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From the Headwaters to the Bay: Stories of the Saw Kill

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From the Headwaters to the Bay: Stories of the Saw Kill

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by

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To Bob Bard, Gayle and Gary Beatty, Sheila Buff, Susan Ellis, Sheryl Griffith, Erik Kiviat, Christopher and Claudine Klose, Brent Kovalchik, Dan McKenna, and Ruth and Maia Oja.

Your care and presence make the Saw Kill a more beautiful place.

Acknowledgements

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To my family; for everything. You taught me how to make home wherever we went, the value of education, and the importance of stories.

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Where it Begins

The Saw Kill

In the Mid-Hudson region of New York State runs a small tributary of the Hudson River. The Saw Kill runs from its beginning headwaters in Milan, through the town and village of Red Hook, and down to the mouth in Annandale-on-Hudson. The stream's source cannot be seen from the road, but instead is nestled amongst the woods that line the properties on Broadview Lane. From there it travels through Milan, past Rock City, circles around the Red Hook Golf Course, under Route 199, under Route 9, into Mill Pond, past the Red Hook Recreation Park, under Linden Avenue Bridge, under 9G, between Bard College and Montgomery Place, to the mouth of the stream at South Tivoli Bays, which empties into the Hudson River. [1]

In Milan, the stream is small enough to hop over as it travels through backyards and alongside roads. It widens, but remains shallow, rarely past knee-depth, for much of its journey. At Mill Pond and the impoundment behind the Annandale Dam, the water collects into larger wetlands or a body of water where boats are launched and cattails grow. The last stretch of the Saw Kill, where dramatic drops in elevation create a series of waterfalls, runs along the southern end of Bard campus to where it empties into the South Tivoli Bay, which is separated by train tracks to the Hudson River.

The Algonquin people gave the stream its first name that we know of, they called it Metambesem (Rafti, n.d). Today, it is known as the Saw Kill, two separate words and not to be confused with the Saw Kill across the river near Woodstock. When I first moved here I was curious as to why so many places had a *kill* in the name, such as Fishkill, Wallkill, and Peekskill.

[1] The Saw Kill is located in Dutchess County, New York, on the eastern side of the Hudson River, latitude 42°00'N, longitude 73°52'W (USGS 2018). The watershed encompasses an area of 26.6 miles, which includes parts of Milan, Red Hook, Rhinebeck, and Annandale-on-Hudson (Reichheld and Barten 1991). See Map 1 for the Saw Kill watershed, and Map 2 for my depiction of the stream.

I soon learned that *kill* is Dutch for stream or creek. The numerous places named for *kill* are thus evidence of the first European settlers in the area. The *Saw* comes from the steam's longtime use for saw mills. That history is still visible in the old dams that have altered the flow and ecology of the stream.[2] Although I have seen the name written as one word, Sawkill, and referred to as the Saw Kill creek, I will call it the Saw Kill throughout my work.

All along the Saw Kill and within its watershed, the area of land that drains into the waterbody, there are overlapping histories. There is a geologic history that tells the formation of the Saw Kill. The physical history is told through its path, and the chemical makeup of the water. It holds an ecological history, shown through the floral and faunal life it supports and is surrounded by. And then there is the human history of the Saw Kill, which dates back to the Native Americans and then the first European settlers who changed the area into one of rural farming villages and fancy river estates.[3] The people's history affected the land use and development of the area, which in turned affected the Saw Kill. They built houses and parks beside it, bridges over it, and dams within it; and as they did, people built their own personal histories of this place. The various histories, when layered together, show the multifaceted nature of a small stream, and the depth of understanding that comes from honoring a multiplicity of knowledge forms and voices.

[2] Map 11 shows where dams existed historically on the Saw Kill, and Map 1 shows existing dam structures in the Saw Kill Watershed. While throughout the project I heard varying accounts of the number of dams on the Saw Kill, excluding its tributaries, the continually referenced dams were the Montgomery Place dam, the Annandale Dam, the Mill Pond dam, the Rock City dam, and the dam on Oriole Mills Road. The mills, largely built in the 18th and 19th century, were used to grind grains, saw lumber, and create wool (Carr 2001).

[3] While the history of Native Americans is an extremely important element to the history of this area around the Saw Kill, my interviews and historical research focused on historical events post European settlement. This history is not a complete history of the Saw Kill and would benefit from the addition of more stories and more perspectives.

The Project

This project is a local environmental history of the Saw Kill told through the voices of those who live or work in the area and informed by my own research and observations. A work within the field of environmental communications, it aims to provide a greater understanding of the Saw Kill environment and its presence in the surrounding community.[4]

My key values framing the project were to create a history based on an upstream model of communication, and to celebrate different forms of knowledge. I encountered "the upstream model" of communication in the work *Citizen Voices: Performing Public Participation in Science and Environment Communication* (Phillips et al. 2012). Louise Phillips, Anabela Carvalho, and Julie Doyle (2012, 4) describe the model as a dialogue, where people "engage in mutual learning on the basis of the different knowledge forms that they bring with them." This shared knowledge then shapes the product of communication, whether that takes the form of science, outreach, or in this case, a history. This is opposed to a downstream model, which involves community after the product of communication is completed. The downstream model perpetuates the privileging of research-based knowledge offered by those seen as experts in environmental discourse, such as scientists. (Eisenhower and Nicholson 2007; Phillips et al. 2012; Yamashita 2015).

The upstream model operates with the understanding that the community situated in the environment already has knowledge surrounding the place. The knowledge might be tacit, experiential, self-taught, community-taught, based in research or academia, or job-related. Regardless, it means that people will have their own terms, important places, remembered events

[4] I am using Tema Milstein et al.'s (2009) definition of environmental communication as how people communicate about the environment. They expand the definition to require communication around the environment to be situated and responsive to the location (2009). In my work, I am situated in and around the Saw Kill, and aim to be responsive to the community associated with the space. Milstein et al. understand the field of environmental communication as one concerned with human relations towards the environment, but also how nature itself "speaks" (2009, 347). Thus, environmental communications mediates a relation between people to nature, but also vice versa.

and stories from observations or experiences that say something about the place. By communicating knowledge found in the community, I hope to create a non-hierarchical history by showing that the presence of more voices, viewpoints, and forms of knowledge will create a richer understanding of an environment.[5]

The Saw Kill was the ideal setting to explore these ideas, for although it is a small stream, it elicits a lot of care from the surrounding community. I was inspired to write this history through my experience working with the Saw Kill Watershed Community (referred to as SKWC), a local group dedicated to the preservation and protection of the Saw Kill and the area of land around it. While working for the group over the past two years, I met a community of people who both show extraordinary care towards and carry an immense amount of knowledge about the stream. I wanted to create an environmental history of the stream that privileged the knowledge of people, like them, who live or work alongside the Saw Kill.

The foundation of the project are the conversations I had with people along the Saw Kill. I first reached out to people I knew were ecologically or historically knowledgeable about the stream from the SKWC and Bard. These people are experts on the area, and I wanted to learn the place from them. I kept in mind the following from nature writer Terry Tempest Williams (1994, 9):

> I am fascinated by what Samuel sees and what I am missing. In the Great Basin I can read the landscape well. I know the subtleties of place. A horned lizard buried in the sand cannot miss my eyes, because I anticipate his. A kit fox at night streaks across the road. His identity is told by the beam of my headlights. And when a great horned owl hoots above my head, I hoot too. Home is the range of one's instincts.

[5] Concern over "hierarchical" knowledge stems from Hiromi Yamashita's (2015) work, which states that privileging multiple forms of knowledge helps relay them as non-hierarchical, takes down an us/them form of communication, and acknowledges that there are multiple ways and perspectives of talking about the environment. A non-hierarchical history is one where all contributing voices are seen as equal, regardless of whether their knowledge stems from research or academia, traditionally at the top of the knowledge hierarchy, or from observations and experience.

I knew I was missing the subtleties of the landscape. I would soon learn through conversations how much of the stream I did not know, from the larger geologic history of the area to the details one would only know through living alongside it. I love William's words because they show how instinctual knowledge about a place can be, and the knowledge that comes from familiarity with an environment. As I met with people, they recommended other people I should talk with. I collected a total of ten interviews, while acknowledging I was unable to meet all the people I wish I could have and that this environmental history would continue to be richer and fuller with the addition of more voices.

I approached the conversations as oral histories. Oral histories are a qualitative method that acknowledge the importance of local knowledge and allows for people's voices to not just inform the engagement or learning, but do it. Danielle Endres, professor of communications in Environmental Humanities at the University of Utah, describes their importance: "Oral history is a form of interviewing that seeks to augment the written historical record with the inclusion of vernacular, traditionally excluded, and ordinary people who experienced the historical phenomenon in question" (2011, 485). When focused on the environment, oral histories can say something about the natural world, often how it has changed, and record local ecological knowledge or landscape observations to create an environmental history (Endres 2011; Mustonen 2013; Robertson and McGee 2003). Endres asserts oral history's contribution to the creation of a public scholarship or history, by not only giving voice to those who might not normally be documented, but also a voice to the places people speak about (2011).

During the conversations, I would ask the person to introduce themselves and their relation to the Saw Kill, and then to tell me everything they knew about the Saw Kill. In some instances, this starting point would launch the entire conversation. Other examples of questions

asked were: when did the person first encounter the Saw Kill, what places stood out along the Saw Kill as important, and what has changed in or around the stream. It is important to note that conversations ranged from what was in the stream to what was happening around it; therefore, by "Saw Kill," I include the water, the banks, what is below ground, and the forests, roads, and homes that surround it. At some point in our conversation, I would ask the person to draw a map of the Saw Kill to reference as we talked. The drawn maps showed the portion of the stream the person was most familiar with, referenced landmarks in our conversation, and often through the process of drawing, revealed more stories. In other conversations where maps were not drawn, it was because our conversation focused around a map already present, such as Brent Kovalchik's sewer map, or a historical map, such as Gayle and Gary Beatty's property map, or the maps were more directional or auditory through the person's stories and the visual came later in maps that were familiar to the person, such as in Sheila Buff's SKWC watershed map and Sheryl Griffith's property parcel map.

With the material and information from the conversations, I constructed individual stories. These stories overlap the categories of ecological, historical, and personal. I chose to write stories because it seemed to best represent the conversations I was having and the attention to the individual I found important. Approaching an environmental history in this way was also inspired by nature writers I read who wrote about place in creative ways. My main inspirations were Aldo Leopold (1949), John Stilgoe (1994, 2004, 2005), John B. Jackson (1984), and Terry Tempest Williams (1994), as well as a whole syllabus of place-based literature in a course with Peter L'Official, the most influential being *Holy Land* by DJ Waldie (1996) and Nicholson Baker's *The Mezzanine* (1986).

All of the information in the stories came from the person's oral history, and I attempted to differentiate my thoughts or expressions by using the first person or italicizing. Each meeting was a different experience, and I tried to mirror that within the writing; whether this was the story taking on a more informational tone, a conversational approach, or a walking narrative. Therefore, the stories are not uniform as that would impair my approach of a story for each individual.

In addition to collecting oral histories, I conducted independent research. Before I began meeting with people, I immersed myself in a literature around place, geography, landscape, and mapping, as I attempted to understand what it meant to do a project around the importance of a location. This literature is extensive, and while I only skimmed the surface of it, the exposure to these readings guided my thinking around the stories I was collecting and allowed me to draw connections between the stories and the broader conceptual frameworks I was finding. I relied most heavily on the concepts provided by Yi-Fu Tuan (1991, 2003, 2004), Tim Ingold (1993, 2000), David Sibley, David Atkinson, and Peter Jackson (2005), John B. Jackson (1984), Tim Cresswell (2013), Wallace Stegner (1989), Donald W. Meinig (1983), Paul Groth and Todd Bressi (1997) and Dennis Wood (2011). Selections from this research that connected to or informed the stories made their way into the *Reflections* I wrote between each story.

As people told me their stories, they mentioned places, dates, and persons I was unfamiliar with. This encouraged me to do additional research to fill in my own lack of historical knowledge around the area. I turned to old local newspapers, the archives at Bard and Montgomery Place, Hudson River Valley Heritage web archives, Red Hook Historical Society archives, written histories, as well as online research to help provide myself, as well as my readers, with additional context. This research, along with clarifications on scientific terms or

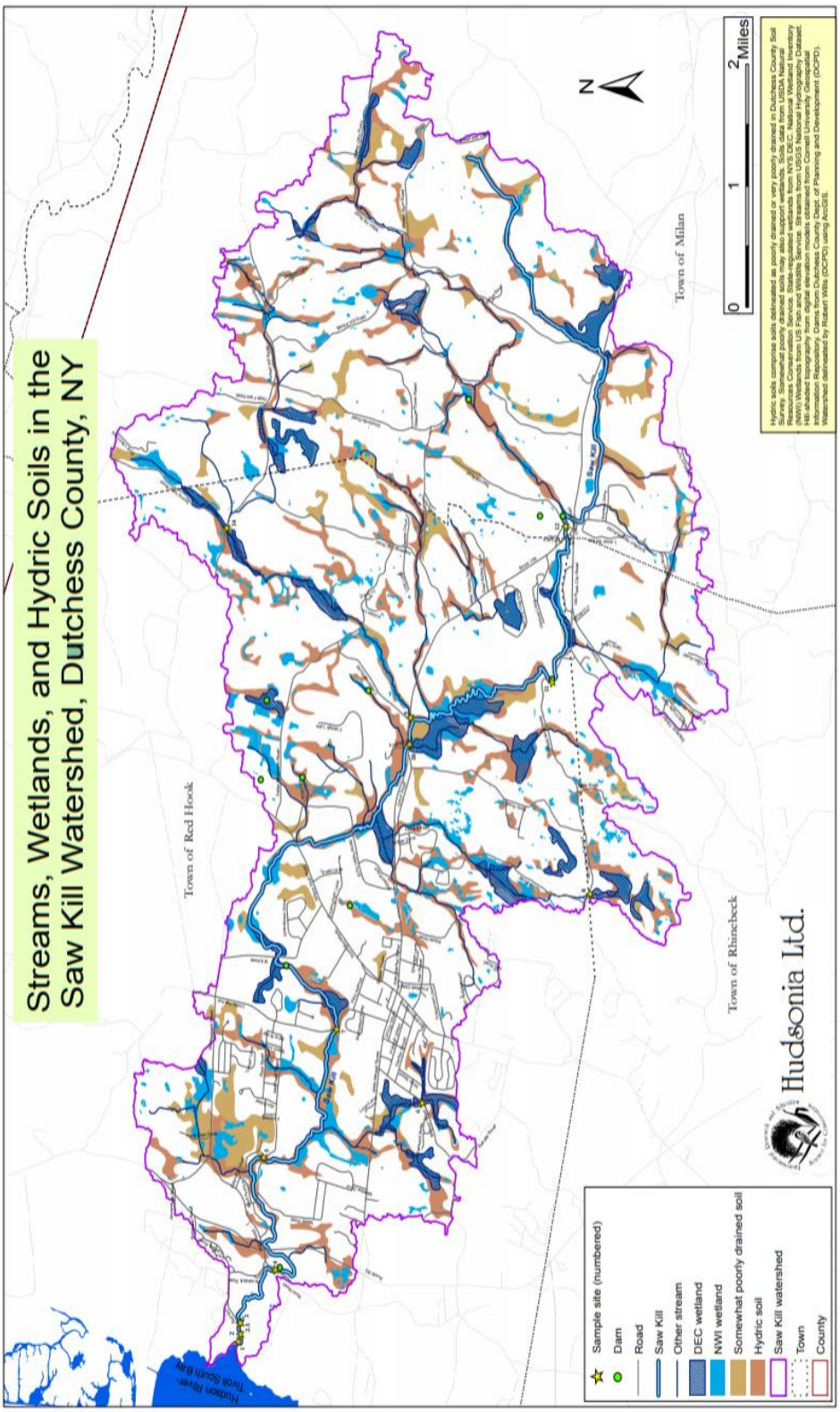
concepts, is placed in footnotes. I have inserted the supplemental research into footnotes because, while pertinent to the history, the stories are the main source of information and can be read regardless of my additions. The footnotes are there to add details and context I found important, but not to subtract from the material given by the person.

The Course of the Project

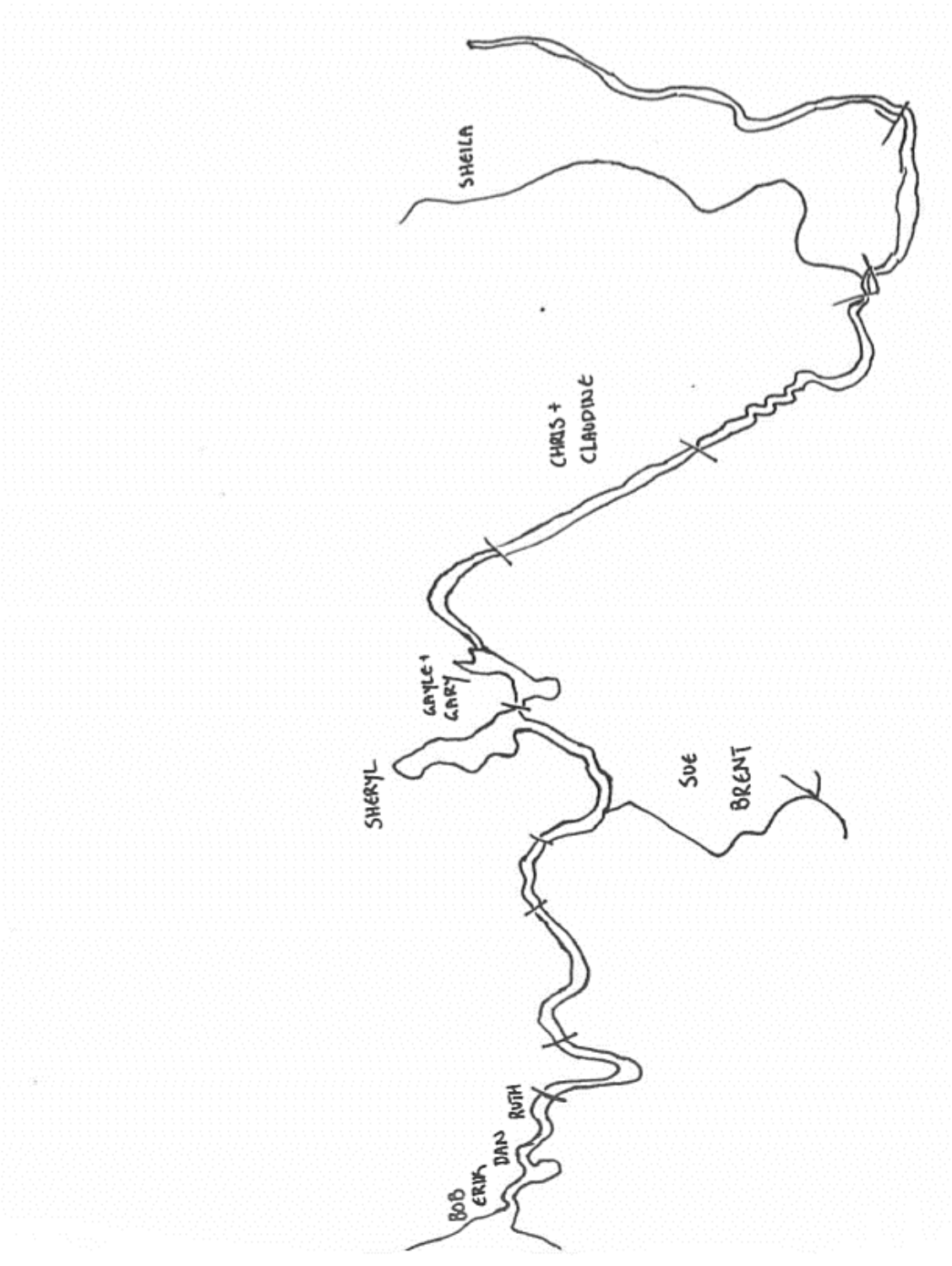
What follows is a mixture of personal histories, my own experiences, and place-based literature, all working to better understand the Saw Kill and communicate an environmental history that is inclusionary and meaningful for the community in which it situates itself. The work can be read as a map. It starts near the headwaters in Milan, following the path of the Saw Kill downstream to the mouth. I could have structured the stories in the order I met people or grouped them based on emerging themes, however the position of the interviews was important to me. What we were able to look out of the window and see, their relation to other people on the stream, whether they were upstream stewards or downstream wondering what was taking place above them, were important elements in each conversation, and dependent upon location. So, although the community is connected in more directions than the course the stream dictates, the stream is central to this work, and I wanted to stay true to its geography and the movement of its water.

Each story includes: the person whose story it is, a short description of who they are or how I came to know them, a map either drawn or given to me by the person, and then their story. Images throughout the story are ones provided by the person (unless otherwise noted), and the story is followed by any figures I found in my additional research appropriate to include. In between each story are my *Reflections*. I used this space to tell my own stories or observations

that were part of the process of this year, as well as connect the stories to a larger literature around place that influenced my writing and thinking. Following the nine stories is “Where it Empties,” named to mimic the end of a stream, which does not really end, but empties into a larger water body and continues on. This section begins with a final conversation with a long-time resident and closes with the beginnings of a water ethic centered around the Saw Kill, suggesting a continuation beyond this project.



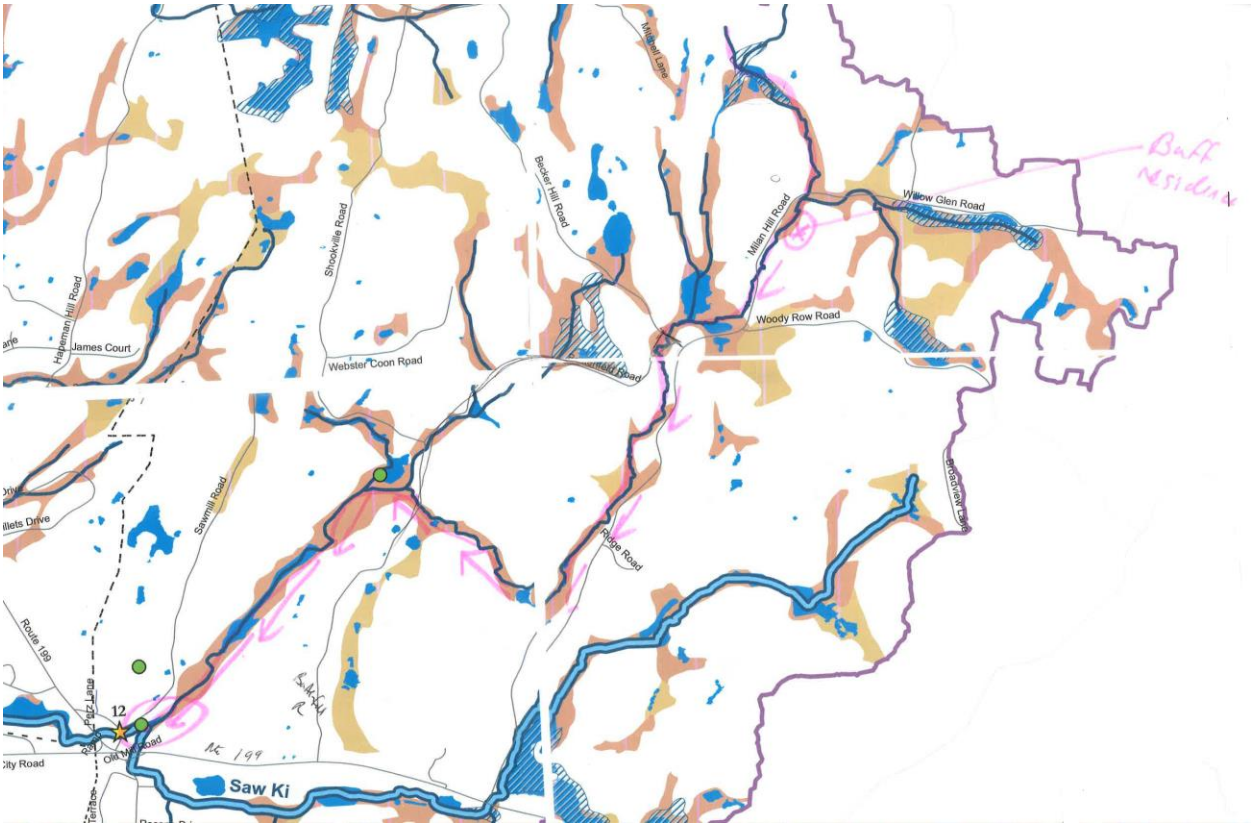
Map 1: The Saw Kill watershed showing the Saw Kill, its tributaries, SKWC sampling sites, existing dams, wetlands, and soil types (Source: Hudsonia 2018, Map courtesy of the Saw Kill Watershed Community).



Map 2: My drawing of the Saw Kill, tributaries mentioned in the text, and the sites of each person I met.

Near the Source in Milan: Sheila Buff

Sheila Buff moved to Milan in 1988 as a weekender. After years of going back and forth between here and New York City, in 2001 she and her husband settled here permanently in the converted school house they call home. She became involved in local environmental politics in 2000 when the Milan Conservation Advisory Commission was activated for the first time in response to a proposed gravel mine on Turkey Hill Road. Since then, she has helped the town to create a natural resource inventory, participated in the Wappingers Creek Intermunicipal Council and formed the Saw Kill Watershed Community (SKWC) as a member of the leadership team. Sheila balances her leadership role with the SKWC with her work as a health writer. I met with her one morning in December at her home. I began as I always do with asking her to "tell me everything you know about the Saw Kill," and from there she began her story. As we sat in her home office and walked the property, I found that Sheila is a storyteller. In my writing I have tried to stay close to her language and her recounting to represent this.



Map 3: Taken from the SKWC map, Sheila marked in pink highlighter the path of the tributary that runs through her backyard. The source of it is north of her house, which she marked with an x and labeled "Buff Residence." She circled where the tributary feeds into the Saw Kill at Old Mill Road (Courtesy of Sheila Buff).

For me, the physiology of the Saw Kill goes from head to mouth; the head being up in Milan. There, the winding roads pass large tracts of property in an area dominated by hills. To describe the town of Milan in a word is remote. Sheila tells me that on the radio after a bad storm when you hear that power has been restored to all but a handful of people, that handful is the town of Milan. The power lines here are too short for cable lines, and there is still a large portion of the population on dial up. It is a town of 2300, with half of the population being weekenders. Unconnected by sewer or water pipes, there is an independence here reminiscent of older times.

It is hard for me to follow her geographic descriptions; the area evades easy directions with landmarks limited to what used to be, such as the closed down deli, or the mobile station that now sells propane. She describes the ruins of bars and gas stations from the era when the Taconic ended at 199.[6] "East on 199, on the north side of the road, used to be Norma's Country Store." Now, the store is replaced by a large structure built by a long-time resident. He imagined a dance hall. However, as people warned him, zoning laws would require a sprinkler system in such a structure. But with no town water supply, a personal well could not supply enough water for such a system, and so it never opened. It stands as a warning to development in Milan. The lack of municipal infrastructure keeps the area quiet. From this house it is impossible to see neighbors, even though the surrounding trees have lost their leaves in the December cold. A five-acre radius deemed by town zoning, introduced for the first time in the 1960s, surrounds the properties.[7]

[6] A 1949 map shows the recently completed Taconic ending at Route 199 (Map 4). In 1954, the Taconic was extended beyond Route 199. (O'Donnell 1999, 26). Brent Kovalchik also mentioned the Taconic as a factor in changing the type of development in the area. Before the construction past 199, the area supported more bars and gas stations.

[7] The Milan zoning code describes the implementation of zoning districts as necessary to "maintain the Town's rural character in areas distinguished by the presence of both small and large farms, sparse residential development, and where limitations on development are designed to protect both natural resources and open space," and "the preservation of permanent open space, viewshed protection, and limited development" (Town of Milan, NY n.d).

I see the head as the most important part of the body. In a hierarchy of body parts, it sits at the top. The same can be thought of for streams where the headwaters determine the entire downstream. Listening to Sheila, it does not matter how good a downstream steward one is if upstream or the headwaters are in poor condition. Milan contains the headwaters for seven streams including the Saw Kill, Stony Creek, Upper Wappingers, and Landsman Kill. The tributaries here flow downwards from the wetlands in the hills towards their respected main water bodies. Most of these then flow into the Hudson River, the Milan area thus serves as a "Hudson Direct line." The source of the Saw Kill is further southeast behind some houses on a different road in Milan, but a tributary of the Saw Kill runs right through her backyard.

The tributary begins about half a mile north of here in wetlands. "The stream runs down Milan Hill Road, down Battenfeld Road, down Academy Hill Road, ends up in Rock City," where it joins the Saw Kill (Map 3). If you follow the stream southwards, you will find it in good condition. Although, like most streams in populated areas, there is a lack of continuous buffers as roadways, farmland or cleared lawns abut the banks.

Looking out the window of the office, I can see the stream run parallel to the house, surrounded by a buffer of brambles and brush except for a narrow path cleared by the dog and footsteps. Sheila recently put out a birdfeeder next to the stream. New species of birds like the Wood Duck have shown up after a small oxbow was created during Hurricane Irene.[8] Connected upstream to the narrow stream is a large pond. We walk along the edge of it, the dead leaves have created a carpeted trail up to the deck overlooking where the pond collects in front of a small dam.

[8] An oxbow is created when a stream's meander (curve) is cut off from the stream. The stream shortens/short-cuts its path by cutting a course between the loop of a meander.

The dam is a stone structure with debris gathering around it. It was most likely built during the 1870s or 80s, a hypothesis made by Sheila based on the sudden availability of Portland Cement at that time, a material which allowed landowners to build their own dams easily. She shows me the space in the dam where a machine could have fit, suggesting its use as a saw mill rather than to create a stock pond or for flood control. Another clue is the farm across the street that used to be joined to the property. She believes the boards that make up the barn were cut from this saw mill. Over time though, with no sluice gate,[9] a "silted," "muddy," "swampy" environment was created behind the dam.

Upon moving here in 1988, Sheila and her husband's immediate attraction to the property was the stream, and they had visions of the stagnant zone transformed into the site of a pond. To realize the vision would require dredging out the silt and mud. As new property owners they wanted to do it right, so they went to the New York Department of Environmental Conservation (NYDEC) to see what permits were required. What they found was that no permits were needed, or nobody cared what they did, due to the tributaries status as an *unclassified stream*. Unclassified means the stream has not been defined by its best use or recognized as a regulated waterbody.[10] Years of searching could not locate a name for this little stream. Unnamed and unclaimed, no one seemed to care what happened to it. The dredging took place, and now the pond rests here - where the dog mostly swims now.

The tributary missing a name is worrisome as I am learning how important names are to this place. Sheila tells me the town of Milan, for example, at one point was called the town of

[9] A sluice gate is a way to channel/control water through a dam.

[10] Stream Classification is done on a lettered scale based on the best suggested use of the stream. A or AA is for drinking water sources. B is for a best use of swimming and recreation. C indicates a best use for supporting fisheries and non-contact activities. D is the lowest standard. A, B and C may have a T for trout population or TS for trout spawning (NYDEC, n.d.g). Stream classification affects permitting. The Saw Kill is a designated B(t) which is problematic because Bard draws its drinking water from the stream and so permitting should reflect that use. Changing stream classification is a difficult process, but one the Saw Kill Watershed Community has discussed it in their community meetings (SKWC 2016).

Northeast. An unimaginative repetition of living in the northeast region of the northeast in the northeast. But then it changed to Milan, which, like Cairo, NY, is consistently mistaken in pronunciation for its more famous sister city. There are several other Milans in the United States. The Indiana Milan is pronounced “Mill-in," and ours is pronounced “my-lin." One theory is based on the date of the town incorporation around 1815, which corresponds with the end of the Napoleonic Wars. When the Congress of Vienna redrew the borders of Europe to what they were before Napoleon, Milan returned to an aristocratic territory. Perhaps these small towns in the US upon hearing the news found it entirely undemocratic and named their own towns Milan as democratic versions. In time, regional dialects took over to create new ways of pronouncing the city turned rural town.[11]

I learn that names tell stories in this town. When they first moved, the house plumber told a story from when he was kid, around the year 1930. Up the road from the house ten to twelve cows were struck by lightning at the top of the hill. He remembers having to bury them all. So somewhere there is a pit full of cow bones and thus called Dead Cow Road. Near this is Dead Farmer Road, named for the steep road where a tread tractor tipped over and killed the farmer riding it. For me, the stories mime Milan’s topography and land use. The land is defined by hills, which in turn defines the farms, mostly cattle and horse farms because the steep inclines make crop farming difficult.

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[11] In 1760, Robert Livingston and his wife Mary gave nine hundred and eleven acres that made up a portion of the “Little Nine Partners Patent” to Johannes Row Jr., which was the beginning of the formation of Milan (Milan History, n.d). Until 1817, Milan was the western part of the town of Northeast. 1817 saw the vote to separate Milan from Northeast, and in 1818 it passed (Huntting 1897, 103).

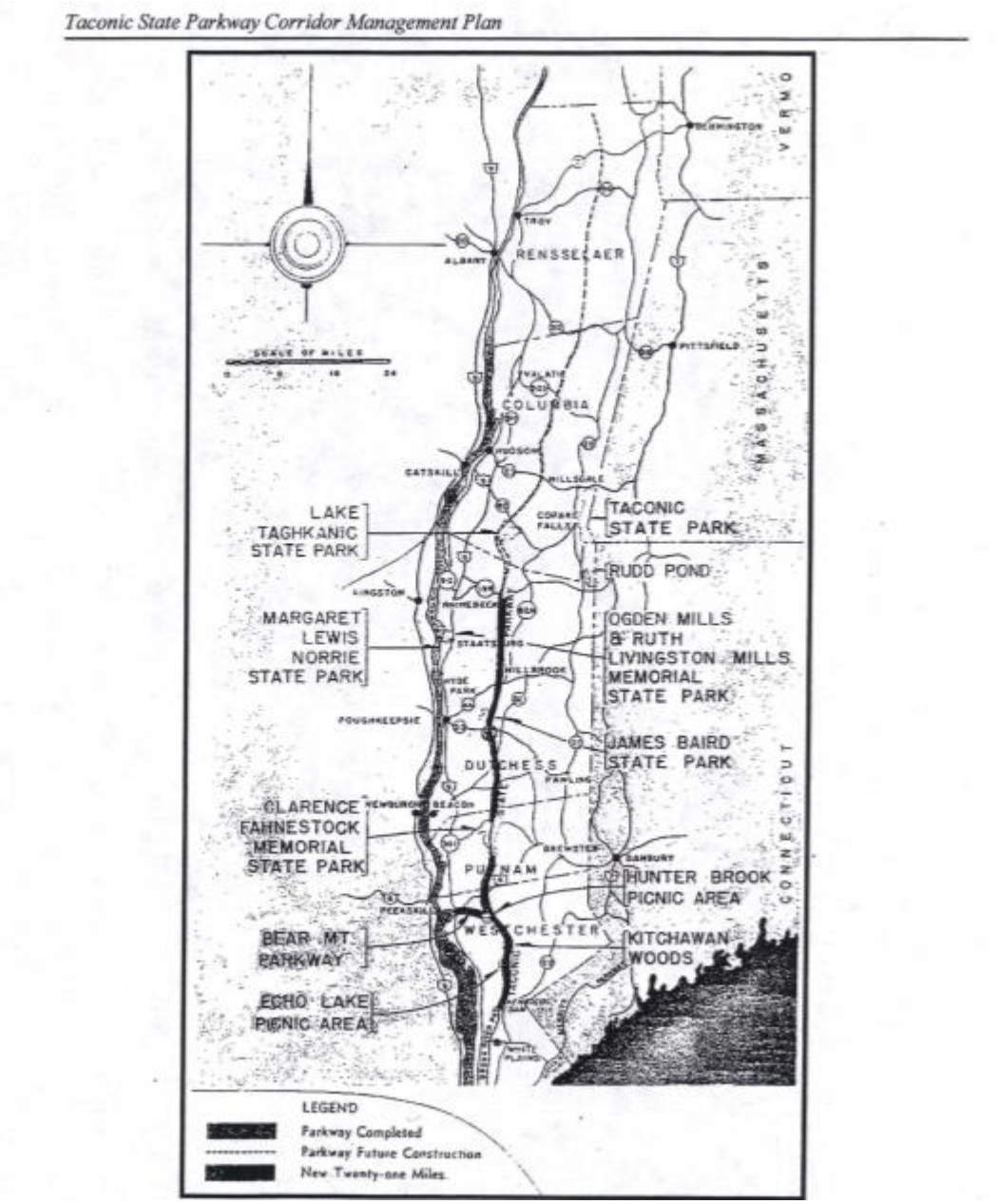
In terms of the name of Milan, according to the Milan Bicentennial Organization, there were many counties in New York competing to name one of their towns Milan. An 1802 map of Jefferson County shows where they proposed a town of Milan and an 1839 map of Cayuga County shows another village unofficially called Milan (Milan History, n.d). Dutchess County claims the real Milan and is the first official incorporated town in the United States to be so named.

Other Milans presumed to be named after Milan, Italy are found in Michigan, Ohio, Indiana, Tennessee, Missouri, Kansas, Illinois, Minnesota, and Georgia (Milan History, n.d). The incorporation dates range from 1824 to 1970, which questions their connectedness to a historical event.

We walk next to her unnamed tributary of the Saw Kill that runs through this town named for famous Italian cities and local folklore. She tells me to name an unnamed stream is complicated. One must identify it on a USGS map, notify everyone along the stream, and then of course, decide on a name. I ask whether she would name it for herself? [12] No, of course not. She believes a name should acknowledge the geography and history of the area; something like willow glen, or Milan hill stream. The name lends a way to more easily locate the stream, talk about it — perhaps giving it a voice in a community. If each little stream was named by the community, for the community, the act could be a way of getting to know and build care toward these upstream water bodies.

[12] My question was uninformed as I recently learned it is impossible to name a geographic feature after oneself, with the exception of in Antarctica. According to the USGS, "No natural feature (and certain manmade features) may be named for a living person. A potential honoree must have been deceased for at least five years and must have had either a direct and long-term association with the feature or must have made notable civic contributions." (USGS 1999)

Figure



Map 4: This map shows the Taconic State Parkway upon completion of a new section that ended at Route 199 in 1949 (Source: O'Donnell et al. 1999, 22).

First Reflection:

Driving to Sheila's home was my second time driving alone. The roads wound more than I was used to and traveled over a long series of hills. On the way there, I turned the music down so low it was just a murmur with enough noise to not feel alone, but not enough to distract. In my side mirror I saw a larger pick-up truck, but they could not pass me on these narrow, curvy roads. Driving no longer scares me. It never should have because the car was an important part of my childhood. My family would take long road trips across the country, with my sister and me in the backseat making up languages or playing the alphabet game. Our language of hand motions is unfortunately lost to history minus the letters s, o, r, and y we used repeatedly to silently settle squabbles. But as I drove through Milan, I thought of the alphabet game. For my sister and me, it was a repetition of searching outside the window for A is for Alvin, B for Brazoria, C for country, and searching for the one La Quinta once we got to Q. It would be hard to play that game here as there are hardly any signs or stores, just the one gas station.

The front of the car was reserved for moments of car sickness and the handful of times I was taught how to drive down my grandmother's dirt lane. But now I am in the front seat, and I had to remind myself I was not really alone. There was the voice of Google Maps, and Rihanna crooning on the radio. There were all the contacts in my phone if anything went wrong, Sheila who was expecting me, and my housemate, Lydia, as the gloves on the seat, the sunglasses on the dash, and the Frisbees in the trunk say it is her car. My driving instructor Iqbal was there, along with the DMV licenser who failed me in Hudson and passed me in Millbrook, and my other housemate Emily, who patiently took me to each test. And the pick-up truck behind me was there, a little too close, but there.

Part of my decision to finally obtain my driving license this year was prompted by this project. I wanted to meet people at different points of the Saw Kill and not limit myself to the portion of the Saw Kill I could walk to. Learning how to drive became an essential side project. And I learned what most people probably learn as teenagers: that there is something freeing about the ability to take myself places. Freeing, as well as a new way for me to learn a place. As I got to know the different roads, I got to know the parts of the Saw Kill that travel beside them.

Driving to Sheila's home took me to one of the furthest reaches of the watershed. Her map (Map 3) is from a watershed map that shows the Saw Kill watershed boundaries along with the land and tributaries the watershed encompasses (For the original map, see Map 1). The tributary of the Saw Kill that runs through her backyard is part of the watershed. Although not one of the main tributaries to the Saw Kill, that would be the Lakes Kill, whatever occurs in this tributary will make its way downstream into the Saw Kill. Therefore, protecting the tributaries and headwaters of the stream is essential to an entirely healthy water body. One of the ways Sheila suggested to accomplish this was to name the unnamed tributaries.

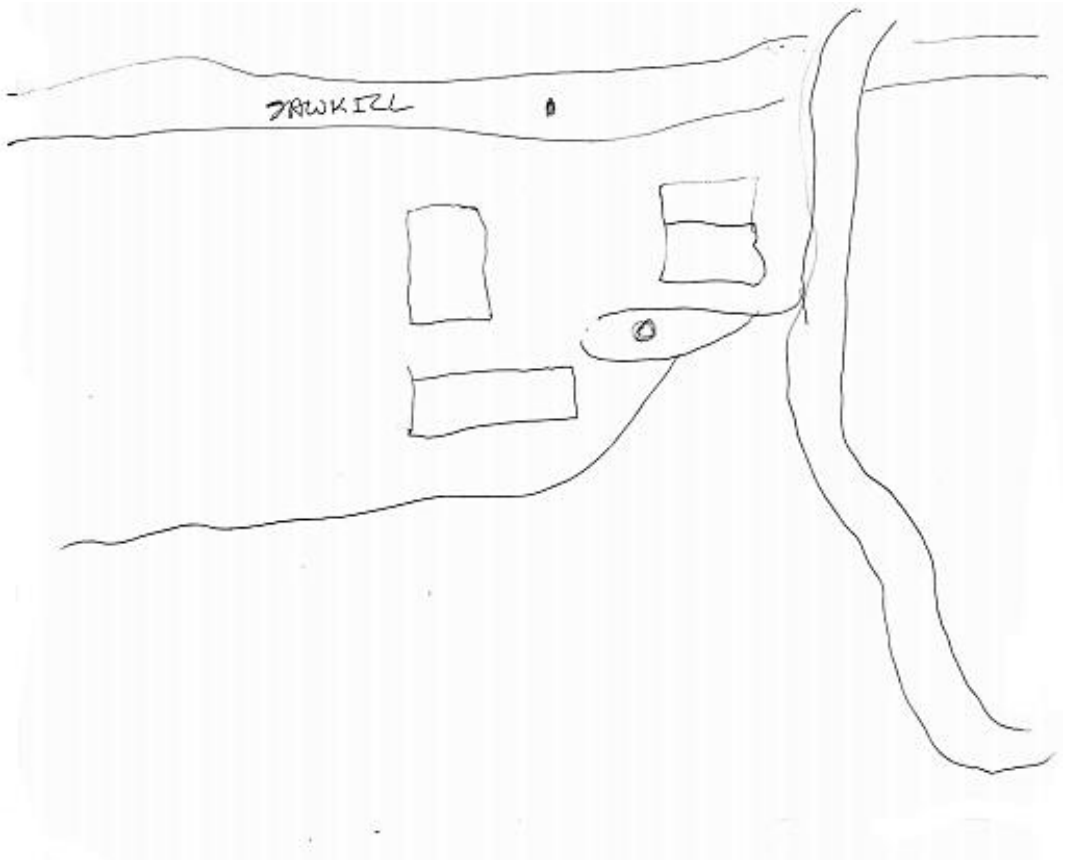
Geographer, Yi-Fu Tuan (2003) describes how we use language to bond ourselves to place and make it vivid for others. He gives examples such as "mouth of a river," a "foothill," a "shoulder of a valley," to demonstrate how phrases in which we use our bodies to describe our physical locations help connect ourselves to them (Tuan 2003, 135). I had this in mind while writing Sheila's story with the focus of the "head" in headwaters. To me, the ecological importance of the headwaters is mirrored in the body part chosen to describe them. The "head" is physically on top of the body, as well as the most important since it controls the rest of the body's functions. It is also fragile. My parent's constant reminder to wear a helmet when doing

anything that could endanger it shows our need to protect it. And it is the head, really the eyes, I look at when introducing myself to someone and telling them my name.

A name for a stream is important for defining it as a place. Phil Hubbard, in his essay space/place in *Cultural Geography: A Critical Dictionary of Key Ideas* (Sibley, Atkinson, and Jackson 2005, 41), requires places to have a name. A name could be official, what is marked on the maps such as "Saw Kill" or it could be personalized to the placeholder, "Tierney's Stream" or so well known to the community it is simply "that creek." But there is something important about the official name since it marks to the community that it is a place. Given the importance of headwaters, Sheila's suggestion of naming these little unnamed tributaries, many of which act as small contributors to the headwaters of the larger Saw Kill, is an elegant way to create connection within the watershed.

Echo Valley Farm: Chris and Claudine Klose

I met Claudine Klose when I reached out to her in September to access the archives of Historic Red Hook at the Elmendorph Inn. She showed me older maps of the area, including her favorite which immediately became mine, the 1845 Panorama of the Hudson River Map (Map 7). While telling her about my project she mentioned that the Saw Kill runs along her and her husband, Christopher's, property. A few months later I visited them at Echo Valley Farm, which has been in Christopher's family for seventy-five years. Most of the interview was spent with Christopher, who goes by Chris, and Claudine joined us towards the end. Chris started the interview with information on the farm, his family, and the Saw Kill. The second half of the interview we spent chatting about what I have learned from the project thus far and where I am from. What struck me was as I told him about my home and family stories, he was able to relate his home and place experiences with mine. I wanted to keep the conversational and relational back and forth we arrived at, so I turned this story into a dialogue. I have kept much of his phrasing/wording and our questions/response but moved around certain stories or information.



Map 5: Map depicting the property drawn by Chris Klose on February 9th, 2018 (Courtesy of Chris Klose).

It is Friday, February 9th when I drive out to the Klose's farm, Echo Valley. I am thankful the roads are clear as I have no experience yet driving in the snow. Just as I pull into their driveway, little flurries start to come down. I start towards the big white house when from the barn Chris calls me over. Claudine and he have converted one of the barns into their home — their living room with family portraits on the wall, a fireplace, and comfy couches make it hard to envision its one time use as a barn. Claudine is running late, so Chris and I sit down to start the conversation. He has experience conducting oral histories through his work at the historical society, where Claudine is president, so when I ask him to introduce himself and his relation to the Saw Kill, he jumps right in.

There is a datestone in the basement of the farm that dates to 1745. In the two hundred fifty odd years since then, the farm has remained a working farm. It passed into the Klose's hands in 1943 and had everything his father wanted — "a white picket fence, red barns, a farmhouse and water." These four elements were part of a dream his father carried from memories of his grandfather's farm in St. James, Minnesota. His parents had three sons when they moved here from New York City, where they had been "daytime radio pioneers." Chris was born two years later in 1945, followed by his two younger sisters.

The Saw Kill runs alongside their property, dividing a field. "Were you to have arrived here in 1943, or say even into the '60s, you would have found a stream that was virtually treeless on each bank, and a narrower stream. So, in seventy-five years the stream has widened to a degree and gotten much more overgrown, at least on our stretch of the Saw Kill, which is probably altogether a couple thousand or 2500 feet and separates us from what is now a housing development but used to be the Teator family dairy farm." Their immediate area is still defined

by farms, downstream from them is the former Hines farm, now the Saw Kill farm. Across Route 9 from the Saw Kill Farm is a new dairy farm, and on the next road over from the Kloses is Rose Hill farm, the old Fraleigh family property.[13]

Now the fields are used to make hay, and they run sheep on the property, but they used to have an orchard, as most farms in the area did. The "miracle of insecticides and fungicides" allowed apples to grow successfully in this climate. Today, fungicides are still used out of necessity, however there is greater attention to organic practices then before. "I'll never forget my father going down to the creek with an old wooden spray rig and a big tank, on a trailer behind the tractor, they'd fill up the water out of the creek into the sprayer, put DDT in it, and spray the orchard. Dad, for protection, would put a bandana around his nose...everyone sprayed. I can't tell you but there's probably residue of DDT and whatever else they'd use."

The pollution, he describes, is different now. Instead of DDT,[14] there is the runoff from suburban development — nitrogen fertilizers, garage and highways, snowmobiles and off-road vehicles.[15] There is a swimming hole on the stream, right down from the house next to a large

[13] The Fraleighs were one of the one of the first families to settle in this area. The first Fraleigh was a Palatine German immigrant who settled in Rhinebeck, and by 1719 was able to lease a farm on the Beekman Patent (Klose 2015). This was the grandfather of Peter Fraleigh who would buy the land Rose Hill Farm is situated in 1798, and establish the farm in 1812, where for the next two hundred years it would continue as a family operation (Klose 2015). The farm was sold out of the Fraleigh Family in 2015, but still operates as an orchard and pick your own farm, as well as continues as a conservation easement with Scenic Hudson that the Fraleigh's set up in 1998 (Klose 2015). Another branch of the Fraleigh's owned the last operating dairy farm in Red Hook, which closed in 2000 after operating for more than 100 years and passing through four generations of Fraleighs (Carr 2001, 92).

[14] A *New York Times* article from December 31st, 1971 announces the insecticide DDT (dichloro-diphenyl-trichloroethane) is banned in New York State beginning January 1st, 1971 along with nine other pesticides.

[15] The effect of runoff on the stream is mentioned in multiple interviews. Runoff is a nonpoint source pollutant, meaning it is not directly dumped into the stream. Examples of runoff worrisome to stream quality are salt (concern over the effect of excess salt in the water from salting the roads in the winter comes up often in Saw Kill Watershed Community (SKWC) meetings, and something they address through their monitoring program), oils, debris, and fertilizers.

Special concern towards runoff from fertilizers is that they add excess of the nutrients nitrogen and phosphorous to the stream. Both nutrients occur naturally in a stream, however a large load of them can lead to a speeding up of the eutrophication process. Eutrophication is the excessive growth of algae in a water body. These algae blooms eventually die off and the decomposition of this mass creates very low oxygen, anoxic, conditions. Algal blooms also shield light from the bottom of the water body, which prevents other plants from photosynthesizing and can

maple tree with a rope swing on it, where generations of Klose have learned to swim — "it's our favorite spot in the world" (see the dot on Map 5). When he was a kid, pollution meant a cow plop floating by from upstream while they were swimming, causing everyone to get out of the water until it passed. Then, livestock had open access to the Saw Kill and were the major source of pollution, whereas today they are no longer allowed in the stream.

I asked why the banks have widened. What changed?

It has widened and overgrown. "In the old days, it would have been bank to bank cultivation. Farmers couldn't waste any land because the yields weren't as great, or you had animals and there were no environmental restrictions about animals in the water. We've run sheep for more than forty years, but have kept them out of our section of the creek. This has encouraged the undergrowth and been very beneficial for birds and wildlife." Along the banks, the plant life has grown up without the grazing. Trees such as Silky Dogwood and other undergrowth has thrived, their roots stabilizing the banks and providing habitat.

Even so, he has noticed there has been a decline over the years in the variety and number of wildlife such as snakes, frog, toads, salamanders, water bugs, and muskrats. As a kid, he remembers the wetlands were much wetter, and he was always seeing "stream side folk" like Box Turtles, but he cannot recall seeing one in years.

As a passionate birder, he is tuned into the changes in birdlife. "This year I've noticed a great diminution of bird life, variety is still there, but far fewer birds. Birds are different, but because agriculture has changed." An agricultural field is a specific type of bird habitat, and the

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produce toxins. The SKWC tests their water samples for nitrogen and phosphorous to monitor potential runoff effects, as well as possible sewage contamination.

disappearance of those fields because of development changes the makeup of bird life. “For example, everyone used to grow corn, so you’d see a lot of pheasants and Bobwhite Quail. And there’d be lots of Killdeer in the cow pastures, going after the insects. But no more corn or cows, and much more development have changed things.” This stretch of the Saw Kill is still quiet, a consistent pair of Great Blue Herons proving it is a good habitat for birds.

And there are still fish in the stream. Chris himself declares he “never had the patience for fishing,” but he knows it is a productive trout stream from the family that fishes on their property, who gift Claudine and he Brown or Brook Trout every spring.[16]

“Where are you from,” he asked. I answer, a little bit south of Houston. I always say this as everyone knows Houston, but very few have heard of Alvin. “Did you get any of that flooding?” he asked.

I appreciate when people ask about Harvey because it is still recent, and when I was there over winter break, I saw people dealing with the effects of the storm. I was in New York when the storm hit, watching the news to see roads and businesses I know so well transformed by water, and in touch with my family every day to hear their stories of wading knee-deep down the lane. I describe to Chris that the community around my family was hit badly, but where my grandmother, parents, and sister live escaped the damage. When my grandmother bought her property in the early 1970s, she walked the forty odd acres before she built the house to find the highest point. The storm’s flooding, which turned the surrounding pasture into a lake while the house remained dry, proves she was right.

[16] The New York Department of Environmental Conservation (NYDEC) stocks Brown Trout during the spring in the Saw Kill (NYDEC 2018).

People used to build like that in Red Hook too, he said. At their farm for example, the house and barns are built on the hill overlooking the stream. Even in a bad flood during Hurricane Irene, when they thought they would have to evacuate the sheep, they stayed dry.

Floods and droughts, however, are more pronounced than they used to be. During the summers in the 1950 and 60s, a person could count on rainy afternoons or thundershowers nearly every day. “Now much more so than it ever did, we have sharp swings in droughts." The last ten to fifteen years have seen intense and prolonged periods of droughts. “Last year, we had a wet spring and the trees did really well. But, by June or July, we were in another drought. Instead of a steady pattern of rain and recharging of groundwater, streams and wetlands, we go from flood to bone dry and back, and that’s not helpful.”

Flooding has intensified. To explain the floods, he has to backup, so I understand the history of the area. Red Hook, he explains, used to be a small rural town made up of Dutch and German Palatine farming families. In 1710, three hundred Palatine Germans arrived to work for Chancellor Robert Livingston to produce naval stores for the royal navy. The idea was soon abandoned since there were no materials such as Pitch Pine that would benefit the navy. Most of the families stayed in the area to take up farming. For the next two hundred fifty years, Red Hook would remain a small town with a population of 3500 to 4000 people. Growth came about in 1957 with the building of the Kingston- Rhinecliff bridge when Red Hook “changed from its traditional historic agricultural township into a bedroom community for Kingston,” because of the introduction of jobs in International Business Machines Corp. (IBM) and the defense industry.[17]

[17] According to the Friends of Historic Kingston and Hudson Valley Heritage’s 2014 exhibit “The IBM Years,” IBM moved to Kingston in 1956 following their move to other Hudson Valley cities like Poughkeepsie. The Kingston plant began with producing typewriters along with work involved in the US Air Forces’ air warning network. Friends of Historic Kingston speculate IBM’s move to create plants in the countryside was in part to create

Now he has seen the area, including along the Saw Kill, become "an explosion of houses," with "all the attendant pollution that comes with a house in suburbia." By the 1960s, many of the small family farms were either housing developments or swallowed up by the larger farms. Now, their farm, about a mile from the village, is the largest piece of untouched ground near the village (when combined with the adjoining farm). An increase in developed land means when it rains heavily or when the snow melts, there are fewer places for the water to go. When floods happen every two or three years, Chris has observed they are more powerful and severe, with the water coming up higher on his property than in the past.

He asked me next what the town I am from is like. The town where my family lives is in a rural community, but they work at my grandmother's hardware store in the Houston suburb of Friendswood. My mother spent part of her childhood in Friendswood, and she always remarks on how much the town has changed from when she was a kid. She describes riding her horse along Main Street, now lined by Jiffy Lubes and fast food chains.

It is like that here too, he responds. People used to ride their horses from Red Hook to Annandale; this was back when all the roads were dirt roads. As a kid, he remembers the town used to tar the roads to keep the dust down. Every spring, a machine would travel along the roads to grade it, followed by the tar. He and his sisters would sit in the middle of the road popping tar bubbles left behind. By the 1960s, most of the roads had been paved over.

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military focused operations in places safe from nuclear attacks they imagined could be targeted at larger cities such as New York City. Kingston also had the advantage of the recently built bridge. IBM at its peak in 1985 employed over 7000 people, but by 1994, the year they shut down, they had decreased to 1500 employees. IBM supported Kingston and its suburbs for thirty-eight years, encouraging growth and development. The shutdown of IBM operations was devastating to the area.

Two years ago, the town widened, repaved and raised the road to their farmhouse, so it is no longer level with the land. Chris compares it to a highway now, complete with traffic and rush hour.

He wanted to know what other people I have met through the project have told me. I tell him that people talk about the changes they have noticed, whether in the storms, the trees, or the course of the Saw Kill itself. And what people say changes depending on where along the stream they are located. With Dan and Erik, for example, at the mouth of the stream, their focus was on the trees and invasives impacting trees such as the Hemlocks or Ashes surrounding the Saw Kill.

He has noticed changes in his trees as well. Over the past ten years, he has noticed his trees under increasing stress. Like others, Emerald Ash Borers are killing off his ash trees.[18] The property has a mixture of trees he has planted himself, Catalpas, Maples, and fruit trees, as well as more ancient pockets of Oaks and Hickories planted before his family took over the place. Outside of the window is one such ancient tree called a Black Locust, which were planted on many older properties to act as lightning rods.

Reflecting on the changes others have described, he wonders about the stream's course. Besides the widening he described earlier, he has not seen a change in the path of the stream. The shape of the Saw Kill could say something about changes in land or development, but it also

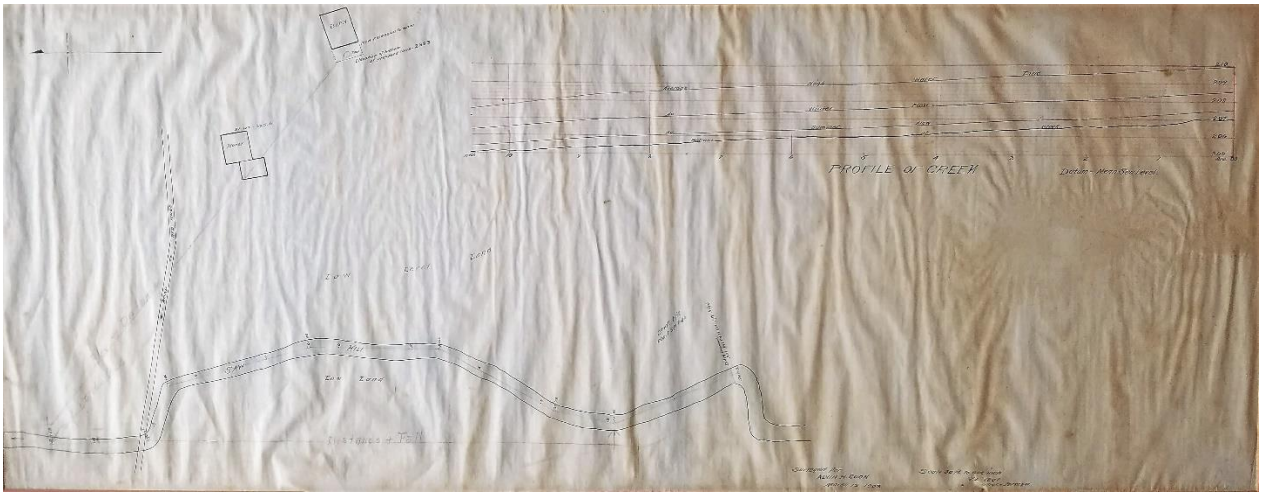
[18] According to the NYDEC (n.d.f), Emerald Ash Borers are an Asian beetle non-native to the United States. They were discovered in the United States in 2002, and in New York by 2009. As the name implies, they are able to burrow into trees where larvae feed, in turn cutting of the trees flow of water and nutrients. You can see the paths left by the larvae in dead bark, as well as a distinctive D shaped mark where the adult beetles exit a tree. Upon infestation an ash will usually die within two to four years. Ash makes up at least seven percent of most New York forests, which makes it a critical part of forest composition (Map 9).

speaks to the stream's age. He estimates the Saw Kill to be middle aged based on the number of meanders throughout its length.[19]

Claudine joins us. As we describe our conversation to her, she reiterates how lucky they are to have the Saw Kill on their property, both the wilderness that is their backyard and the beauty of it. The swimming hole especially, is a "holy part of the property." She asks if I would like to see the 1908 survey of the property. As she goes to get it, Chris describes how the surveyor, Frank Teal, was a local character — a man always dressed in a three-piece suit who in 1949 was murdered in his own home, the crime remaining unsolved to this day. Teal, who surveyed properties in Red Hook and Rhinebeck throughout his fifty plus year career, deemed the property one hundred and four acres in his survey. Later, when the Kloses sold the development rights to Scenic Hudson, they found it is really one hundred and six acres. By the sale of the development rights, the land can never be developed from its agricultural use.

The survey map is drawn out similarly to Chris' map. The barns are shown in the same orientation as they are today; the original barns burned down in 1999 during lambing season in all of twenty minutes. On Teal's map, the Saw Kill meanders slightly through the property, bordered by "low land." In the upper right-hand corner, there is a profile of the Saw Kill showing the season's effect on the depth of the Saw Kill. The high-water line, and winter and summer measurements fluctuate. After our conversation about the increase in flooding and the increased riparian zone, I wonder what the stream profile would look like today.

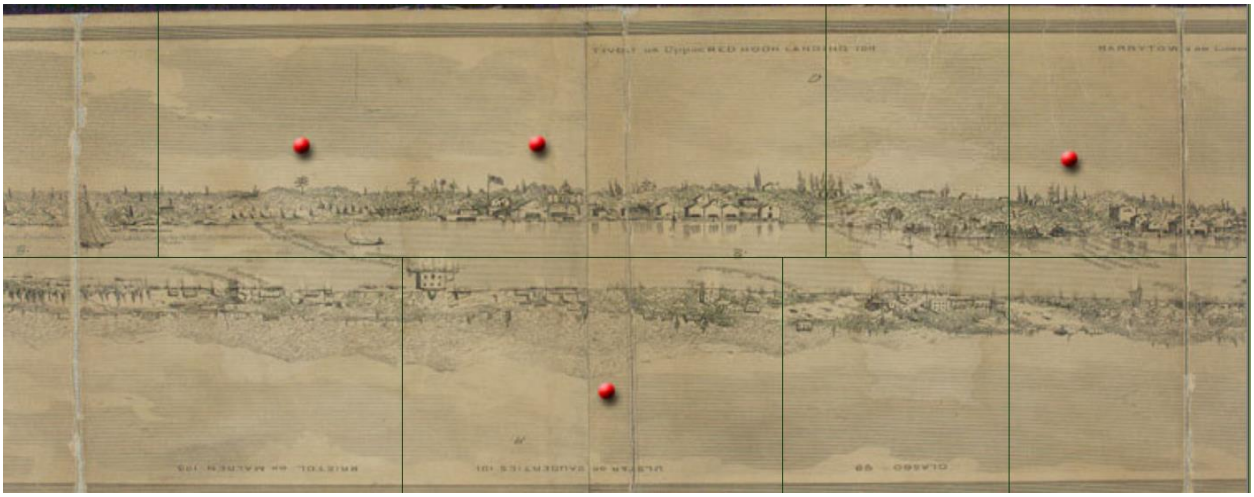
[19] Stream age can be determined by a number of things. One, which Chris is referring to, is the shape of the stream. Young streams often have a straight, narrow path with steep slopes. A mature stream will have gentler slopes, a floodplain, and become wider and shallower. Small meanders in a stream get larger as sediments continue to deposit downstream creating areas of friction, which allows greater water velocity in the channel and erosion of stream banks. An old stream will have many meanders with a large flood plain.



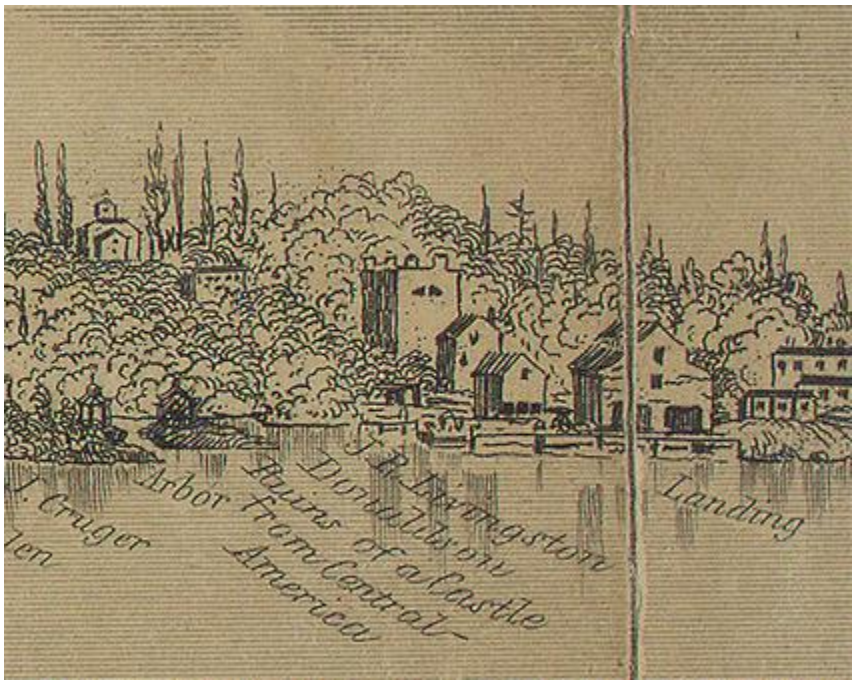
Map 6: 1908 survey map of the property done by Frank Teal (Image courtesy of Chris and Claudine Klose).

Over one hundred years have passed since Teal's survey, and the farm is still active. The fourth generation of Kloses are growing up, hopefully to keep the farm going as it has "through thick and thin." But Chris acknowledges how hard it is to keep the land as an active farm. Farming is a twenty-four seven, three hundred sixty-five days of the year job, and one that is difficult to make profitable, even when they are producing high quality products. This farm though is a "family beacon" — the land, the barns, the Saw Kill, are tied into the makeup of this family. From our conversation, I would add that it is also a beacon for the Saw Kill — a place to escape the development that occurs along its other banks, and a reminder of a different time in its history.

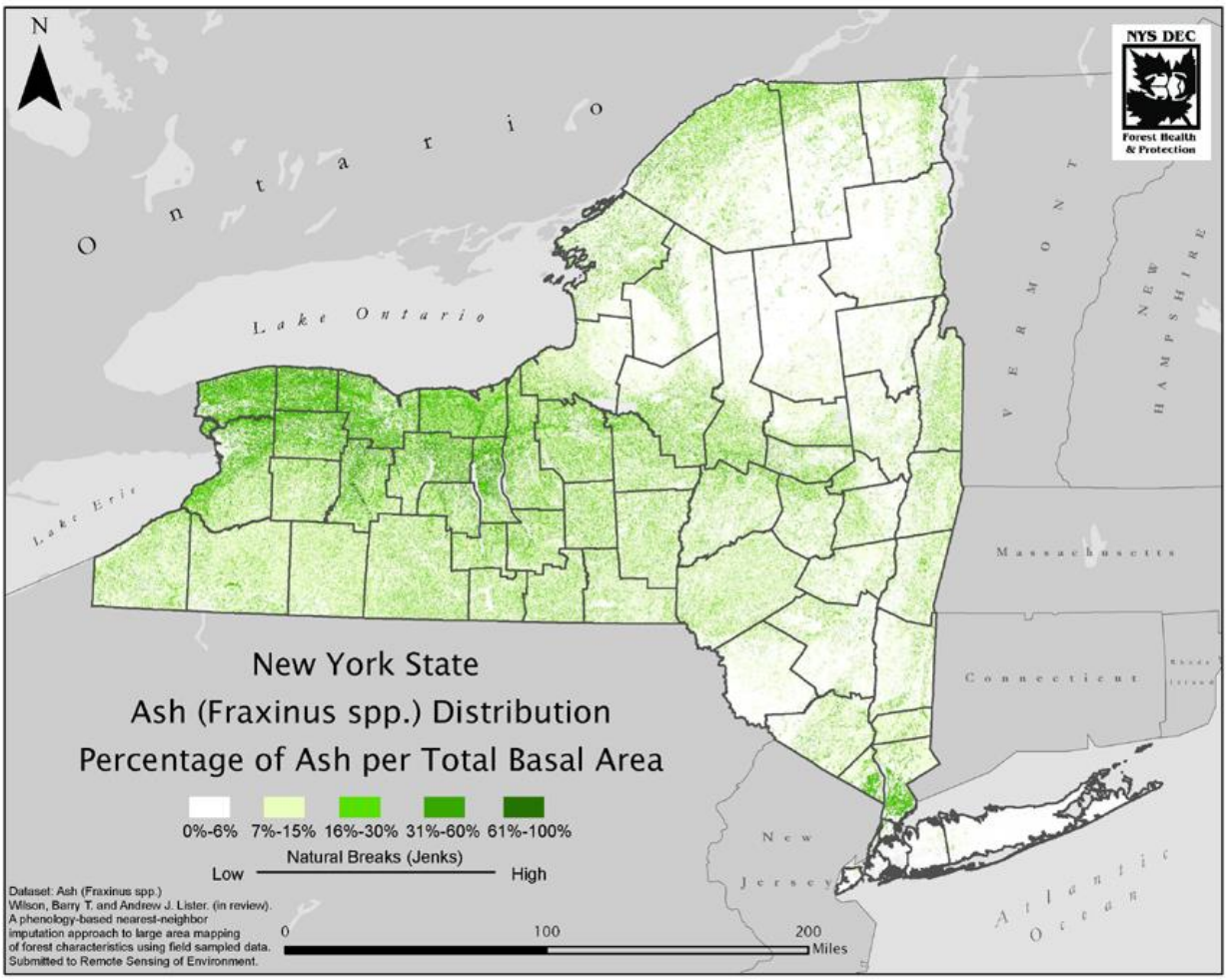
Figures



Map 7: Wade & Croome's 1846 Panorama of the Hudson River from New York To Albany (Source: New York Public Library's Online Exhibition Archive).



Map 8: Close-up of the Montgomery Place landing from Map 7. The map shows there were more structures directly on the river's bank then there are today.



Map 9: New York State map depicting the distribution of Ash trees. Ash make up approximately seven percent of the state's forests, making them an important player in the regional environment (Source: Wilson and Lester, n.d).

Second Reflection:

(The following was taken from an email I wrote to myself on January 21st while traveling through Taiwan with my sister during winter break, and then added to right before I met with the Kloses upon arriving back in New York beginning of February.)

They called it the Yin Yang Sea.

We followed the coast on bikes with no air in the tires past abandoned boats and packs of stray dogs to cross the estuary. The water under the bridge was a green that was mostly grey. The coast line was a bright aquarium blue. Between that and the green grey was a pebbled beach with a series of small tents. The tents looked flimsy compared to the large expanse of blue just a few feet away from where they rested.

My sister cycled beside me. In our emails as we parted ways at the airport some two weeks later, we called each other our piece of home. A mobile transitory cycling home. So I could be halfway across the world, a day ahead of the rest of my family in the confusing way time zones work, and still feel at home. But the tires were mostly flat, and as we started the slight incline on the road that would lead to the point overlooking the ocean, I found myself cursing myself, the bike, my sister, and any challenge that had previously occurred on the trip.

We turned off the highway on to the small potholed road leading out to the point. My body held stationary but the wheels moving from the previous momentum, I coasted over the bumps, no longer cursing, but laughing at the state of the bikes. We turned in to a place we had heard served coffee. “How did you find this place?" The recurring question we still did not know how to answer, how did we find this place? The rest of the afternoon was one of those stories from travelling that I love, where strangers become friends in the course of the afternoon over coffee, sweets, and plans to build tiny houses. But, to relate this story on the Pacific Ocean to the Saw Kill takes me instead to the view from the top of the building we had chanced upon. From their rooftop, and even their kitchen window, was a perfect view of the Yin Yang Sea. The name derived from the two colors of the sea formed by the interaction of the murky estuary entering that bright aquarium blue. And next to the divide, the pebbled beach with scattered tents. Our host, Ray, explained the tents set up around this time every year for the eel season.

Standing over the Pacific Ocean on a converted army fort, on the island of Taiwan, in my clear rain poncho, those words transported me back to a different home. One where another murky estuary flows (connected to a different ocean) and eels migrate up the river into the different branching tributaries, such as my own, the Saw Kill. Funny that the sight of the tents where fisherman sleep during the day then fish at night could simultaneously spur on both the feeling of homesickness and at home.

These eels must be different from the American Eels, Anguilla Rostrata, that I know. Eels found in the Saw Kill travel miles from the Sargasso Sea as little glass eels, not even the size of my pinky and transparent. I describe them to my family as little vermicelli noodles. The eels in this story are the Japanese Eel. At this stage of their migration they might look identical to their American counterpart although their origin is in the Western Marianna ridge. I repeat after Ray attempting to say their name correctly, my voice missing the nuanced tones of the word eel, pronounced close to Manyu. Ray jokes with us that my sister will return to paint here, and I will

> return to count the eels. We have been separated into the artist and the scientist many times — often for ease of description in a language we don't know.
>
> Back at home, eel migration is still a month or two away. Sometime in March, I will help set up the fyke net and be part of the group that checks the number of eels every day as part of a larger Citizen Science effort that happens all along the Hudson River. This net sits at the mouth of the Saw Kill, and the counted eels are hand carried past the lower dam to help them overcome some of the obstacles in their way, although their ability to slither over land if need be makes them far from helpless. These eels will spend most of their life in the Saw Kill, growing to their yellow juvenile stage and finally into sexually mature large silver eels, which will then make their way back downstream and to the sea they came from to spawn.

The Kloses were one of my first interviews of the spring semester after spending six weeks with my family in Texas and travelling with my sister. During our conversation, I was reminded of this moment over winter break when I was somewhere completely different than the Saw Kill yet found myself still creating connections to it. It made me wonder if this is a part of attaching oneself to a place, a process of it becoming the place one relates to every other place encountered. In Chris and my conversation, my mother's memories of her town related to his memories of Red Hook, or my experience with a recent flood connected to his knowledge around flooding on his land. And relating is not a refusal or talking over of someone's experiences, but rather a way of learning one another's places through an exchange. Compared to all the people I encounter in these stories, I am still new to this area. My nearly four years here is hardly measurable to the time the Klose family has occupied this land. Thus, the way Chris made his place relatable to me felt like an act of generosity to help me make this my place too.

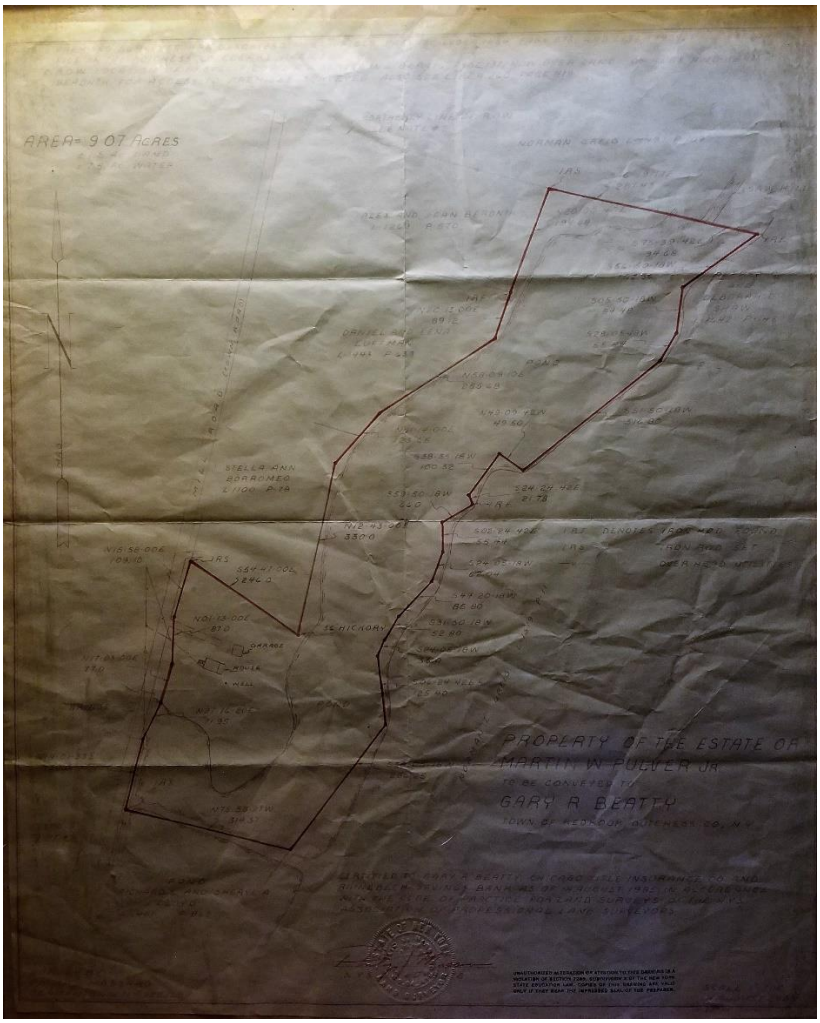
For the Kloses have fully inhabited their place along the Saw Kill. Their time spent making it a home, a livelihood, and learning the history, suggests to me a "lived landscape," a phrase borrowed from anthropologist, Tim Ingold (1993, 152). Besides our one tangent estimating the age of the Saw Kill, the rest of our conversation resided in the course of human history (really a more recent European history). The experiences that took place on the human timeline from the buying of the property, the changes in agricultural practices, to the growth of

the town, give the place definition and memory, while also physically shaped the land. The reshaping and enlivening of the lived landscape is summarized in Ingold's "dwelling perspective," which looks at the landscape as "an enduring record of— and testimony to — the lives and works of past generations who have dwelt within it, and in so doing, have left there something of themselves" (1993, 152). For good or bad, the activities of the people who have lived on the property and surrounding it, are imprinted in the landscape. This is more tangible in the examples Chris gave of the banks widening or the roads becoming paved, but also in the less visible chemistry of the water as pollution sources changed. Dwelling looks at the land and water similarly to a historical document in the archives; understanding why the landscape has come to be this way is one way of telling a people's history of the area.

To me, the word "dwelling' implies a home. On the map Chris drew (Map 5), he placed a dot on their important place in the stream, the swimming hole. There are no other landmarks on the map besides their house, so finding the exact place would be difficult for someone outside the family. A dot on the map is the kind of place I imagined I would encounter often in my conversations. I assumed people would have a locatable special place on the Saw Kill, however, the Kloses were the only ones to do so. This dot marks that although much of the Saw Kill is out of their control, there is still a part of the stream that fully belongs to them and their family. The balance between what is shared and what is private is a continual theme throughout the places and people I encounter.

Hook, Line and Sinker: Gayle and Gary Beatty

Mill Pond rests outside of Red Hook, above the Recreation Park, and is divided by the bridge on Mill Road. While attempting to research the pond, I came across the blog for the bait shop Hook, Line and Sinker. I reached out to the email on the blog, which led me to visiting the shop soon afterwards in late December. There I met both Gayle, the owner, and her husband Gary, and was welcomed into their home on the same property that borders the pond. The property and house have been in Gary's family for over one hundred years, and he shared his family history through stories as well as artifacts, such as the title and deeds for the property. Gayle did not grow up here, but upon settling here in the late 1980s, her passion for fishing and later her more unconventional research into Bigfoot, has led her to explore this area to its fullest. The two of them share a love for the local history of this area, and the importance of sharing it.



Map 10: Survey of the Beatty's property done by Phillip J. Massaro on August 14, 1985 (Photo courtesy of Gary Beatty).

I met Gayle at her bait shop, Hook, Line and Sinker, towards the end of December. The entrance wall is a collage of pictures of customers and the fish they have caught in Mill Pond behind the shop. The pictures show pickerel, bass, and trout. In the corner next to the door, there is a box of the children's book she recently wrote, *A Young Researchers Guide to Bigfoot* (2017), and on the checkout counter are a number of glasses with Bigfoot designs a friend of Gayle's hand painted. This front room is where Gayle conducts bait shop business. Through the entrance, past the fishing pictures, a small statue of Bigfoot marks the other use of the shop as a center for Bigfoot research.[20] This back room is filled with large plaster casted tracks, newspaper clippings, photos of shadows in the woods or tree breaks, and further evidence she and others have collected. Past this, the back counter holds examples of the floral arrangements she does on the side.[21]

Gayle introduces me to her husband, Gary, and we settle into their home only a few feet from the shop. As I setup the recorder, I worry about picking up sound of the cat purring on the table between us as we talk. Listening back, the cat's purrs are absent, but the occasional squawk of the bird in the next room interrupts the recording. Gayle begins to scroll through pictures on her computer. People know she is interested in local history, so they are always sending her articles or photos they find. While she looks for items of interest, she prompts Gary to begin his history, "Tell her about how the family acquired the land."

[20] According to the Bigfoot Field Researchers Organization (Fahrenback 2002), Bigfoot, also known as Sasquatch, is a creature resembling a mix between human and ape. Sasquatch comes from the word "Sesquac," which comes from the Coast Salish Native American tribe in British Columbia's word for "wild man." Variations of words for such a creature span across at least sixty different Native American tribes. The term "Bigfoot" was first used in newspapers in the 1950s following multiple sightings in Northern California. The creature's existence has been debated over the years. Evidence such as tracks are available along with footage on camera such as the famous Patterson Movies in 1967, but researchers are still searching for a clear picture or hard evidence like a body to convince the larger public.

[21] When I revisited in late March, they had remodeled the entire shop so that it is now one room, and mostly taken up by bait merchandise.

Gary begins his story, and afterwards I draw out the family tree to make sure I kept up with the different family members he mentions. He traces the land back to his great grandmother, Amanda Corkins. When her brother was killed during the Civil War, the family received one hundred dollars in compensation. With some portion of the money, her husband, Gary's great grandfather Cambridge Fulton, the area's Commissioner of Roads and cousin to Robert Fulton who is known for the Hudson River steamships (Image 1),[22] bought this piece of property. They knocked down the old house to build the one still standing today. While building, the family stayed at the Elmendorph Inn[23] and nearby at the old Martin farm.

Amanda Corkins had four surviving children. There was Gary's grandmother and her sister, and two brothers. Of the boys, the younger brother, Charles Fulton, died at a young age after going ice skating with the next door Barringer boy on Mill Pond; they both died of pneumonia at seventeen years old. The other brother, William Henry Fulton was a member of the area's militia. His initials WHF, along with the date 1889, are carved on a rock in the house's cellar (Image 2). Below in Image 3, William poses behind a horse and sled used for carrying blocks of ice from the pond to the ice house that stood near where they are pictured at the dam.[24]

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[22] Robert Fulton built the first commercially successful steamboat officially called the North River Steamboat, and more popularly known as the Clermont after his partner's, Robert Livingston, Hudson Valley estate. The Clermont was launched in 1807 and ran successfully until 1814. Together Livingston and Fulton ran a monopoly on the Hudson River, where their steamboats were the only ones allowed in operation until 1824. ("North River Steam Ship. . ." 2017, "Steamboats on the Hudson..." n.d.)

[23] The Elmendorph Inn Community Restoration Project describe the Inn's placement in the village of Red Hook at what used to be the intersection of the Albany Post Road and the road to Connecticut. It began as a farmhouse, however, by 1783 it was sold as a tavern. By 1785, it was a stop for the stagecoach between New York City and Albany. In 1813, the Inn was used for meetings for the newly incorporated town of Red Hook and as a courtroom. By 1854, the railroads and steamboats made the Old Post Road less travelled, so the Inn reverted back to its original use as a family home. It had other uses as a kindergarten, county store, antique store, until abandoned; then becoming the home of Historic Red Hook, which successfully got it listed on the National Register of Historic Places.

[24] The 1798 map (Map 11 and 12) depicts the grist mill on Mill Pond owned by Robert L. Livingston, better known as the Chancellor Livingston, who resided in Clermont. By looking through old, local newspaper articles, I found that at some unknown date the mill was passed on to the Hendricks who then changed the name to Red Hook Mills in 1860 (Figure 1). However, when H.H Conklin took over the mill in 1862, it was still referred to as "Hendricks Mill" ("Value of two cents" 1862). There is evidence of another proprietor, Charles White, in 1885 ("Notice" 1886). It changed hands again in 1893, when the Fraleigh's used it for a cider press (No title 1893).

Image 1: Family photograph depicting a Robert Fulton steamboat near Poughkeepsie (Photo courtesy of Gary Beatty).

Photographs from the Historic Red Hook Society show the mill in 1899 still operating under the name Red Hook Mills (Figure 2). Articles from 1903 describe the unfortunate story of a twelve-year-old boy accidently killed when playing with a shotgun while with his friends, including Oliver Rider, at the Red Hook Mills where they all lived (Figure 3). Oliver Rider came to own the property, as well as become Mayor of Red Hook ("Dad Took Office 50 Years Ago" 1979). A newspaper article seen at Gayle and Gary's read the mill building, known as the "Red Hook Mills," was torn down in 1930. A reader write-in for the *Rhinebeck Gazette* in 1953, describes the pond as "abandoned" and "muddy" with ruins of a previous mill visible, suggesting the dam was abandoned and unused at this point (Figure 4). The next mention of the property suggests it stayed in the Riders family as a 1976 article from the *Taconic Press* mentions a dispute between Rider and his neighbor about junk on the property ("Neighbors Dispute Junk" 1976).

Another article from 1980, shows that Rider, who became a Red Hook Mayor like his father, drained the pond by opening the dam gates. "The water level has dropped several feet since Sunday, exposing green plant growth and casting a foul odor in the area. Some small dead fish were lying on top of what once was the pond floor" (Figure 5). The article reveals he used the dam for electrical power he sold to Central Hudson.

The same article reveals an interesting description of activity around the pond during the 1980s. "Rider, a former village mayor, also said that he might try to prove that septic tank refuse from a dump on the north end of the pond is leaching into the pond's water. William Anagnos owns the dump behind Mill Road Apartments where the refuse from local septic tank cleaning businesses is dropped. County health inspections last year, however, showed that the dump was not a hazard and that sewage was not leaching into the groundwater. The pond contains such fish as bass, trout and sunfish, according to Tim Van Hoesen, 17, who lives on Apple Ring Road, which is next to the pond. 'I looked outside my window Monday just before I was going to go fishing, and there was hardly any water left,' Van Hoesen said" (Figure 5) The septic pit is mentioned in several articles from this time, as neighbors all along Mill Pond complained of the possible health problems caused by the open pit used for septic waste (Figure 6 and 7).

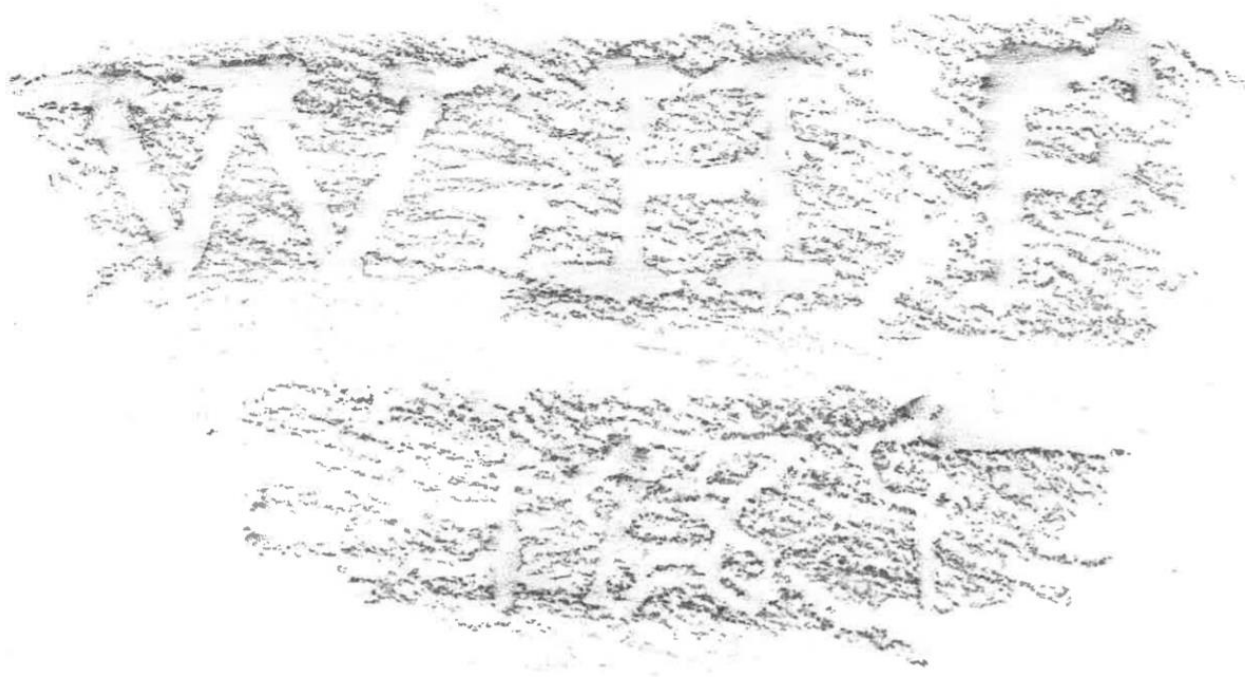

Image 2: An engraving Gary took of William H. Fulton's initials carved into a rock in the cellar in 1889. (Engraving courtesy of Gary Beatty)

Image 3: Gary showed me this photo of his great uncle William Fulton in front of the Red Hook Mills. There is handwriting that reads "Uncle Bill" and an arrow pointing to the figure in the middle. (Photo courtesy of Gary Beatty).

As we look out of the kitchen window onto the pond, I try to imagine the ice harvesting that once took place here.[25] Although the ice industry ended once refrigerators replaced ice boxes, the frozen pond remains important as a source of business during ice fishing season. At the shop, Gayle is part of the statewide NYS Winter Classic Fishing Tournament for ice or open water fishing. During the tournament people may bring their fish into one of the few certified weigh-in stations, one of which is in Gayle's shop where she gets her scale recertified each year. Along the Saw Kill, people ice fish at the Bard waterfall or on the pond for Bass or stocked Trout. Last year, Gayle and her son caught two Bass out in the pond, each over five pounds. In the spring when the ice is melted, they sell Herring from the Hudson River, which people use for Striped Bass season.

Gayle and Gary point my attention to the levy in the distance. People fish off it now, but at one point it went across the pond separating out a section used for a gravel pit.[26] Gary was told by his brother that before the gravel pit the area was a burial place for African American slaves. The bodies and markers were supposedly moved to the other side of the pond to make way for the pit, an act both Gayle and Gary find disrespectful. Storms in recent years have broken apart the levy, so one can no longer walk all the way across. Next to the levy is the new bridge, built in 1933, after cars had replaced the horse and carriage (Image 4). Next to the new bridge is their dock. Gary and I walked out onto it when I revisited in March, and he pointed to the bottom of the pond where broken up pieces of concrete are remnants from where the old bridge and road used to be. 1933 was the same year his grandfather built the garage, and two years after his grandmother acquired the house.

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[25] See Figure 8 for a photo of the barges that carried the ice harvested on the mainland down the Hudson River.

[26] An upstream gravel pit is mentioned in Bob Bard's story as well, and this could be the one he is referring to. Susan Ellis also brought up a gravel pit that disturbed residents, not so much because of the environmental impact, rather because of the noise that went along with the machinery.

Image 4: Handwriting on the bottom of the photo reads “New Bridge over Mill Pond 1940.” Although Gary remembers another family photo that says the bridge was built in 1933 (Photo courtesy of Gary Beatty).

It is his grandmother’s ownership of the house that Gary has personal memories of. He would visit during the summers as a child, learning all the best fishing spots. He remembers the pond being deeper than it is today, perhaps because past dam owners like Oliver Rider used to dredge the pond to remove the algae. Dredging is no longer allowed because of the New York Department of Environmental Conservation’s (NYDEC) wetland designation, and there are periodic algae blooms Gayle monitors during the summer. Later, as the house passed through the family, he rented then eventually bought the property from a cousin. He remodeled the house, while maintaining quirks like its short doorways that give it character. “There’s a lot of history here," Gary ends with this statement. We pause to look around the room that is now their home, seen through the half-decorated Christmas tree and dog on the floor, but now seems full of the memories of the family tree he has spoken of.

“It’s like we’re on a peninsula out here, water all around us.” Gayle jumps in to describe the property. She is newer to this land having grown up in Pine Plains on the lake at the base of Stissing Mountain. She bought the house next door in 1989 and set up a bait shop in the barn. She met Gary because of their dogs; she had a great Dane, he an Irish Setter. The dogs had a trail between the two places. Animals are throughout the property. He built her a chicken coop, which she used to show exotic chickens at the Dutchess County Fair. They have rabbits and had ducks before some predator got to them. Gayle describes the beaver, otter, mink, and Bald Eagles that make up the wildlife around the pond. “Everyone who comes here, loves to be here,” Gayle says, showing a passion for the property shared by the two of them and audible in their description of their location on the pond as “perfect."

Gayle’s passions for the pond and fishing, seen in her bait shop, are connected to her other passion through the shop’s additional use as a centering place for her Bigfoot research. She describes her research as another passion, but through articles I read prior to meeting her, I discovered she is also one of the lead researchers of Bigfoot in the Hudson Valley. Growing up, she had never heard of Bigfoot. Her first encounter happened when she was fifteen or sixteen camping by herself on Stissing Mountain. That night, she first heard an owl hoot and then a “god awful scream, this earthly, wasn't any kind of animal known around here." She “grew up not fearing anything," but upon hearing the sound she ran home scared. It wasn’t until later in life, around 2011, while watching the show “Finding Bigfoot” when she was reminded of the event. The show played a recording of a Bigfoot call and she recognized the howl from what she heard that night on Stissing Mountain. At that point, she began to look up Bigfoot sightings in Dutchess County. The first sightings listed were from the road she grew up on, Lake Road, in Pine Plains. After this, she began exploring the county, meeting other researchers and becoming

passionate about the subject. She accumulated knowledge and evidence, eventually becoming one of the main authorities in the Hudson Valley.

“I can tell within fifteen minutes of being in an area if there’s been activity." Her experience hunting and fishing translated well to the field research in different environments and gave her a familiarity with paying attention to natural signs. When she is out conducting research, she looks for tree breaks, stick structures (dome or teepee shaped), rock formations, arches (sapling that are bent and weighed down, perhaps pointing to clan or water), tracks, hair (rubbed on tree or barbed wire fences), and scat. She listens for wood knocking, a human like whistling, mimics of animal noises, and a type of chattering. Her description of her field research sounds similar to me as that of an ecologist who is tuned into the changes or disturbances that occur in their surrounding environment.

When I ask if the Saw Kill or Mill Pond play a role in her research, Gayle responds with anecdotes to show the importance of water. The first sighting she remembers hearing about was a story of two fishermen happening upon a blond Bigfoot on their way to the pond in the 1980s. Another more recent encounter occurred in 2014 at the levy we were just looking at. Friends of hers were fishing there when a large rock was thrown into the water, leading them to ask Gayle what kind of animal could do such an act. The same year, Gayle went boating up the Saw Kill to check on their upstream property. The property is mostly pine with bushy undergrowth. As they walked through, Gayle tripped on some of the undergrowth and looked up to see a nest, which she describes as fifteen feet tall, covered in vines, a stick stuck in the front with an opening in the center, and the head of a dead carp nearby. Although unsettled by evidence of activity on her property, she was not surprised given their proximity to water. They like to be near a water

source, often leaving branches pointing to the direction of water, in this area the Saw Kill or Hudson River.

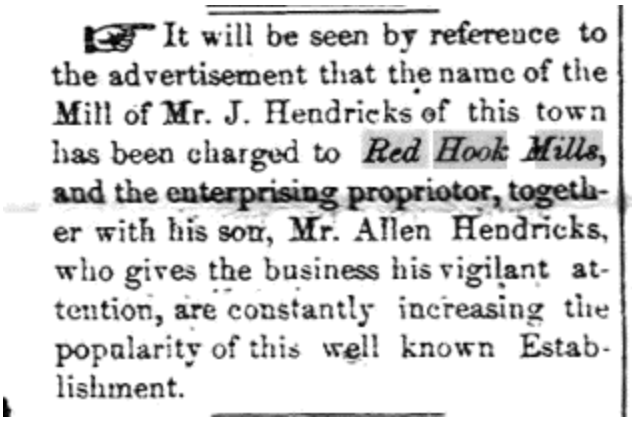
Gayle acknowledges that the research can be frightening. The creature they are looking for is not like a regular animal one might study. Its mysterious nature makes exploration unsettling as well as keeps it interesting. She is in a constant state of research and discovery since there is still so much unknown about the creature, such as their breeding, food or language. The research has taken her across the county and connected her to a global community. Every place has its own creature bordering on the mystical, whether it is a Yeti, Yowi or a Bigfoot — and a community of people dedicated to understanding them.

Meanwhile, their place has become a centering point for Hudson Valley Bigfoot research, while maintaining its focus on the fishing activity in the pond and its main function as their home, all of which rest on the pond's edge. Gayle walks me out to the car, and we take a last look out on the water together. It really is a beautiful spot. She tells me one last story — that somewhere in the pond there might be the record for the biggest Largemouth Bass in New York State. A while back, a young boy caught and released one that was around ten pounds. The state record is eleven pounds and two ounces. By now, if the fish is still alive, it could be twelve or thirteen pounds, just waiting to be discovered.

Figures

Map 11: Alexander Thompson's *Map of the Town of Rhinebeck in the County of Dutchess: Surveyed in December and January 1798.* The map shows houses, roads, mills, and landings along the Hudson (Source: Library of Congress).

Map 12: A close-up of the above 1798 Thompson map. This portion of the map shows the "Chancellors G.M," G.M standing for grist mill, on the Saw Kill and what is now Mill Pond (Source: Library of Congress).



☞ It will be seen by reference to the advertisement that the name of the Mill of Mr. J. Hendricks of this town has been charged to *Red Hook Mills*, and the enterprising propriotor, together with his son, Mr. Allen Hendricks, who gives the business his vigilant attention, are constantly increasing the popularity of this well known Establishment.

Figure 1: *Red Hook Journal* article from 1860 reads, "The name of the Mill of Mr. J. Hendricks of this town has been changed to Red Hook Mills" (Source: Old Fulton New York Post Cards).

Figure 2: *Mill Dam, Red Hook, NY* taken in 1899 by Harriet Martin Dey (Source: Hudson River Valley Heritage).

A BOY SHOT

Lad Twelve Years Old Killed in Red Hook.

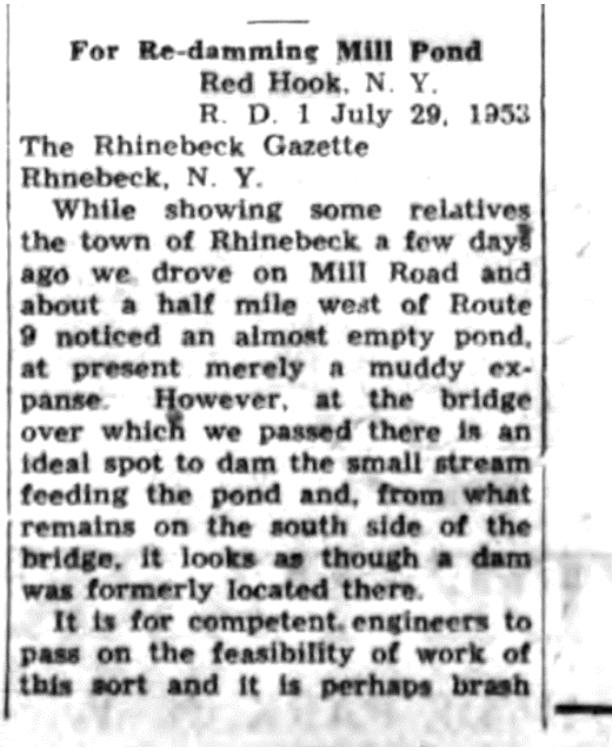
A DISTRESSING AFFAIR

Playmate Did the Shooting and Says It Was Accidental.

While playing with two companions about his own age Alexander Funk, twelve years old, shot and killed Millard Edward Best at Red Hook Saturday afternoon. Best's mother heard the shot and opened the back door when the boy fell dead at her feet. Funk ran home and afterward told Coroner Carroll that the was aiming at a stick with a small rifile when Best stepped in range just as he fired.

The boys were playing o'cat in the dooryard of Samuel Best, father of the Best boys, who lives at Red Hook Mills, one and one-half miles from Red Hook village. Alexander Funk, who is called "Sandy," a boy of 12, sat in a hammock, holding a rifle owned by Oliver E. Ryder, in which was a 22-calibre bullet. Samuel Best and young Ryder were looking for the ball which had rolled down a bank, when they heard the rifle discharged and at the

Figure 3: 1903 article from *The Columbia Republican*, "A Boy Shot." (Source: Old Fulton New York Post Cards).



For Re-damming Mill Pond

Red Hook, N. Y.
R. D. 1 July 29, 1953

The Rhinebeck Gazette
Rhnebeck, N. Y.

While showing some relatives the town of Rhinebeck a few days ago we drove on Mill Road and about a half mile west of Route 9 noticed an almost empty pond, at present merely a muddy expanse. However, at the bridge over which we passed there is an ideal spot to dam the small stream feeding the pond and, from what remains on the south side of the bridge, it looks as though a dam was formerly located there.

It is for competent engineers to pass on the feasibility of work of this sort and it is perhaps brash

Figure 4: 1953 article "For Re-damming Mill Pond," from the *Rhinebeck Gazette* (Source: Old Fulton New York Post Cards).

Water usually flows over the dam, but not since Oliver Rider opened the gates, draining M Pond of most of its water.

Rider empties Mill Pond

by MARK VOORHEES

The Mill Pond in Red Hook has been drained to a fraction of its original size by Oliver Rider, who owns a dam on the south end of the pond.

"I drained it because I wanted to," Rider, a former Red Hook mayor, said.

The water level has dropped several feet since Sunday, exposing green plant growth and casting a foul odor in the area. Some small dead fish were lying on top of what once was the pond floor.

Rider opened the gates on his dam Sunday leading to the draining. He uses the dam for electrical power.

The deed to his property on Mill Road gives Rider the authority to change the course

Rider said that he might ask the Red Hook Rod and Gun Club to clean the weeds from the pond, while it is drained, but Glen Denu, the club secretary has not been notified recently by Rider.

Rider had approached the club several times in the past about cleaning the weeds in the pond.

But Monday Denu said he did not know the reasons for the draining.

"I don't know why Rider did it," Denu said.

Rider also said he would have one of the dam's gates fixed while the water level in the pond was low. He gave no definite time when he would refill the pond.

"It'll get higher after a

pond 10 years ago and c some of the weeds in it.

Rider, a former v mayor, also said that he try to prove that septi refuse from a dump on th end of the pond is leechi the pond's water.

William Anagnes own dump behind Mill Apartments where the from local septic tank cl businesses is dropped. health inspections last however, showed that the was not a hazard an sewage was not leechin the groundwater.

The pond contains such bass, trout and sunfis cording to Tim Van Hoes who lives on Apple Ring which is next to the pond.

"I looked outside my w

Figure 5: 1980 article from *The Gazette Advertiser*, "Rider Empties Mill Pond" (Source: Old Fulton New York Post Cards).

Board dumps problem on ZBA

The Red Hook Town Board decided at its meeting on Tuesday, July 11 to turn the controversy about the Mill Road dump site over the town zoning board of appeals.

Town superviser Robert Bowman said the board agreed to recommend to the zoning board that use of the dump site be restricted to Red Hook residents, in order to limit the amount of refuse coming in.

Residents in the area of Mill Road have been complaining for months about the odor emanating from a dump site used by septic tank contracter William Anagnos. The county health department has said the dump site is not now a health hazard, but residents present at the board meeting said the smell had been noticable as recently as last Saturday.

Since Anagnos is not in violation of any current law, Bowman said the only way to solve the problem may be to reduce the amount coming into the dump.

The board also discussed a proposal by Klose and Melley to sell the Annandale Water Works to the town to create a municipal water system. Although the villages of Red Hook and Tivoli have public systems, the town does not. Bowman said Klose and Melley, is asking $95,000 for the operation.

Bowman said the board decided a public meeting should be held on the proposal, so the board could determine how the water works might be financed, and residents of the area served by the Annandale plant could express their opinions on the matter.

At the meeting, the board eliminated the post of coordinator of grants, now held by Gene Mason, to save money at a time when the town is unlikely to be applying for grants. The salary of the coordinator was $100 a month. Bowman said the board temporarily eliminated the post once before, then recreated it when the need arose.

Figure 6: "Board Dumps Problem on ZBA" (Source: Old Fulton New York Post Cards).

Open pit sludge upse

An open pit sludge disposal site in Red Hook which neighboring residents claim is a possible source of pollution to nearby air and groundwater will be discussed at a special meeting of the town board tentatively scheduled for Monday, June 4.

The focus of the controversy is a sludge disposal site located north of Red Hook's Mill Pond. The site, which has been in operation for several years, is owned by William Anagnos.

A number of residents on nearby Mill Road and Apple Ring Road claim they are troubled by odors stemming from the pits, which are used to dispose of septic system pumpouts.

The disposal site, located in a residential zone, is operated under a county department of health permit and has been operating since before the town passed a zoning ordinance, which would have forbidden the site in that location.

Several neighbors have also voiced fears that the sludge could possibly contaminate nearby water wells, including those serving the Mill Road School.

Sees no danger

Health department administrator Jack Hill, however, said that the site was under "continuous surveillance" by his department and that there was absolutely no evidence that nearby wells were in danger of becoming polluted by the sludge. He noted that the site had been designed according to health department standards and that the department continually monitored the groundwater in the vicinity through a series of test wells.

Hill said that improper operation of the site — negligence in covering or lining the sludge pumped into the pits — could cause odors to spread in the neighborhood but that staff members have checked out three separate odor complaints in the past week — all of which have turned up negative. In one instance, Hill said, a department representative was in the neighborhood within 15 minutes of receiving the complaint but was unable to detect any odor away from the site.

Proof Needed

Hill said that unless there was some proof that the sludge dump was violating the sanitary code the health department had neither the intention nor the right to close the site down. He also mentioned that Anagnos operated the only sludge disposal site in the northwestern part of the county, except for Tivoli, which operates a disposal site in conjunction with its sewage treatment plant.

"We can't reject the site just because the neighbors don't want it there," Hill said.

The complaining neighbors,

Figure 7: 1979 article from *Taconic Newspapers,* "Open Pit Sludge Upsets Town Residents" (Source: Old Fulton New York Post Cards).

Figure 8: *Ice Barges on a Body of Water with Mountains in the Background*. Taken by Harriet Martin Dey in 1889 (Source: Hudson River Valley Heritage).

Third Reflection:

Early on in my writing, immersed in a literature around place, and before I had begun to meet people, I tried to guess what kind of character the Saw Kill would be, or in more literary terms, I attempted to personify it. I asked questions such as whether the Saw Kill would have a gender? Whether it was old or young, wise or naive? Was it a helpless character or a proactive player? The image fueling the writing was of the Saw Kill that runs through Bard Campus, the part I knew best at that point. This Saw Kill has dramatic drops in elevation, two waterfalls, fast moving water that then meets a quiet bay with views out to the Hudson River. However, when I went down to the mouth this fall, I saw the whole bay covered in water chestnut — a blanket of green. A month later and the bay was clear again, with the carcasses of the chestnut on shore. I imagined it then in the winter, covered in ice. The constantly changing landscape made it difficult to prescribe one character onto the place. As I started to meet people and talk to them about the Saw Kill, I abandoned this question, as what seemed important was the person's personality and identity, versus that of the Saw Kill which I could not pin down.

After meeting Gayle and Gary, I returned to my starting questions around character. I found myself with them, and others, thinking of the place along the Saw Kill where I met them or they described *as them*. Geographer, Donald W. Meinig in his thoughts on place, claims that an area has a "personality," so that a geographic location can have character (1983, 319). I would argue this personality comes from the people who interact with it most. As Gayle and Gary spoke about their piece of Mill Pond, it took on a character defined by them and their interests.

The connection between individual and place is seen on the map Gayle and Gary showed me, which is their property map depicting their home in relation to the Saw Kill. Like others along the stream, the Saw Kill is part of their home, their land, or their property. The Saw Kill

connects them to others, but this area is particular to them with their character, memories, and stories written over it. In Gary's stories, his historical knowledge around the Saw Kill centers around knowing his family's history. He uses his own history to then connect to the history of the area.

Gayle's knowledge differs in that it revolves around a community. Gayle described how she has found a community around Bigfoot exploration. The community is grounded in their shared interest of building knowledge in the field. My project is similar in its goal of building or showing a community connected through their knowledge of the Saw Kill. As interviews leave the formal interview structure to become back and forth conversations, I share information I have found or what is coming up in other conversations. This is where the movement from upstream to downstream is not a useful device, because the knowledge movement does not flow in a one-way direction. The connections beginning to take shape move in both directions. I am reminded of geographer, Tim Cresswell's writing on place; he describes the process in which an individual's history of place eventually joins a communal history, and soon their roots are intertwined (2013). The place becomes defined by a shared history and knowledge, rather that of an individual (Cresswell 2013).

How to reckon these two ideas then of the stream's personality or character based on individuals, along with a communal history that is forming? I do not have an elegant answer except that I think the two can coexist. Throughout the project, I find a balance between the personal and the communal. Places are defined and bordered by individuals, however the material of water passes those borders and facilitates a community connection. The character of the Saw Kill becomes less defined and more complex with the addition of personalities and histories.

A Pause in Mill Pond: Sheryl Griffith

My conversation with Sheryl took place at her home next to Mill Pond on November 12th. I first met Sheryl through my work with the Saw Kill Watershed Community (SKWC). She is an active member who regularly attends meetings and samples water with the village team each month. She is one of two members who were part of the original monitoring program in the 1970s, although then she was more focused on the recycling and mapping portion of the group's work. We sat in her kitchen and our conversation ranged from the fish ecology set up by the dams, the different birds she encounters, her history of work with the Saw Kill, and her boat building. At the end of our conversation she showed me the boat she is working on in her basement — this, along with the book she is building the boat from, was the inspiration for the start of her story.

Map 13: A map of Sheryl's parcel of land next to Mill Pond (Courtesy of Sheryl Griffith and sourced from: Dutchess County "Parcel Access").

Sheryl moved here from California in 1968. There, she describes, streams did not just run through your backyard as the Saw Kill does. When she moved here, she wanted to be near water, on water. So she began to build a boat some twelve years ago. The long cedar strips are bent and glued together; a rainbow of musty brown constructed. Like an enlarged toy, it is only meant for one. The molds sit in the basement, some broken from when a raccoon knocked them over. The strong back rests on the ground.

> *A simple building board is made on which to erect molds cut with the aid of patterns. For the wee lassie, nine molds are enough to create the shape of the finished boat. These molds do not remain in the boat; rather, they are removed after the hull is planked. Around these molds we bend strips from end to end, temporarily fastening them to the molds, while edge gluing them to each other with carpenter's glue.* (McCarthy 1996, 2)

A twelve-year pause; a project left and returned to. This pause in the building of a project and our situation on the pond reminds me of Yi-Fu Tuan's thought that a place can also be thought of as a rest or pause in space (Yi-Fu Tuan qtd in. Cresswell 2013, 35). The Saw Kill is a continual movement downstream from its beginnings in Milan to where it empties into the Tivoli Bays. Even in the calmest sections, it is still moving. But there are places where it pools. These pools, behind dams or resting in small lakes, allow things to move slower as the water collects, and leaves or debris pile up. The pause too, I imagine, gives space for events to happen or memories to collect. The boat rests on its stands, itself a site of pause. The above quote is where the construction on the boat has halted— not stagnant but ready for the next step.

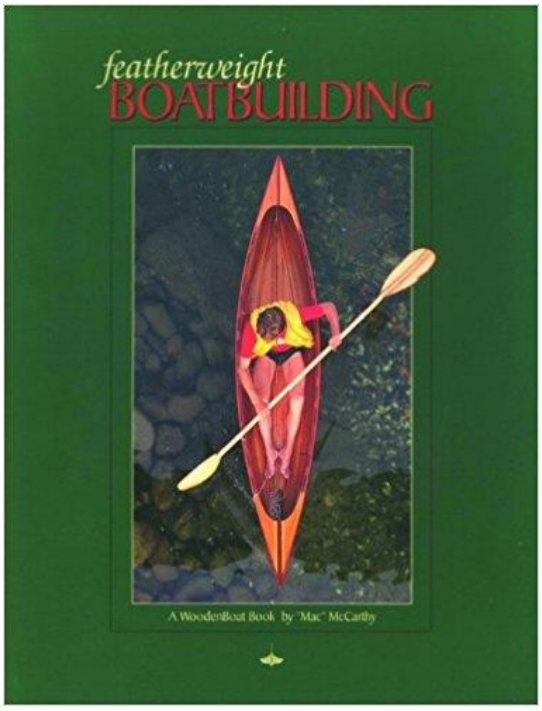


Figure 9: The cover of the book *Featherweight Boatbuilding* by Mac McCarthy (1996) shows the 'Wee Lassie' canoe model Sheryl is building (Source: Amazon).

Mill Pond, where Sheryl has made her home, is one such pool. Standing together at the window above the kitchen sink, we can see where it abuts her yard. Sheryl describes her backyard pond as a home for Painted and Snapping Turtles. She finds them in the buffer the New York Department of Environmental Conservation (NYDEC) mandates.[27] The buffer is one hundred feet of bushy undergrowth Sheryl wishes she could replant with more useful native plants to replace the ones currently growing.

[27] The NYDEC defines a riparian buffer as "vegetated areas on either side of a stream or river" (NYDEC, n.d.e). In a presentation to the Saw Kill Watershed Community (SKWC), Beth Roessler, Stream Buffer Coordinator, Hudson River Estuary Program/ NYS Water Resources Institute, defined the riparian area as the interface between land and waterbody which supports different soils and wildlife, and therefore influential on the stream and a unique ecological zone. A buffer, when functioning properly, acts as a protective area between the water body and human activity (SKWC 2017).

The NYDEC recommends at least a one-hundred-foot buffer to "improve stream health and water quality by slowing runoff, filtering pollution, preventing soil erosion, contributing essential nutrients to the food chain through leaf litter, providing woody debris for in-stream habitat, and shading the stream to keep waters cool. Buffers also absorb and slow flood waters, which protects property and human safety." (NYDEC, n.d.e). Mill Pond falls under the State's Freshwater Wetland Act, which requires strict permitting in these areas, as well as the one-hundred-foot buffer (NYDEC, n.d.b).

For five or six years, she could stand at the kitchen sink window every morning to look out and see the same heron in the pond, a Great Blue Heron.[28] She has never seen a Green Heron on her pond, but she imagines seeing one from the vantage point of her future boat. The pond attracts other birds — ducks, a pair of swans (a more welcome invasive than the water chestnut), and swallows. She hypothesizes that perhaps it is the pond mud readily available attracting the swallows who use it to make their nests. The same mud that makes Mill Pond shallow, and difficult to launch one's boat. Years ago, there was a man who dredged out sediment from the pond and piled it up on shore, making small hills on the banks still visible today. Or I imagine it might be Sheryl herself who attracts the birds, her bird feeders surround the house (as I will come to see in many of the homes I visit) — a Red-bellied Woodpecker lands on one, noticeably larger than the other birds already there.

The pauses were built, like in middle school when I learned how to give a speech by writing in when to pause after every sentence in order to be understood. Sheryl details the history of mills along the Saw Kill, which played an important role in setting up these sites of pause. Saw and grist mills were built on the stream along with the dams to power them. The dams created retained ponds, impoundments, many of which have now been there for two hundred to three hundred years. On Mill Road there stood two mills and the dam that built the pond. [29] The length or duration of these pauses created an established ecology. The diversity of life present in

[28] The Great Blue Heron comes up often in people's stories. It is a common bird in Dutchess County seen throughout the year. *Birds of Dutchess County* report an anecdote of finding one on nearby Wappinger Creek with its feet frozen to the ice (Butler and DeOrsey 2016). They are a species which has increased in time, in part due to their protection in the Migratory Bird Act and the ban on hunting for feathers which was popular in the 1800s (New York Natural Heritage Program 2017). Now, the main threats to their populations are habitat destruction and human disturbance of breeding areas called heronries (Butler and DeOrsey 2016; New York Natural Heritage Program 2017). Reports from different Dutchess County birding groups collected in the *Early Birds of Dutchess County* recall common sightings of the bird from 1910 onwards (DeOrsey 2014).

[29] Like Gayle and Gary, Sheryl mentions the Chancellor's Mill or Red Hook Mills. It had a nearly one hundred fifty-year run of grinding corn, wheat, grain and feed, then later cutting tobacco for the Red Hook tobacco company (Carr 2001, 17).

Sheryl's memories of fishing with her former husband, is specific to how the stream, and the wildlife around it, adjusted to the environment set up by the dams. She remembers bass in Mill Pond. Above the Annandale dam, they could be sure of catching bullheads. Eel traps off the Oja property guaranteed three to four eels, at least a foot long. In the lower dam above the falls, she remembers sunfish and perch. In the mouth of the stream they would seine for herring using a scap net, later she would salt them.[30] The fish defined by the habitat built by the dams.

But these pauses are not permanent, they may change with the construction or deconstruction of the dams, or fluctuations in weather. Sheryl recalls where, near County Road 55, Spring Lake connects to a tributary of the Saw Kill, the Lakes Kill.[31] During a drought one year, the lake became low. A lake is a more stationary water body; therefore, the fluctuation of depth is more apparent in the lake than the connected running stream. People in the area were concerned the intense lowering was caused by the activities of the Anagnos company, a local pool filling and excavating company.[32] As a source of the Saw Kill, as well as part of a shared water table, concern gathered over whether the Saw Kill would also lower. The conclusion was that the change was simply due to the drought. It was an impermanent change, and with the end of the drought, the lake returned to a normal level.

[30] There are two types of river herring, Alewife and Blueback Herring, which migrate to the Hudson River and its tributaries to spawn, similarly to a salmon's life cycle (Taking of Anadromous River Herring...2018). Current NYDEC law restricts fishing for herring, and nets like the kind of scap net Sheryl once used, are no longer allowed (Taking of anadromous river herring...2018). A 2008 report by Riverkeeper shows the herring species in decline since the 1980s (Richard and Henderson 2008). They suggest thermal changes and introduction of species of non-native predators, such as the Zebra Mussel, as possible contributors to the decline (Richard and Henderson 2008).

[31] The Lakes Kill is the only named tributary of the Saw Kill. See Sheila's map (Map 3) to view connection between the different water bodies in the watershed.

[32] William Anagnos' name surfaces in research around Mill Pond. Multiple articles in local newspapers from 1979 describe concern created by a dump site for septic waste on Mill Road of which he was the proprietor (Figures 6 and 7). Residents voiced public health concerns at a town board meeting and in a heated letter to the editor by Oliver Rider,

Figure 10: *The Cataract* by Alexander Jackson Davis, 1847 (Source: American Arcadia).

The places where the built and the natural come together, create a place of shared history. Sheryl's history of the Saw Kill extends from her home to further downstream, where the landscape around the lake, upstream of the lower dam, and its relation to Montgomery Place is "a historical landmark." The narrow side path, the old archway, the site of the old gazebo; all of these features construct a feeling of what used to be. She helps me visualize it by describing the above Alexander Jackson Davis print.[33] And the other print of his, that tea stained and sepia

[33] Alexander Jackson Davis was a well-known architect, who in the mid-1800s added embellishments to the exterior of Montgomery Place. His other designs on the estate include; the coach house, a farmhouse, and the Swiss cottage in 1867, which housed the workers for one of the Annandale Mills (American Arcadia 2011a; The Cultural Landscape Foundation, n.d).

toned was the cover of the Critical Environmental Assessment report on the Saw Kill Sheryl helped write as a member of the Red Hook Conservation Advisory Council (CAC),[34] shows a historical Saw Kill.

Figure 11: An 1840 Alexander Jackson Davis print showing the Saw Kill in the foreground and the Hudson River in the background. On the right side is the bridge that once connected the Blithewood and Montgomery Place properties (Source: CEA Committee of the CAC of the Town of Red Hook 1988).

Looking at the above print, Davis's depiction is not topographically correct. It is impossible to see the Hudson and the Saw Kill from the same viewpoint until the mouth, and even then, they are separated by the South Tivoli Bays (although this separation was not until the 1850s with the construction of the railroad). Yet, I appreciate how this imagined viewpoint shows the connectedness of the two water bodies. The print suggests another time, a glimpse

[34] The CAC was created by the Town of Red Hook in 1976. They address environmental problems that might come up in the town and take or propose actions to make the town a more environmentally responsible place (Town of Red Hook, n.d).

Critical Environmental Assessment report (1988) was completed by the CAC, which included other persons interviewed such as Susan Ellis and Ruth Oja, chairperson at the time. The 1988 report aimed to establish the Saw Kill as a Critical Environmental Area under the State Environmental Quality Review Act in order to establish greater protection and accountability for the Saw Kill and its tributaries. A CEA monitors actions around and in the stream, requires environmental assessment before any action is taken on the stream, and is a platform for setting local laws on stream health (i.e. maintaining buffers). Unfortunately, the proposal was put down, however the document exists as an important body of information on the Saw Kill.

back into what the Saw Kill used to be or how it was perceived. At the same time, we both agree that at this location of the Saw Kill, it is easy to imagine that what Davis saw is similar to what we see today. The seemingly unchanged environment, along with the visible ruins of the past, render it a historical landscape.

The 1840 print depicts the Saw Kill in the year A.J Davis was there. Forty years later, much further upstate near the St. Lawrence River, a man named Henry Rushton would build the first 'Wee Lassie' canoe. Eighty-eight years later, Sheryl would move here. Another twenty-eight years and Mac McCarthy would write *Featherweight Canoe Buildin*g to encourage others to "find enchantment" in the places they paddle. He declared there is "interesting water everywhere," but is up to the paddler to find it (McCarthy 1996, 20). Nine years later Sheryl begins to build her canoe from this book. This year, there is talk of removing the dams and Sheryl worries about the historical ecology that has been created, and what will happen to her piece of pond — where it is already too shallow to launch her boat.[35] Down by the mouth, the historic landscape persists, but there is a possibility of a new bridge to connect the two estates. Perhaps a reconstruction of the bridge in Davis's print or a new modern bridge to juxtapose with

[35] Bard College received a grant from the New York State Energy Research and Development Authority to research possibilities for installing micro-hydropower turbines at the existing dams on the lower Saw Kill, the Annandale Dam and the Lower Dam. The work Bard is doing to understand what to do with old dams in disrepair, can be a model for other streams in the Hudson Valley. Hudsonia conducted a biological survey of the reach that would be affected (Kiviat, Stevens & Schmidt 2017). The report (2017) described the following options for the dams: dam removal, improvements on dams for fish passages, dam repairs, or turning them into micro-hydro projects. They noted that dam removal would change water level, sediment accumulation, and alter the flow of the Saw Kill (Kiviat, Stevens & Schmidt 2017). They cautioned the effect this would have on certain habitats, while also saying it could improve other habitats and eel migration.

Eel migration was the greatest concern noted in both studies (Currenthydro 2017; Kiviat, Stevens & Schmidt 2017). Eel migration positive effects were more pertinent to the removal of the Lower Dam, as not many eels make it past the falls to the Annandale Dam. The removal of the Annandale Dam posed a threat to the existing pond/wetland habitat behind the dam.

The Currenthydro report (2017) suggests a micro-hydro project at the Annandale Dam, not the Lower Dam. The project would use gravitational vortex turbines, which they believe would be passable to eels, but because the effect on eels has not been studied, this site would be a test site. The two turbines they are planning would generate 75.300 kWh watts of electricity a year (Currenthydro 2017). Figure 12 shows the profile of the stream, which is interesting to view the drops in elevation, and imagine what would change with the removal or alteration of these dams.

what is already there. In the basement, the boat rests, waiting to be planed smooth, sealed fiberglass with an epoxy finish, sanded then varnished; water ready.

Figure

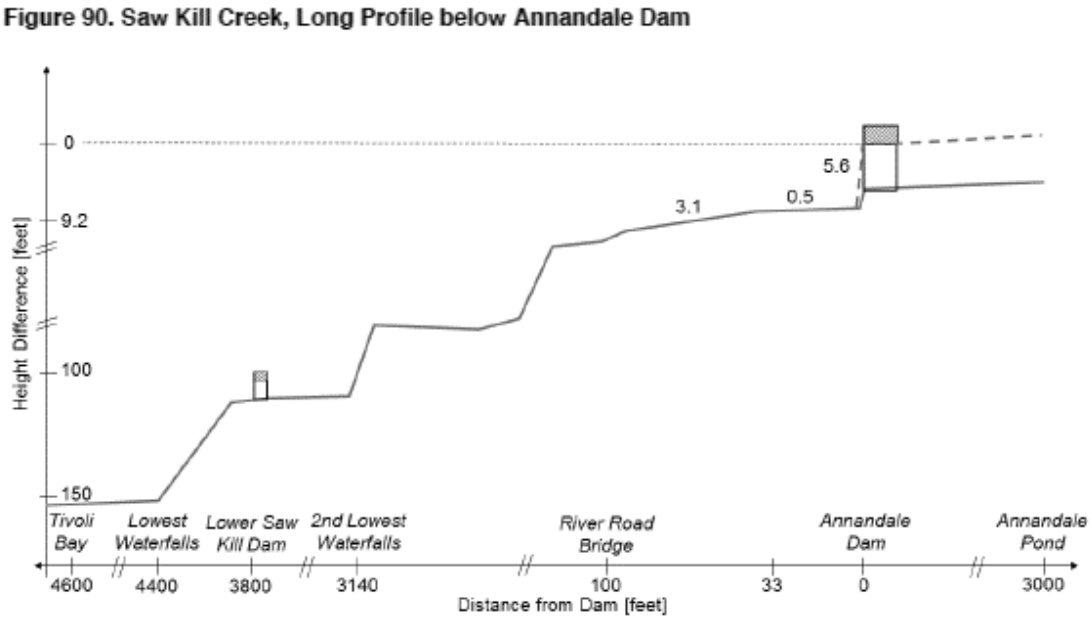


Figure 12: A profile of the lower Saw Kill reach, which depicts the falls in elevation from Annandale Pond to the mouth of the stream (Source: Currenthydro 2017).

Fourth Reflection:

Upon reaching out to people, the most common first response I heard was that they would not have much to say. However, once the conversation started, in the span of an hour, a whole wealth of information on plant and wildlife species, river changes, or history of land uses would be revealed. To me, knowing the habitat of one Great Blue Heron is a piece of ornithology, or an opinion on a property's buffer is sound advice for the NYDEC. I believe it is rare for us to ask one another to tell us everything we know about our place; therefore, it becomes a subject we are for the most part quiet about. This is unfortunate, because we lose out on an opportunity to learn from one another as well as inspire one another.

Directly after Sheryl showed me her boat, I went to the library to learn as much about wooden boat building as I could in an afternoon. A few days later when Susan Rogers suggested we try boating on the Saw Kill, I immediately agreed as a way to better understand how Sheryl experiences water. What follows is a story of Susan and my experience boating on the Saw Kill on November 17th.

> Susan was once asked if the Saw Kill was navigable. On Bard's stretch, it is not. There, a landscape defined by valleys and ridges creates two waterfalls (Azzie and Brashear 2017). The man-made dams create further voyaging obstacles. Further upstream, beyond this section was an unknown. Thus far, I have not heard stories of boating along the Saw Kill, with the exception of Mill Pond.
>
> Susan and I dropped kayaks in above Annandale Dam, to begin our paddle upstream to see how far we could make it. Here, the Saw Kill is wide, and bordered on either side by cattails. They hide the road from view, but you can still hear the cars going by. Gunshots go off in the distance and scare up sitting ducks. I haven't kayaked in a long time, and the plastic boat is quick to respond to my jerky movements. I move in a zig-zag pattern, constantly correcting the effect of my strokes Susan says are too far from the boat. We pass under 9G. It is hard to believe this low cement structure can hold the large trucks passing over. The sun is warm, and the tights, leggings, rain jacket, long sleeve, wool sweater, flannel, winter jacket, hat, scarf, gloves, and two pairs of ski socks start to seem unnecessary. Past 9G we are paddling in people's backyards. It is still wide, but

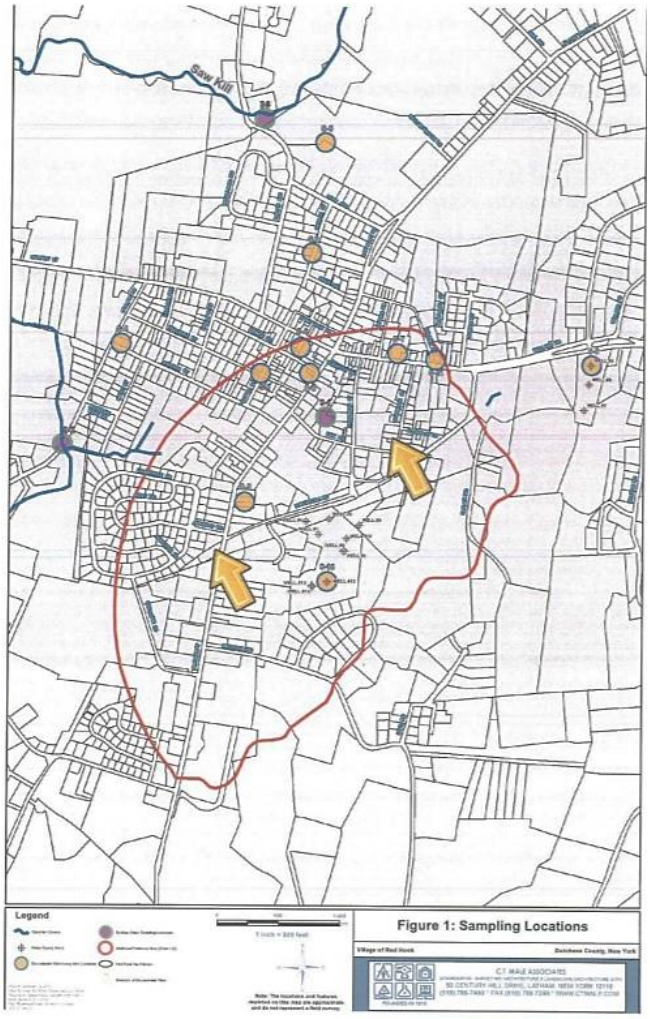
> much shallower, the bottom of the boat occasionally scraping the bottom. Their lawn chairs face toward us, empty on a cold November afternoon. This is a backyard kind of stream, but curiously lacking trash. We approach a tree that has fallen across the stream. From far away it looks as though we will be able to slip underneath it. Close up, that is not a possibility. I attempt to pull myself up onto the log, with the idea I will climb over it and hop back into the seat of the boat. But by pulling myself up I lose my balance and fall halfway in. The water fills up my rubber boots making the two layers of ski socks, tights, leggings and rain pants useless in one motion. Wading to shore, I drag the kayak along past the fallen tree. We continue on, me leaking into the boat. We maneuver around riffles, other fallen logs, until eventually reaching a spot where the riffles seem to continue for a long stretch, and we would have to walk the kayaks along. The man watching from his window reminds us we are in someone's yard. We turn around, paddling down some riffles, getting stuck on logs, repeating the same maneuvering around obstacles.
>
> This is my first attempt boating the Saw Kill. It both is and isn't navigable.

Although I emphasize the pause of Mill Pond, the importance of movement is seen in Sheryl's story through the building of her boat and her observations of birds and fish. Her story recalls John Stilgoe's words in *Alongshore*, that "a creek is a secret road" (1994, 130). The road implies movement, and the secret is a path less traveled. To travel along this road is to traverse the landscape, an idea favored by Tim Ingold. He describes traversing or moving as what allows one to truly perceive a landscape (1993). It is through our active path making and journeying that we come to have knowledge around the place, following Ingold's idea that places exist within a "matrix of movement" (Ingold 2003, 217).

Our observations around the paths we take build our knowledge of place (Ingold 2003, 227). Therefore, the more we travel, the more we learn (Ingold 2003, 229). The moving parts of the landscape are then important; both what is moving, and how we are moving through. Sheryl's emphasis on the moving features of her landscape and her observations based on those, show a knowledge of place formed by observation, experience, and movement.

Beneath the Village of Red Hook: Brent Kovalchik

Brent is the deputy mayor of the village of Red Hook. This is his third term as an elected official, preceded by fourteen years on the zoning board and other community groups such as the Intermunicipal Task Force. He first became invested in the sewer project while forming a plan for smart growth and protecting agricultural lands during his time on the Intermunicipal Task Force. The need to develop responsibly while maintaining assets of farmland and open space brought infrastructure projects, such as sewers, to the forefront of his work. Our conversation took place in the midst of planning for the new sewer project in the village hall's conference room where every Friday, Brent, the mayor, and an engineer work through the project. The room is filled with maps, books on zoning, and the town law. It is a world of sewer related business that revealed a perhaps overlooked perspective of the Saw Kill — what happens below ground.



Map 14: The map we referenced throughout our conversation. It shows the wellhead protection area circled in red, the Saw Kill labeled *on the upper left*, tributary number seven *on the left*, and the yellow arrows depicting the flow of the groundwater. The yellow circles are test wells and the purple dots are surface water sampling locations (Map courtesy of Brent Kovalchik).

I imagine a drop of water lands in the village. It perhaps puddles on a driveway, falls into a drain pipe, or catches on the brim of a cap. But suppose this drop lands on a lawn. Brent explains it would permeate the soil, travelling down through layers of dirt and rock to what exists beneath the village of Red Hook, a different body of water. This aquifer, is not just "a pond underwater," but rather a complex "series of crevices and gravel, sand and bedrock." Water is stored through this system of soils, travelling westward (yellow arrows on Map 14) to eventually surface in the Saw Kill. However, the journey could be halted by the suction of the village's wells. Or it could rest in the aquifer for upwards of 10,000 years. Or it could travel through the Saw Kill only to be sucked up later by Bard's drinking water pipes. Or further downstream to join the Hudson, drifting back and forth on the tides, eventually reaching the Atlantic. That drop of water would be joining a multitude of other drops, all on separate but interconnected journeys. It would join a history of drops, dating back to a glacial pool.

The village aquifer is a glacial pond that was separated by a glacial bridge to another pond in Pine Plains.[36] When the bridge melted at the end of the glacial period, it left behind rocks and gravel, then silt and clay as it moved closer to the Hudson River. In the watershed, this defined Rock City's soils as rocky, the village benefits from the sand and gravel, and Bard's land received the silt and clay. The village soils are some of the best in the area. "Local residents can plant anything, and it will grow." The glacial history defines the soil history, which in turn defines the underground ponds.

The layers of sand and gravel filter water as it travels down through the ground and moves westward, the speed and ease of which depends on the soil type. Here, the soils are "quick to drain," meaning they are very porous. However, because of that, they are not the best soils for filtering out contaminants before they are deposited in the groundwater, therefore called, "low to

[36] Brent explained that the town of Red Hook is different, their aquifer was formed as part of an ancient river.

infiltrate." Understanding how the water moves quickly through the soils, and has a lower ability to filter out wastes, gives us a better idea of how the underground filter is working before the water reaches the surface body of water, the Saw Kill.

The westward journey is not as linear as the arrows in the sewer map depict (Map 14). The red line surrounds the wellhead protection area; an area where land use is mindful of what water could pick up on the surface and bring downward into the drinking water source. However, as water is drawn out of the well, it creates a kind of suction where water from around the well moves to refill the newly opened crevices, even if it is contrary to the westward flow (Figure 13). This action can reroute water, possibly affected by septic tank infiltration or other contaminants, from outside of the protection area. In some village wells they have found bacteria and nitrates, indicators of septic contamination, which suggests this nonlinear movement of water from outside of the protective area moving back towards the wells as water is taken up from the ground.

Water distribution pipes and connections from the wells to the village were constructed during the 1940s. The nearly eighty-year-old water system has started to complain; it leaks a lot. However, a pipe leak in the village is not obvious because of the soils. During a pipe leak, the water from the leaking pipe travels easily downwards through the soils, versus somewhere like Tivoli, where the water bubbles upwards because the clay soils prevent immediate downwards movement. A visible puddle in the village means the leak has fully saturated the surrounding soil so that the water can no longer travel downwards. In low lying areas, a leak can affect nearby homes through water in the basement. When this happens, they have found traces of chlorine in the basement water, suggesting the water came from the drinking water treatment plant, and therefore, leaking water distribution pipes.

The life expectancy of a water system is twenty to forty years. The system's materials become dated; for example, the village discovered many of the goosenecks on connections from main pipes to service lines were still constructed from lead (there was no evidence of lead in the water but they still found it necessary to replace them).[37] Some of the pipes themselves were just two inches wide; a pipe that size is too small to provide enough pressure to power important municipal infrastructure such as a fire hydrant.

The village recently replaced their water system infrastructure, including new leadless goosenecks and larger eight-inch pipes. During the project in the southwest quadrant of the village near Benner Road, workers found a pipe from 1859. It was most likely part of the gravity system that took water from the old reservoir two miles east of the village. Now the system is pressurized from the tank, visible from the conference room window, to the pipes. The ruins of past systems, such as the 1859 pipe, are unmapped. Even active water lines are still unmapped, with shut off valves not labeled and therefore, their function unknown. Recently when working on the pipes, the workers found an unlabeled valve, turned it off, and then got a call from the school saying they had no more water. The new underground system of pipes crosses remnants of the old system, through the gravel and the sand.

However, there is no infrastructure for sewer. There have been multiple attempts throughout the village's history. Brent has heard, through speaking to long-time residents, of an attempt in 1947 (Below Images 5 and 6), and of another earlier attempt during the Great Depression when municipalities were offered money through the Works Progress Administration

[37] Lead goosenecks are flexible pieces of pipe used to connect more rigid pipe material together. They were often used to connect the main water line to the smaller service lines connecting homes or businesses. However, because they are made of lead they were banned by Congress in 1986. Now, other flexible materials such as copper or plastic are used (Lead Service Line Collaborative, n.d).

(WPA) project to build infrastructure.[38] As the story goes, Red Hook refused the money because the municipality was predominately against then president Franklin D. Roosevelt. Other municipalities, such as Tivoli, took the money and as a result have a sewer system. Perhaps ironically, Brent's first attempt at a sewer system came during the 2008 recession, and benefited from the Economic Stimulus Act, gaining from a similar offer to what Red Hook once turned down. Politics are unavoidably mixed into the conversation, but Brent keeps it focused on the environment and economic development.

RED HOOK, N. Y., THURSDAY, JUNE 19, 1947.

Village and State Are To Finance Sewerage Plans

Mayor Authorized to Select Engineer—Plans May Be Placed Before Taxpayers This Year.

St. Paul's Chil

er Proposition eaten by 21 Votes

142 eligible voters cast their in Tuesday's special election, to the proposition for laying pipes t Market street, by 21 votes. were 60 votes in favor of the ition, 81 against and one void. portion of the system up to vote ed from Cherry street to Broad- and would cost approximately These pipes and laterals were ald before the new highway was

niversary Celebrated

Images 5 (*left)* and 6 (*right)*: Image 5 is an article from 1947 in the *Red Hook Advertiser*, "Village and State are to Finance Sewerage Plans". The following article, Image 6, shows that the project was voted down (Images courtesy of Brent Kovalchik who received them from Chris Klose).

[38] The WPA was a program put in place by President Roosevelt to provide jobs to the unemployed; it ran from 1935 to 1942 (Hopkins 2011). A 1936 article in the *Poughkeepsie Evening Star* announces the WPA sewer project was in plan for Red Hook, a project that would employ 20 men (Figure 14). Apparently, something must have stopped the project from getting under way.

Rather than a village wide sewer system, waste is currently managed through individually owned septic systems. To return to soils, a septic system works through the natural system of soil filtration. Waste water is leached through the soils, filtering as it goes, eventually joining the groundwater. And the aquifer needs the water the systems provide. If the entire village were sewered, Brent worries the "recharge capacity," the ability for water in refill the aquifer, would decrease. The sewer, therefore, affects the aquifer, which in turn affects downstream. Downstream, as well as the character of the village. A septic system requires a certain size lot in order to function properly. An entirely sewered village foregoes the need for larger lot sizes, allowing encouragement for subdivision. A subdivided village would change the current personality of the village.

The new sewer system will connect a portion of the village to a waste treatment plant, where the leftmost purple dot is marked on the sewer map (Map 14). The treatment plant will upgrade the current Red Hook Commons treatment plant, which is built from the waste treatment center for the frozen pie factory that occupied the site around twenty years ago. Before the factory, the site was an apple orchard. The continuous use of DDT on the orchard along with chemicals leftover from the pie factory created a Brownfield site.[39] The Environmental Protection Agency (EPA), county and town/village of Red Hook cleaned up the damaged soils.[40] The history of the site though remains one of waste and environmental concerns.

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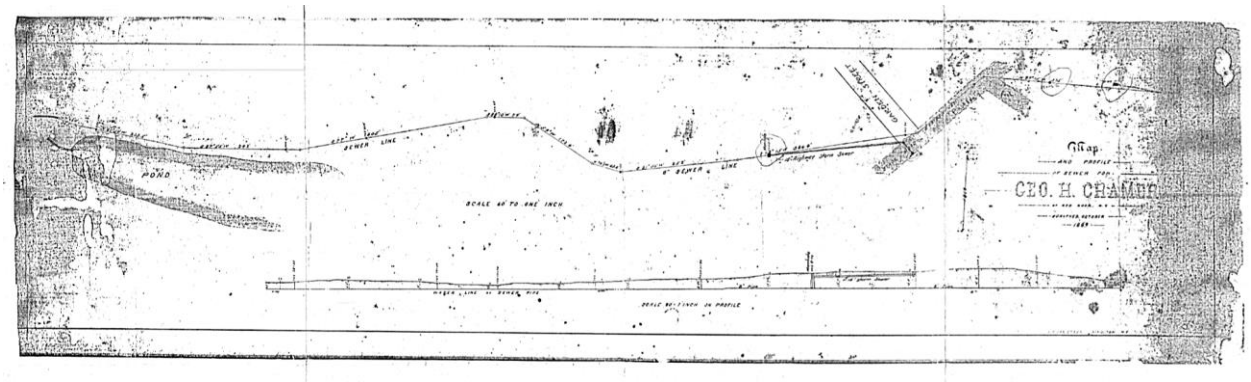
[39]According to the EPA, "The term "brownfield site" means real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties protects the environment, reduces blight, and takes development pressures off greenspaces and working lands. The definition is found in Public Law 107-118 (H.R. 2869), the "Small Business Liability Relief and Brownfields Revitalization Act," signed into law January 11, 2012" (EPA, n.d).

[40] What people have called the "pie factory" or "Orchard Hills farm" is the twenty-acre Perx Property in Red Hook. From the New York Department of Environmental Conservation (NYDEC) Record of Decision (2005), the NYDEC Site Record (n.d.d), and the Environmental Easement (2006), I learned that from 1949 through the 1960s an apple orchard operated on the western half of the property. From 1955 to 1981, it was a frozen food processing plant, which had a waste treatment plant. The property was abandoned in 1985. The NYDEC Environmental Remediation Records (2005) described the site prior to clean up by listing the following as reasons for concern: past

The site also has a history of water as it used to be a pond and then a wetland. Before Brent's time, it was called Mills Pond (not to be confused with today's Mill Pond). This pond somehow accepted water from the pond behind the library. The library pond, formed by a glacial inclusion, is located in the lowest part of the village. A map made in 1889, two years before the village was formed, shows both ponds and a pipe connecting the two (Map 15). Recently the ruins of the pipe that pumped water from one pond to the other were found. Without that pipe, there is no more pond at the waste site, the wetland is dry, and the presence of water is limited to the tributary of the Saw Kill.[41]



Map 15: An 1889 survey map drawn for George Cramer. The large pond on the *left* is the site of Red Hook Commons and the new treatment plant, which is no longer a pond or wetland. In this map, it is connected by a pipe to the library pond, in the shaded grey on the *right* (Scanned courtesy of Brent Kovalchik).

The new treatment plant will discharge into what everyone calls "the unnamed tributary." But this tributary has a name, even if it is only a number: tributary seven. Tributary seven currently receives 24,000 gallons per day of discharge. The sewer would add 65 to 68,000

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uses as a factory and waste treatment plant, pesticide residue including DDT, chlordane, and lead arsenic, abandoned drums still full of unknown liquids, and buried petroleum tanks. Remediation in the early 2000s involved the disposal of waste chemicals and storage tanks, excavating contaminated soils, remove asbestos in buildings, an assessment of groundwater, and putting in place an environmental easement for the next property owners.

[41]A letter to the *Red Hook Observer* in 2014 addresses the concern residents around the library pond had of flooding (Queen 2014). The letter also reveals local history on the pond. According to David Queen's letter (2014), the pond was once called "Cramer's Swamp" after resident George H. Cramer. An eight-inch pipe connected and drained Cramer's swamp into what used to be called "Massonneau Pond," a parcel of property acquired by Charles Massenous in 1873 and the site of the current Red Hook Commons and former brownfield site. The drain pipe was constructed in 1869, and the village records show property owners kept up with maintenance in 1924 and 1939. However, the pipe has since fallen under disrepair leaving the library "swamp" prone to flooding.

gallons, which sounds like a large increase, however, the tributary can handle up to 500,000 gallons per day. The tributary, like the aquifer, connects to the Saw Kill, therefore special attention to the treatment of the discharge is essential to ensuring the quality and health of the stream further downstream.

Brent acknowledges it is not a “glamorous story." But it reveals an underground network, and a history, both geologic, historic, and personal. Brent has spent thirteen years attempting to make the sewer project to come to life. He can cite the zoning code by heart. Ever since he found it mandated in the zoning law r10000 and repeated in the comprehensive plan, he has not quit trying to make it a reality.[42] For him, the sewer has given him a new understanding of the Saw Kill, one that goes below ground but ultimately effects downstream. He is intent on preserving the “active and alive” stream, which is dependent on the above ground, the below, and the surface activity.

The proposed start date for the construction of the village sewer coincides with the ending of Brent’s term — a fitting end to his years of municipal service.

[42] Red Hook Village’s zoning law “Residential District R10,000” states “The land uses most appropriate in this district include higher-density single-family residences and the public facilities which complement them (e.g., parks and schools). Residential lot sizes would be determined by the capacity of the land to absorb septic waste, but would not, unless served by central sewage facilities, be less than 20,000 square feet per dwelling unit. The relatively concentrated character of residences within this district provides opportunities for extending amenities, such as sidewalks, utilities and street lighting” (Village of Red Hook, NY, n.d).

Figures

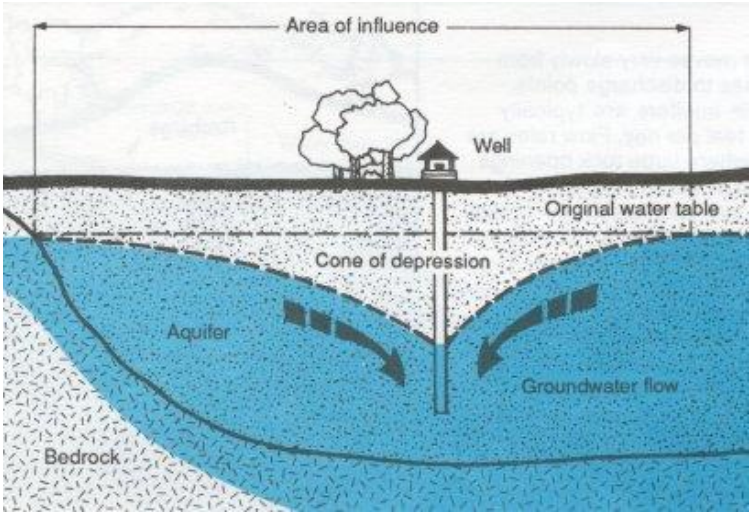


Figure 13: This diagram shows the "cone of depression" formed as water is pumped up a well. This changes the flow of the groundwater to fill the new space, depicted by the arrows (Source: Raymond 1988).

RED HOOK SEWER START PLANNED

WPA Project Gets Under Way Next Week

Special to the Evening Star

RED HOOK — The WPA sewer project will be launched here next week, according to William Wollerton, county WPA director. About 30 men are expected to be put to work. The project is expected to

Figure 14: 1936 *Poughkeepsie Evening Star* article reads, "Red Hook Sewer Start Planned, WPA project gets under way next week" (Source: Old Fulton New York Post Cards).

Fifth Reflection:

I consider the village of Red Hook the halfway point of the Saw Kill. It was suiting then to meet Brent here, because of his emphasis on the importance of upstream and downstream connections, including the less visible connections. During our conversation, Brent also spoke to his memories of spending time with his son at the portion of the Saw Kill bordering the Red Hook Recreation Park. Although I did not include this in his story since the focus was on groundwater, this moment resonated with me. The recreation park is one of the few public access points to the Saw Kill, and one I was able to walk to from the village at the start of my project, before I could drive. I spent an afternoon writing there in September:

> Sitting by the Saw Kill 9/22/17, Red Hook Rec Park:
>
> The Saw Kill has been pushed to the side by the skate ramp and baseball field (not really, but that's how it feels). Where I am sitting has been pushed too, the tree's roots I am perched on overhang the bank. It suggests the roots used to rest on land, which has since eroded away. It is hard to imagine the slow-moving water able to displace so much land. Perhaps instead, the roots simply outgrew the land. The tree is some type of maple, I can tell that by the leaves. Nearby is a leaf the size of my face. The bark is charred with a white fungus creating a stripe down the middle.
>
> I have sat here long enough without writing, without moving, with quiet breaths, that I like to think things have become accustomed to my presence. Two chipmunks play just two feet away from me. Their constant squeaks mimic a bird call. The fall leaves meander by, resting on the slow-moving surface of the water and reminding me of the game "pooh sticks." I wonder if they'll float by someone else, or if instead they will join the backlog piling up behind larger rocks. Regardless, their fate is to decompose in the river, becoming a substance called detritus to be eaten by small bugs, which will then be eaten by certain fish. I had the goal of looking for a fish to keep my eyes focused. However, the placid water creates a reflective surface, and it is difficult for my eyes to travel below the mirrored glass. In conversation with the reflection is an overhanging branch, where the shimmer from the water is reflected onto its leaves, like the shadows created from the recent August solar eclipse. The constant squeak of a bird I know, different from the chipmunks, has me scanning the edges, then stopping at the log across from me with the letters ETC etched into it. I wonder if it is someone's initials, the name

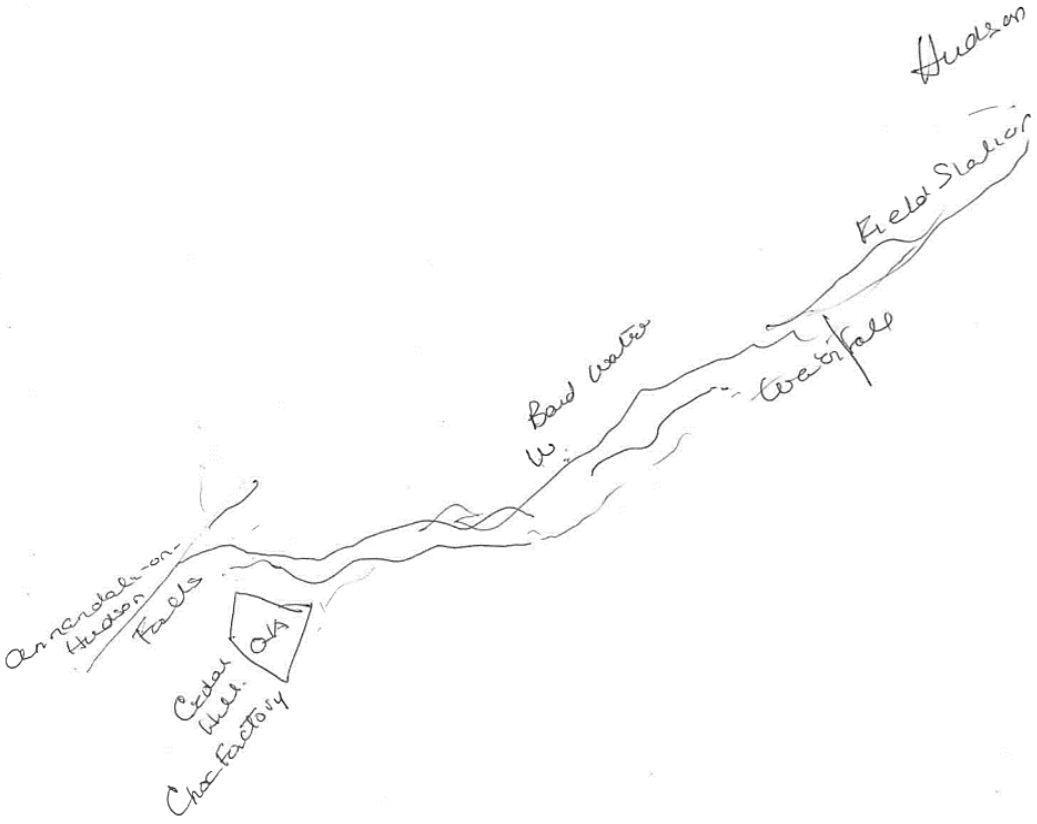
> of a club, or three best friends. There are no clues reflected back in the water, and no fish to tell me what they've seen.
>
> With time, it becomes important to notate the details of things. I did not hear a few plops from acorns falling into the river; I heard exactly five plops and counted fifteen circles in the largest ripple created. The five plops happened all at once in a sudden cacophony, and then all was quiet again. The whole park is abandoned. Something about the quiet park reminds me of how much I used to love to run as a kid. My dad would count how long it took for me to get to a certain tree and back…

My observations while sitting in the Recreation Park are not remarkable. I did not see anything out of the ordinary or unexpected. Like the groundwater, this solo experience was not visible to others. And although more pleasant to think of than septic tanks, it is still not as glamorous as the falls to come downstream or understood as important as the headwaters upstream. The focus on the ordinary corresponds with David Sibley, David Atkinson, and Peter Jackson's (2005) introduction on cultural geography, that the geography of the ordinary is as well worth study and appreciation as the unique geography. From talking with Brent, I would add that the seemingly mundane subject of sewer does point to a unique geography, because it is dependent on the area's soil composition, which stems from a unique geologic history. Therefore, how water or sewer distribution systems operate in this village is fully unique to this place.

The map Brent referred to as we talked was the one used in the project planning meetings. I was aware throughout our conversation of Brent's position as a village official, and therefore the political lens framing the story. This reminded me of Yi-Fu Tuan's (1991) idea that it is impossible for geography to be an apolitical, neutral subject. As Brent tells the struggle the village has had with implementing sewer, it is clear the groundwater and stream are affected by political programs, changes, and feelings. Although on a geologic scale our politics are small in comparison to something like ancient groundwater, they are an important piece in determining how we interact and interfere with our landscape.

The Chocolate Factory: Ruth and Maia Oja

Ruth Oja moved to this area from Nebraska with her husband who was a psychology professor at Bard. While living on campus, they found the ruins of the old Chocolate Factory on the banks of the Saw Kill and turned it into their home. Ruth has lived on the Saw Kill for nearly fifty years, it is her home as much as the structure of the house is. Her position on the stream connected to her work with the Conservation Advisory Council (CAC) during the 1970s and '80s where she served as chairperson. She was influential in implementing the village recycling program, the stream monitoring, and winning the political fight to prevent a power plant and landfill in the area. I met Ruth and her daughter Maia at the Chocolate Factory during a snowstorm in February. Everyone I had talked to previously and since then mentioned Ruth and her home — her home is an important landmark and she herself is an important figure for the Saw Kill. We spent the morning switching between looking out of the windows on to the stream and flipping through her photo albums that capture both the Saw Kill and the changes to her home over time. The house and the Saw Kill become interchangeable as a place of home.



Map 16: The map Ruth drew of the stretch of Saw Kill running next to her house and through Bard. She named her home after the Chocolate Factory and placed it on what she calls "Cedar Hill," more commonly known today as Annandale Triangle (Map courtesy of Ruth Oja).

Ruth's daughter, Maia, who was shoveling snow when I arrived, went back outside to grab the bird. "You ready for this?" She came in with the frozen dead bird cradled in her glove. It was a bright deep blue with a white ruff along its neck. A huge bird we all agreed. The bill, a long sturdy bill, is what allowed me to identify it right away. This is the second Kingfisher to hit their window, but the ground was too frozen to bury this one. As sad as it is to see a dead bird, it is amazing to see it so close — "the size of it," we keep exclaiming.

The bird had hit the living room window that looks out on a waterfall. It is nearing the middle of February, we are in the middle of a snowstorm, and yet the waterfall is far from frozen over. The water pushes past the snow-covered rocks. The window near where we are seated at the kitchen table with Ruth's cat Whiskers, looks out onto a birdfeeder, which is active despite the snow. I spot a Downy Woodpecker and a House Sparrow. The birdfeeder is on the porch which almost overhangs the Saw Kill. The proximity to the stream and the many windows that look out make the Saw Kill a part of the home's structure.

Image 7: The frozen dead Kingfisher (Photo courtesy of Ruth and Maia Oja).

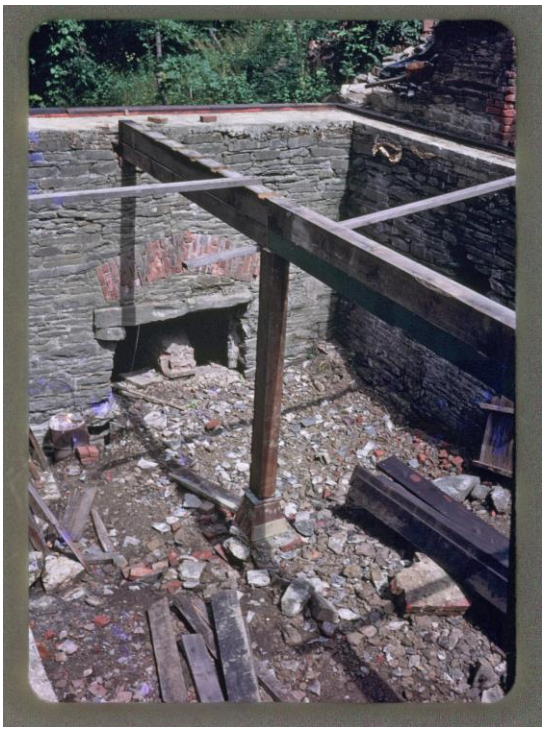
People refer to Ruth's home as the "Chocolate Factory." It has made its way into other people's stories or maps as a landmark. But before it was a chocolate factory, Ruth tells me it

was the Livingston Grist Mill.[43] The stone wall that makes up the living room wall is a remnant from that time. To power the mill, water was diverted from the Saw Kill on its natural course to come down over the hill through what is now the basement of the house. There are brick archways set in the stone walls where the water channeled through to power the mill (Images 8 and 9). From the living room window, we see the remains of a stone wall that appear to have at one time gone from the road to the waterfall to hold back the water. We all stand at the window to look out at the wall, trying to understand how the water was diverted.[44]

[43]A grist mill is a mill used for grinding grain. There were multiple mills along the Saw Kill, with a cluster surrounding the Annandale Triangle, previously called Cedar Hill, to the mouth of the stream. These can be seen on the 1798 map (Map 17). Jaquetta Haley, researcher for Historic Hudson Valley, in her work (1987) lays out a brief history of the mills, beginning with the first European owner of the land, Peter Schuyler, who bought the lower reach of the Saw Kill in 1688. He sold the land in 1725 to Henry Beekman, Barent Van Benthuysen, and Barent Staats. Staats received the land directly next to the Saw Kill, but all three shared water rights. In 1747, Beekman acquired the lower falls and sold them to Robert Livingston, who in that same year also acquired the second falls. In 1770 he operated a gristmill on the north bank of the Saw Kill by the mouth. It was burned down in 1777, yet promptly rebuilt by Margaret Beekman Livingston. In 1793, the Saw Kill west of River Road was deeded to Margaret for her lifetime and then to Alida Armstrong. On the 1797 map, "g. mill" would then be Margaret's Mill, the second falls show the Armstrong Mill, and at Cedar Hill is the Benthuysen Mill. In 1803, General Armstrong, married to Alida, would purchase the Benthuysen Mill and come to operate three mills at the Cedar Hill site, one of which is the site of Ruth's current home. By 1836, John Cruger offered $30,000 for the entirety of the Saw Kill up to the "Factory Pond," which is the impoundment behind what is now called Annandale Dam.

In 1840, Robert Donaldson, owner of Blithewood, approached Montgomery Place's Louisa Livingston about buying the Saw Kill up to the second falls to prevent development on the stream. They did, and Cruger moved his operations further upstream, near the former Armstrong Saw Mill. In 1852, Cruger sold the two mills (one of which is Ruth's) to Philip C. Fritz. The Annandale Dam was sold to Joseph Spurr, then Thomas Barton who received the water rights as well as the right to the muck in the pond. By 1876, the Cedar Hill mills had been inactive for years. In 1896, the WB Chocolate Factory took over one of the old mill sites but moved into the village of Red Hook not long after. From 1899 to 1920, Charles and Francis Zabriskie bought the properties surrounding Cedar Hill, including the Chocolate Factory (Goddard 1988; Haley 1987).

[44] Upon my dad's reading of this story, he noted it could be that the original path of the stream was where the house now stands, and the diversion was made alongside it, rather than how I imagined the stream being diverted to power the grist mill.



Images 8 (*left)* and 9 (*right*): From Maia, Image 8 "is the inside of what is now our basement, having cleared it of trees and so forth and ready for floor joists. It's the same downstream wall — where the water exited — shown in the photo previously sent to you (*right*), before my father put in the blue windows" (Photos courtesy of Ruth and Maia Oja).

Ruth and Maia tell me about Hurricane Irene, which deposited a large amount of water into the Saw Kill.[45] Downstream near Ruth's home, this extended the waterfall nearly all the way to the road. The force of the water took out one of her gardens, and swept right under the house, going through the old grist mill windows in the basement, just as they were designed for. The daffodils from the garden transplanted themselves further downstream in the pile of sediment that washed along with the storm's water. The load of water and sediment, mostly silt, knocked down the beaver dam that had been there for decades, near the bend leading to the more stagnant pond. Now, the floodplain there is a more permanent part of the stream.[46] Sycamores grow in the

[45] Hurricane Irene hit New York state on August 27th, 2011.

[46] A floodplain is the area adjacent to a stream expected to flood during certain precipitation events. Recently, the Red Hook CAC conducted a Saw Kill Watershed and flood mitigation assessment project that examined the

water on the wide mud flats. Maia says the soil is not healthy there; it does not dry out, it's swampy, and it smells as though there is not enough oxygen in the soil.

We sit back down at the table to look through one of the photo albums. We come across pictures taken by Bard's Buildings and Grounds of the flood (Images 10 and 11). In the photos, slightly blurry, the flooding looks out of control, so it remains a mystery to us how the operators of the grist mill achieved the flooding of the basement without the mad rush of water like in a storm event.

Images 10 (*left)* and 11 (*right)*: From Maia's description to me, "0022 (*left)* & 0017 (*right)* are flood photos. If you align them side by side (0022 on the left) you can find the spot where they meet up & overlap and have a full view of our falls and the garden being overwhelmed" (Photos courtesy of Ruth and Maia Oja).

Around 1900, the mill was repurposed into a chocolate factory, the W.B. Baker Chocolate Factory, named similarly to the more well-known Bakers chocolates. They too used the water from the Saw Kill to power the factory. The floors of the factory were brick, which now make up the path through Ruth's garden. And they had a type of fireplace to melt the chocolate, now buried beneath a raised bed. The path is slick today from the ice, and the garden is invisible under the layer of fresh snow. The old factory walls provided the perfect frame for a garden, while some of the archways became interior walls for the house. The factory moved its

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history of flooding and flood damages in the area. Their report examined land uses changes as well as models potential future land use and climate changes (SKWC 2017).

operation into Red Hook in the 1920s to be closer to the main travel routes. After which, it stood empty for years. Ruth has heard a story, that may or may not be true, of when the Zabriskies owned the land they burned the factory down rather than pay taxes for an unused building.[47] Whether on purpose or not, the place did burn down. The brick floors and walls are still standing but crumbling.

Images 12 (*left)* and 13 (*right)*: From Maia, "0021 (*left)* is my brother John playing around on a pile of bricks from the Chocolate Factory's smokestack which we pulled down. This is now our outer courtyard where we built the raised garden beds & where the original brick floor remains." On the *right* is "the same view today" (Photos courtesy of Ruth and Maia Oja).

[47] Emily Majer, Red Hook Town Historian, sent me old local newspaper articles on the development of the Chocolate Factory and the role of the Zabriskies. An April 25th, 1896 article she sent me reads, "Work was commenced on the old Livingston Mill at Annandale Monday preparatory to the establishment there of the Baker Chocolate Factory to be removed from Brooklyn. Four hundred hands will be employed" (Figure 15). An article from 1899 reads, "Mr. Zabriskie may blot out a town. Now owns five square miles surrounding his $1,000,000 country home. Bids for only factory. Annandale may cease to be if he acquires site of its sole industry" (Figure 16). At this time, Zabriskie was buying lots of property in the area, however his $35,000 bid for the Chocolate Factory was most likely not accepted at that point as the factory did not move until 1905. A 1912 article shows Zabriskie is to make highway improvements by the Chocolate Factory, suggesting he may own the property at this point (*Captain Zabriskie...*1912). And in 1913, two barns on his Blithewood property burned down, which may be the fire to which Ruth was referring ("Two large barns on the estate of … 1913). It is unclear when the Zabriskies acquired the factory lands, but by 1920 they had purchased the majority of the Annandale area, which would include the factory (Haley 1987).

The ruin, during and post the Zabriskie's ownership, turned into the Annandale dump.[48] People would throw their garbage over the edge of the road where it would fall close to the stream bank. Years of household garbage — bottles, face cream, metal, cinders and ashes, all piled up (Image 14). The piles of garbage were still there when in 1968, the Ojas were walking around the woods near the Saw Kill and they happened upon the old stone walls of the grist mill (Image 16). They had been wanting to build a house, and the ruins offered a unique foundation. Upon their discovery, the garbage was still piled up, the factory foundations were crumbling, and poison ivy "as thick as one's fist" covered the structure. To walk along meant holding on to the walls as one could not see a step in front of oneself, it was so overgrown with trees and shrubs. Despite the mess, "It was such a fantastic spot, the waterfall was so dramatic, the stream, the forest." After buying the property in 1968, it took seven years for them to clear and build the house, with the whole family helping to do both.

[48]A 1995 Town of Red Hook Local Waterfront Revitalization Plan reveals there were multiple dump sites along the Saw Kill as well as lists other areas of concern. "The Dutchess County Environment Management Council (EMC) named several closed landfills in the Town as suspected hazardous waste sites. The only site located in the coastal area is the Bard College landfill. Other sites identified by the EMC outside the coastal area that could potentially negatively impact ground and/or surface waters throughout the Town include: an old asbestos factory on Spring Lake Road in the eastern portion of the Town, the Red Hook Road and Gun Club site on the west side of Freeborn Road in the north central part of the Town, a metal finishing company landfill on Route 199 just east of Red Hook Village, a private dump used by a sanitation company on Metzger Road south of Red Hook Village and a sludge spreading site on Mill Road just north of a portion of the Saw Kill that is north of the Village of Red Hook. In addition, the former Town landfill site located just north of Rokeby Road and east of Route 9G near the coastal boundary which is now used as a sand and salt storage area by the State DOT needs to be monitored" (Town of Red Hook Local Waterfront Revitalization Plan 1995, 30).

Images 14 (*left)* and 15 (*right)*: From Maia's description, "0023 (*left)* is my brother Matt sitting in the Annandale dump, which (as I'm sure you already know) the property was used for after the chocolate factory burned but before my parents bought it. Underneath that section of the dump was rubble from an original wall, which we rebuilt using the extraordinary volume of stones on site. Photo 0013 (*right)* shows the same area as it is now, walls rebuilt & made into garden with wisteria trellis" (Photos courtesy of Ruth and Maia Oja).

Image 16: From Maia, this photo shows "my dad removing poison ivy from the oldest part of the site — the original Livingston Mill — that we built on" (Photo courtesy of Ruth and Maia Oja).

"A totally recycled house," Ruth calls it. In accordance with Ruth's activity implementing a recycling program with the CAC and the house's situation on an old dump, the materials used for building the house were all recycled. Up the road from them were the remains of Ward Manor's cottages. Ward Manor, which had been a social services organization for elderly people and an affordable country weekend place, was in disrepair and falling down. There were no funds to fix them, so the building materials were being given away. The Ojas used the materials from the old manor summer cottages, named for different fancy hotels in the city such as the Ritz, and used them to build upon the foundation of the ruin.[49] They collected the old wood, then cleaned, stained, and finished it to make up the beams of their home.

From the house, Ruth's reach of the Saw Kill can be followed from window to window. In recent years, Ruth has noticed big foam balls float down the stream to become lodged on rocks and the bank. She hypothesizes they could be the effect of septic system effluent. Maia adds her observations to the conversation. She saw a mink the other day on the bank— she has noticed it over the years, and it always follows the exact same trail. In one of the recent more severe winters, when the stream puffed up from the water freezing, she saw three otters swimming in open pools between the ice fragments. Together, Ruth and Maia remember always seeing Great Blue Herons in the spring, eels at the bottom of the waterfall, trout, crayfish, turtles, frogs, ducks, and big black snakes. The snakes in the garden Ruth just lets be.

"One thing that is different…," Maia points our attention back to view the pool right below the waterfall. Here, the pool must have at one time been deeper because she describes how she used to see clear across to the other side. Now, there is a pile of rocks in the middle that

[49] Ward Manor had "holiday bungalows" where guests could stay for very little money. Emily Majer emailed me a 1958 assessment of the property, which lists the names of the bungalows. It reveals their being named after famous fancy hotels such as the Pierre, The Rip Van Winkle, The Commodore, The Ritz, The Mohawk, The Mohegan, The Iroquois, The Biltmore, The Plaza, The Algonquin, The Prince George, The St. Regis, The Astor, The Roosevelt, and The Ambassador (Figures 17 and 18 shows photos of the Biltmore and the Mohegan from a property brochure).

make up an island, covered in snow today. The two most recent floods changed the banks as well. There is a tree six feet off the water that held a swing when she was a child. The flood must have tipped the tree, as a person swinging from it now would be underwater. Maia remembers thirty years of history at the house with no floods, and then in recent years there have been at least two significant ones. One of the memorable floods happened on a February day much like today, except instead of snow it rained. The frozen ground prevented the rainwater from infiltrating the soil, so it had nowhere to go but flood the stream. Ruth and Maia agree that global warming or climate change are one of the factors changing the Saw Kill.

Along the banks surrounding their home, more changes are taking place. They have noticed more ferns since recent floods. And they have had to cut down many trees this past fall due to the Emerald Ash Borers.[50] They still see the native plants like the Jewel Weed, but others like the Joe-Pye weed they no longer find, as well as a lack of spiders. They remember the summer weeds that used to cover the banks, a "mess of them." "The purple loosestrife! That's right, there used to be a lot of it by the stream." Perhaps, they think, some of the changes are from an increase in the strength of the Saw Kill's current or from the larger deer population that eat new growth before it has a chance to take off. The small changes they have observed over the years reveal the shifting details of the landscape, as well as connect their stretch to changes in the larger surrounding environment or further upstream.

While her home's location gives her a private interest in the health and protection of the Saw Kill, she has a public interest from her connection to the upstream reaches. She learned about the further reaches of the Saw Kill's path through the water monitoring she did with the CAC for five or six years. Saturday mornings for her were spent with other CAC members

[50] See footnote 18 in the Klose's story on the Emerald Ash Borers.

collecting water samples for Bard chemistry professor, Michael Rosenthal, who was willing to do the tests, along with the county health department.[51]

The sampling locations took Ruth past her own section of the Saw Kill to further upstream all the way to Rock City. In those upstream reaches, the Saw Kill interacts more directly with development creating, what Ruth calls “hot spots." One such hot spot was the pie factory, a frozen food plant whose waste output affected the quality of stream health.[52] Other concerns Ruth remembers came from agricultural fertilizers and new developments, such as Linden Acres, that used to be a wetland.

Along with these more localized threats to the Saw Kill, Ruth remembers larger political fights she and the CAC faced to address potential environmentally hazardous actions. She was part of the community movement against a proposed nuclear power plant. Central Hudson had bought nine hundred acres of land behind Ward Manor, where the materials from her home were collected, where they planned to build a plant.[53] But Ruth, through her work with the CAC, helped prevent this from happening, and instead the land was sold to the state to create the Tivoli

[51] See Map 18, which shows the original sampling locations, along with “hot spots” such as the Orchard Hill Farms Treatment Plant. Newsletters Michael Rosenthal sent out on sampling updates reveal a look back in time to the Saw Kill. Examples from the letters describe: high total coliform counts in certain places, and he asks whether anyone knows if there are lots of cows near this portion, malfunctions in the Bard treatment plant, and Orchard Hill as the “main supplier” of phosphate to the stream (Rosenthal 1977). His September 1st, 1981 letter thanks Ruth and Betty Tabor for taking over the sampling (Rosenthal 1981).

[52] In Brent Kovalchik’s story’s footnote 40, I describe the cleanup of the Pie Factory Site. In the Critical Environmental Assessment report Ruth helped write as chairperson, they describe the site as “a food processing plant formally was located at the head of a tributary in the village of Red Hook” (1988, 9). The site can also be seen on the above-mentioned Map 18. An article from the 1970s in the *Gazette Advertiser* also mentions the pie factory, through Rosenthal’s description of the improvements in the site due to the new treatment plant. Before the plant, he describes the sludge worm’s presence in the tributary, “‘sludge worms are horrible looking little red worms’...Their presence indicates a ‘dead stream’ as they are the last thing remaining when the dissolved oxygen level declines from pollution” (Mead [197?]).

[53] The land around Ward Manor was sold in 1958 to Central Hudson. Newspaper articles and write ins to the editor in the *Taconic Newspapers* reveal residents’ worries about their safety following news from the 1979 accident at Three Mile Island, as well as disturbance to the historic riverfront from trains carrying coal to power the plant (“Good Sign,” n.d). With pushback from community groups, such as the CAC, the land was purchased by New York State for $710,000 in 1981 and turned into the Tivoli Bays State Nature and Historical Preserve. Central Hudson maintained a small corridor on the land for potential future power lines. Proponents of the plant were disappointed in the loss of tax revenue for the town (Faber 1981).

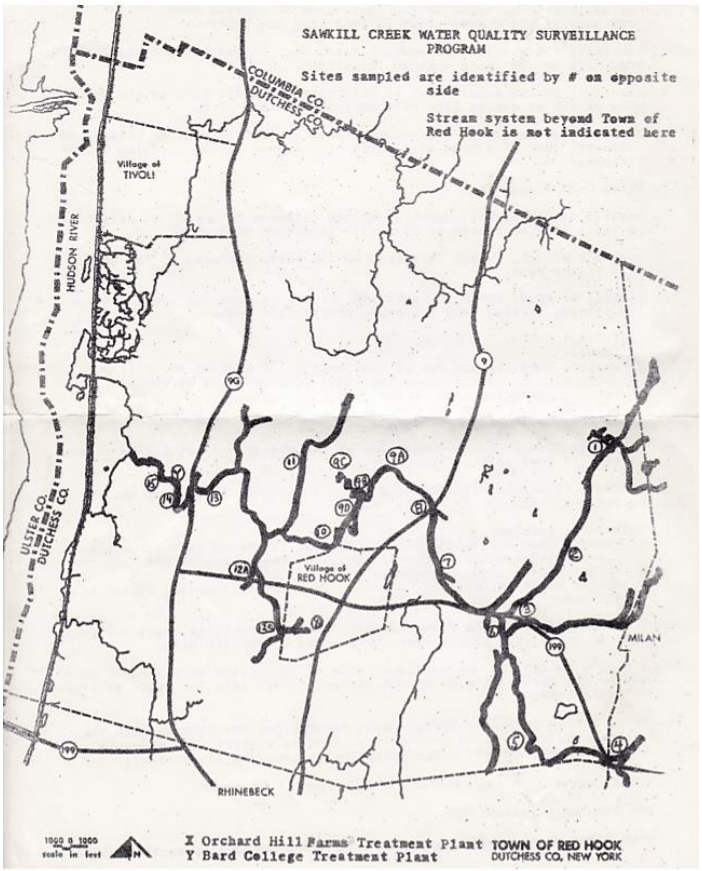
Bays Wildlife Management Area. The CAC faced criticism from the surrounding community during this fight, which we imagine would not happen today as the "political and environmental consciousness" has changed in the area since then.

Ruth acknowledges the changes taking place in the community surrounding her stretch of the Saw Kill, some good like the above-mentioned change in attitude towards the environment, and some bad like the increase in development. The history of work she and others did was essential to creating the Saw Kill I know today, and it is from these efforts, that groups such as the SKWC base their work. Now, she would like to see the Saw Kill stay exactly as is, with no new development or uses. The nearly fifty-year history of small changes, the more recent impacts of flooding, and changes in upstream activity, make it difficult to predict if the Saw Kill here will be able to remain the same or how it will evolve. Yet, looking out onto the stream, imagining what it will look like in the spring when her garden is in bloom along the banks, it is easy to understand why one would want it to remain just as it is today. For Ruth, if one walks along this stretch of the Saw Kill, "you can get lost in it….it feels more like the wilderness here." This parcel "is perfect Hudson Valley... deep ups and downs, this little stream shows it — the essence of Hudson Valley." [54]

[54] The Saw Kill exemplifying Hudson Valley Landscape is echoed in the CEA report (1988) Ruth helped put together. The report describes, "This topography of perched streams falling over steep slopes to meet the river at sea level is apparently unique in North America to the Hudson Valley" (1988, 3).

Figures

Map 17: A close-up of the 1798 Thompson survey map of the town of Rhinebeck in Dutchess County shows where the "Armstrong" mill and the "Benthuysen" mill are located at Cedar Hill. The "Armstrong" mill is the site of Ruth's home (Source: Library of Congress).



Map 18: A map of the original 1975-1982 Saw Kill monitoring program sample sites. Both the Orchard Hill treatment plant and the Bard College treatment plant are labeled here (Source: Saw Kill Watershed Community).

Rhinebeck Gazette—April 25, 1896

Over a hundred and fifty guests registered at the Rhinebeck Hotel Sunday last.

Work was commenced Tuesday on Jacob Teal's new building on East Market street.

Work was commenced on the old Livingston mill at Annandale Monday preparatory to the establishment there of the Baker chocolate factory to be removed from Brooklyn. Four hundred hands will be employed.

The appointme
Miller as librarian
stitute gives gene

A meeting of th
Reformed church
Glenham on Tues

The steamer
her first trip of
Monday night. Th
have a steamer
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Ernest Steenbu
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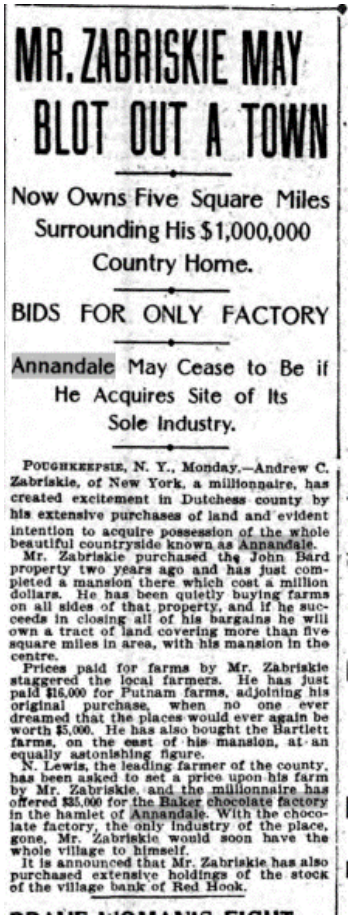
Figure 15: This notice from an 1896 article in the *Rhinebeck Gazette* reads "Work was commenced on the old Livingston mill at Annandale Monday preparatory to the establishment there of the Baker chocolate factory to be removed from Brooklyn. Four hundred hands will be employed" (Source: Old Fulton New York Post Cards).



MR. ZABRISKIE MAY BLOT OUT A TOWN

Now Owns Five Square Miles Surrounding His $1,000,000 Country Home.

BIDS FOR ONLY FACTORY

Annandale May Cease to Be if He Acquires Site of Its Sole Industry.

POUGHKEEPSIE, N. Y., Monday.—Andrew C. Zabriskie, of New York, a millionaire, has created excitement in Dutchess county by his extensive purchases of land and evident intention to acquire possession of the whole beautiful countryside known as Annandale.

Mr. Zabriskie purchased the John Bard property two years ago and has just completed a mansion there which cost a million dollars. He has been quietly buying farms on all sides of that property, and if he succeeds in closing all of his bargains he will own a tract of land covering more than five square miles in area, with his mansion in the centre.

Prices paid for farms by Mr. Zabriskie staggered the local farmers. He has just paid $16,000 for Putnam farms, adjoining his original purchase, when no one ever dreamed that the places would ever again be worth $5,000. He has also bought the Bartlett farms, on the east of his mansion, at an equally astonishing figure.

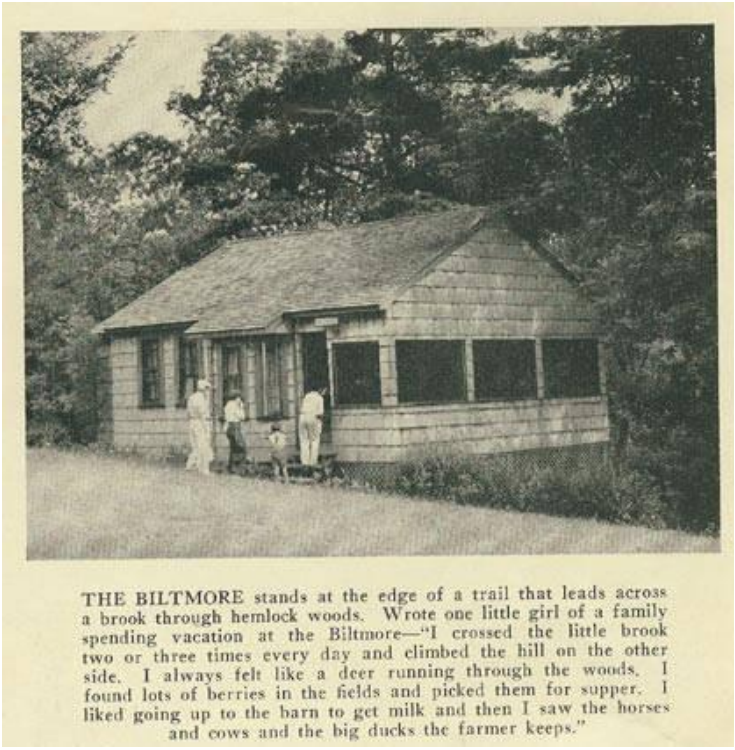
N. Lewis, the leading farmer of the county, has been asked to set a price upon his farm by Mr. Zabriskie, and the millionnaire has offered $35,000 for the Baker chocolate factory in the hamlet of Annandale. With the chocolate factory, the only industry of the place, gone, Mr. Zabriskie would soon have the whole village to himself.

It is announced that Mr. Zabriskie has also purchased extensive holdings of the stock of the village bank of Red Hook.

Figure 16: A 1902 article from *The Daily Herald*, "Mr. Zabriskie May Blot Out A Town," describes Charles Zabriskie's $35,000 bid for the Chocolate Factory (Source: Old Fulton New York Post Cards).

THE MOHEGAN, tucked away among the trees. Wrote one person who spent a month in this little cottage, "The awful fear and fright which literally used to shake me has subsided; the comfort and freedom here can be appreciated only by being known. Sometimes I feel a bit frightened at being so happy. The cards had been dealt so differently for so long a time."

Figure 17: A Ward Manor informational pamphlet from some point during its operation in 1930 to 1940 shows one of the summer cottages, named for famous hotels, "The Mohegan" (Source: Hudson River Valley Heritage).



THE BILTMORE stands at the edge of a trail that leads across a brook through hemlock woods. Wrote one little girl of a family spending vacation at the Biltmore—"I crossed the little brook two or three times every day and climbed the hill on the other side. I always felt like a deer running through the woods. I found lots of berries in the fields and picked them for supper. I liked going up to the barn to get milk and then I saw the horses and cows and the big ducks the farmer keeps."

Figures 18*:* From the same Ward Manor informational pamphlet as Figure 17, this shows the summer cottage "The Biltmore" (Source: Hudson River Valley Heritage).

Sixth Reflection:

An 1830 map of the Hudson River (Map 19) shows the Saw Kill in relation to nearby estates until near Cedar Hill/Annandale Triangle, where it trails off beginning somewhere in Red Hook. This map shows what I found in many of the historical maps I looked at, that the path of the stream loses specificity the further away from the Hudson River it goes. I believe these maps reflect their time period, because it used to be that, the closer to the Hudson River and the estates one went, the more the activity around the stream intensified. The importance of river transportation and landings, concentration of settlements near the river, and the political clout from the estate holders, were all possible contributors to the geographer's interest in the stream closest to the Hudson. It is also in the lower reach where the availability of recorded history increases. With the estates Montgomery Place and Blithewood, and Bard College surrounding it, the stream becomes a well-documented focal point through the archives associated with them.

Map 19: Close-up of Chapin's 1830 map, *The Tourist, or Pocket Manual for Travelers on the Hudson River, The Western Canal, And Stage Road* (Source: David Rumsey Map Collection, n.d).

In my experience, the estate histories can overwhelm the landscape. It is hard for me to feel as though I know the Saw Kill here without knowing the entire histories of families, such as

the Livingstons, who occupied it. It is impossible to avoid their history, as evidence from the ruins of walls or old mills, or existing dams, are a constant reminder of their influence. Without historical context, happening upon such structures renders the landscape mysterious. The feeling as though the structures reveal an unknown, along with the sheer multitude of structures from the past, causes them to define the landscape. A landscape defined by its ruins is a thought inspired by John B. Jackson, who believed landscapes are told through the stories of their ruins (Jackson 1984). Ruins imply a historically inhabited place. The historical inhabitants of this stretch of the Saw Kill connect to a history, or a cultural heritage, seen throughout the Hudson Valley region of river estates and industry along the river and streams.

In visiting Ruth, who has built her home from such ruins, I saw a way of living alongside history, but not being overcome by it. Ruth and her husband repurposed the ruins into their home and garden, reshaping them to suit their family. By doing this, they sculpted a new history alongside the Saw Kill. However, their history overlaps with the older history. I saw this in Ruth and Maia's story of the flooding from Hurricane Irene, when their basement windows constructed from the grist mill windows were reverted to their original use as they let water flow through.

Outside of the historical landscape constructed from the ruins, Ruth and Maia's memories and observations on plant and animal life, or how they remember what certain spots used to look like, constructed a new understanding of the landscape for me, the listener.

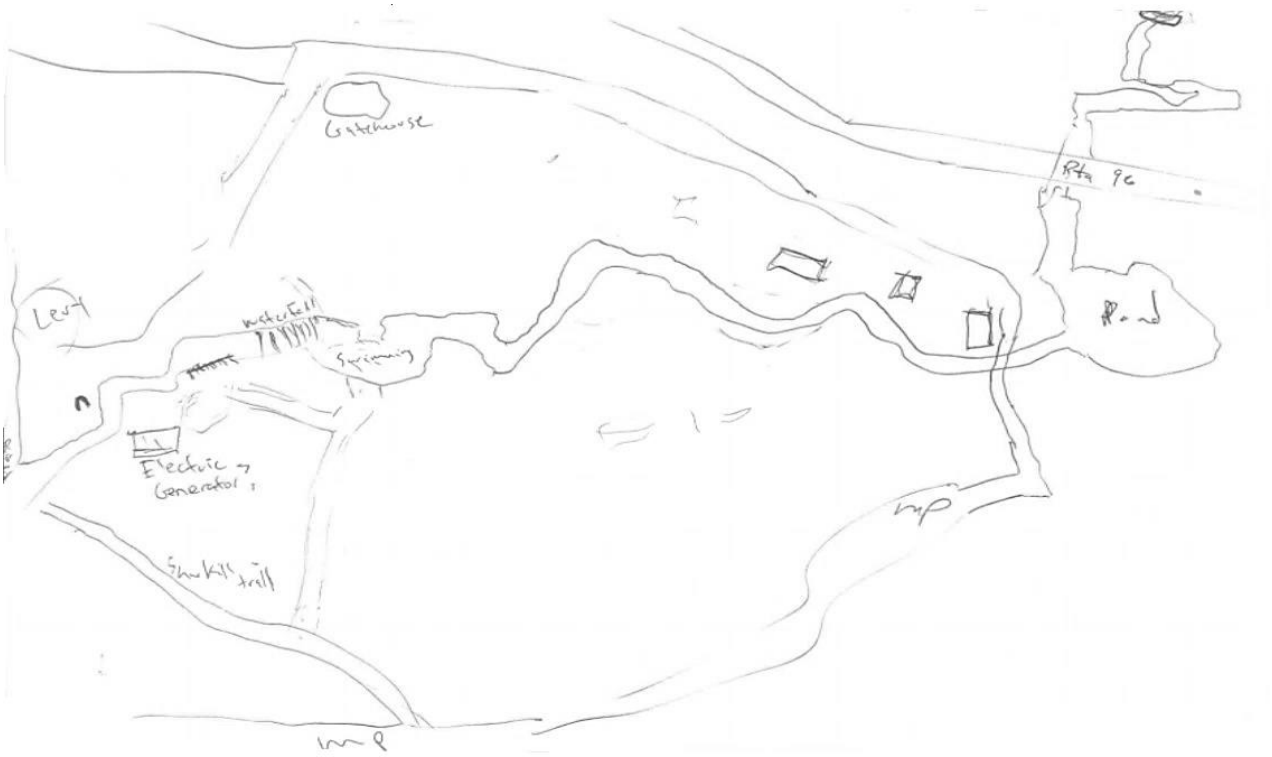
> To perceive the landscape is therefore to carry out an act of remembrance, and remembering is not so much a matter of calling up an internal image, stored in the mind, as of engaging perceptually with an environment that is itself pregnant with the past. (Ingold 1993, 152-153)

Tim Ingold's words recall for me the image of Maia and Ruth looking out of their window onto the falls, stream and banks, and telling me what they remember seeing to reveal a more recent

past. As Tim Ingold would say, they engaged with the surrounding environment, that for them is full of years of memories, observations, and labor and time building a home, in order to help me perceive and understand the current landscape. What I saw from them, was a landscape understood through the process of inhabitation. This, blended with the cultural heritage elicited by the historical landscape and connected to a regional history of the Hudson River, create an environment or landscape that is indeed “pregnant with the past.”

The Water Plant to the Mouth and Back Again: Dan McKenna

Dan started working in Bard's horticulture department during his high school summers and has been full time with the department for the past seventeen years. I knew of his extensive knowledge of trees in the area from working with him during Day in the Life of the Hudson River. We took a walk together along the trails from the parking lot next to Bard's drinking water plant down to the field station. Our walk was a mixture of conversation, observation, storytelling, and sharing. Along the way, I learned of his childhood spent by the Saw Kill, the way he taught himself tree identification, his interest in American history, theories on what the area used to look like, and his band. His story is a walking narrative, built from both his observations and stories, and my own as I walked alongside and learned from him.



Map 20: Dan drew this map after our walk. His landmarks are on both the Bard and Montgomery Place side of the stream. He shows the roads, as well as the trails, such as the Saw Kill trail, that pass the Saw Kill (Map courtesy of Dan McKenna).

“Somewhere around here there’s some Sassafras."

How do you know? I asked.

“Scratch and sniff it” (like one of those stickers I thought).

A blend of unknown spices, perhaps cloves, is released. The smell of sassafras lingers under my fingernail. Without Dan, I would not be able to tell the difference using smell between it and its family member spice bush; but, I make note that these leaves are green, while the other under-growing bush is a bright autumnal yellow.

Black Oak, *Quercus Velutina*. Somewhere he heard the name and became intrigued.

I tell him it must be his spark tree, a term I borrowed from Susan Roger’s “spark bird," which is the bird that initiates an interest in birding. A spark tree being the one to start Dan on his passion for trees.

With this spark, he began consulting books and researching online. The leaves especially were interesting to him. A random leaf picked off the ground has a basic symmetrical shape, “boring." A Black Oak leaf however, is asymmetrical, with long bristle tips at the end of its lobes. However, the leaves at the top of the tree with full access to the sun will look different than the shaded leaves, furthering confusion or giving it more character. The bark too, to the non-educated observer, resembles a normal bark, but underneath is a bright yellow exposed only

when cut. He began to search for one on campus and found a tree he thought it might be. But in order to ID a tree, you have to compare it to other trees. In the process of finding one Black Oak, he had to learn all of the other Oaks.

It was not a Black Oak.

However, the process could be repeated for other groups of trees. After Oaks were Hickories and then Aspens. At some point he discovered the New York State champion trees, a record of the state's biggest trees. Total Point Score = Height in feet + Trunk Circumference in inches + 1/4 Average Crown Spread in feet.[55] The search for these big trees, required further skill in IDing. It was all self-directed and self-taught. "That's the way to go...when you do something on your own, you're more into it."

Did we have them here?

"Oh, we have tons of Black Oak."

The Saw Kill separates two "worlds," the Bard and the Montgomery Place sides. The separation created some way of diversifying the trees. They are similar, both with their White Oaks and Hemlocks, but the Montgomery side, with its land defined by its estate, has slightly different undergrowth and more of certain trees such as Striped Maples. This difference is a mystery, but other times the trees can tell you things, they give you a history.

"See this is a Beech." He points out the area along the trail above the lower falls as predominantly Beech. That says something, that this patch of forest is at the end of its cycle. He describes a recently cleared woodland; first to come back are the Ash, Juniper, Mulberry, Black

[55] The NYDEC keeps a register of the state's biggest trees to help coordinate the efforts of American Forests which, since 1940, has run the national register for big trees (American Forests n.d). Dan has identified ten state champion trees (NYDEC 2017).

Locusts — the “scrubby” ones. Next, come the Oaks and the Hickories. Lastly, the Sugar Maples and the Beech fill in. There are certain spots along the Saw Kill that have these small pockets of perhaps more “ancient forest."

“Look up, that’s a dead Hemlock.” A Hemlock is across the trail from the Beech, identified by its bark. It is a second growth tree, providing another clue towards the age of this patch, perhaps in its younger transitional phase.

Image 17: Detail of leaves from a Black Oak (Photo courtesy of Dan McKenna).

Image 18: Detail of bark from a Black Oak (Photo courtesy of Dan McKenna).

We have been looking up, but now we look down. The topography of the land suggests more stories.

Above the upstream waterfall, he points to where the land flattens out on both sides. This is one of Dan's guesses of where a bridge between Montgomery and Bard once went.[56] Further downstream, past the dam, we look for evidence to prove the Saw Kill's course was changed by

[56] In an 1840 letter from Robert Donaldson, owner of Blithewood, to Louisa Livingston of Montgomery Place, he says, "By his map now laying before me I see that the lot on your side is considered a site for a factory and the island (near the rustic bridge) is the site for another and should these ever be erected, no vigilance can prevent depredations upon your wood vegetables and fruits --nor prevent your place from becoming a thoroughfare to Barrytown" (Haley 1987, 9). This letter is important because it marks the beginning of one of the first conservation easements, as the two of them prevented John Cruger (who's map they are referring to) from developing the lower Saw Kill, but it also proves the existence of a bridge, they call the "rustic bridge," that went between the two properties.

This series of letters from 1840-41 show sketches of the Saw Kill with the rustic bridge labelled (Figures 19 and 20). Other documents showing the bridge are an easement map, which labels a "19th Century Pedestrian Bridge" (Map 21). And lastly, a map from the 1986 master plan of Montgomery Place also points out the location of a past bridge that connected the Montgomery and Bard trails (Map 22).

human hands.[57] In other places there are suggestions of stories, such as disconnected pipes, or the stone wall perhaps placed to support the trail built over it.

Dan builds his own trails throughout the campus. “The thing about a trail is, the woods tell you where the trail should go. That’s the first thing you need to learn." When starting a trail, he looks at the whole to find the obstacles and natural paths the woods offer. The trail needs a start and an end, and some sort of objective. The goal might be to go where the woods is telling him a trail should go, or he might make a decision to override obstacles, like a stream, by creating a trail that crosses water.

The older trails, the single file ones we are currently walking on, that travel alongside the Saw Kill, these we have no way of knowing their creator’s objective. Dan knows you can travel from Tivoli to Barrytown on such paths, but their history he can only guess. Were they Native American paths? Or built with the estates? Covering the ground next to them near the mouth is a groundcover called Periwinkle. In his horticultural work, he sometimes tears it up to replant other places on campus. It is a non-native species originating in Europe, and therefore, must have been a decorative plant that was purposefully planted. He wonders if it was meant to line these trails. If so, what else was planted at that time? Or is it an unexpected “pop-up” that traveled from one of the nearby estates?

[57] In Figures 19 and 20, which show the rustic bridge, it looks as though the Saw Kill has a different course then it does today. It is Helene Tiegers, like Dan’s, belief that the Delafields changed the course of the stream in early 1920 to increase power to the generator, which supplied the estate with electricity. Amy Parrella, Director of the Arboretum at Bard College, directed me to an informational sign on the Saw Kill Trail at Montgomery Place. The sign informs that when the Delafields occupied Montgomery Place, starting in 1921, they used the Saw Kill to generate electricity for their home and other structures in the hamlet. They diverted water at the lower dam through a large metal pipe, which then carried the water downstream to power a turbine housed in a structure near the mouth on the Montgomery side. The foundation of the building and the remains of the pipe are still there today. While this proves the Delafields diverted water from the Saw Kill, and explains the large pipe adjacent to the stream, it does not answer whether the course of the Saw Kill itself was changed, unless that happened through the act of damming the stream.

The Periwinkle, is not blue as I would have thought, but an unassuming green leaved horizontal plant. Dan's questions turn the plant into a clue to be decoded. People have inhabited this area for so long, the histories blend together or are forgotten. Plants like these are physical evidence to detangle those histories, for those who understand them.

From where the Periwinkle is planted, the trail overlooks the mouth of the stream. Dan wonders out loud what it would be like to walk the entire length of the Saw Kill. He would start at the mouth, the most "turbulent" part of the stream, where people used to dock their canoes or boats. Then it "snakes" a lot, changing directions, and goes further upstream than most people think.

Following his map, from the mouth, he passes the waterfall, the electric generator on the Montgomery Place side, the pillars or archway, the pond or the wide area that was a swimming hole according to a nearby plaque. The big bend in the stream is a little more unknown. Then it passes the Oja residence, Shafer house, Bard Publications, the Annandale Bridge on Annandale Road, then Route 9G. Near here is Kelly Road, where he spent part of his childhood, and where he remembers dropping big rocks into the stream to make the frozen water crack during the winter.

If one was to come from the other direction; the stream goes from behind the school over toward Mill Road, under a bridge, and then the pond. He lived on Mill Pond five years ago during Sandy when he experienced firsthand "the power of the Saw Kill." It washed a neighbor's yard away, pushed it behind their house creating a small canyon. After the pond, it runs south, meanders to the east, and then under the bridge at the Rec Park, behind a housing development, then another bridge, and keeps going until the Annandale bridge, where this area begins.

This area is mapped out in exact detail. He knows it, the Bard/ Montgomery area, “like the back of my hand” or a “second home." “If you were to say there is a Shagbark hickory in the woods on the north side of the practice soccer field...I know the one you’re talking about…"

What is it about the land that you love?

“The fingering ravines, snaking towards the river." The change from sea level to one hundred something feet in elevation, which distributes different plants based on height. “The little streams that pop up everywhere.” The trees that show up unexpectedly, the bones or antlers he finds, the random things that he stumbles across — a dump of old fridges and stoves at Montgomery, Place or a root cellar buried in the woods.

He finds it is impossible to become lost in a place he knows so well, where trees can serve as landmarks.

To the left, not visible from the path, he points out an Amur Cork tree. This tree is one of those that showed up unexpectedly. As an invasive that originated in China and was brought here for ornamental purposes, its placement in the forest is unintentional. In the mysterious way plants can travel, this decorative tree somehow popped up in the forest, while its parent tree is on the Montgomery estate.

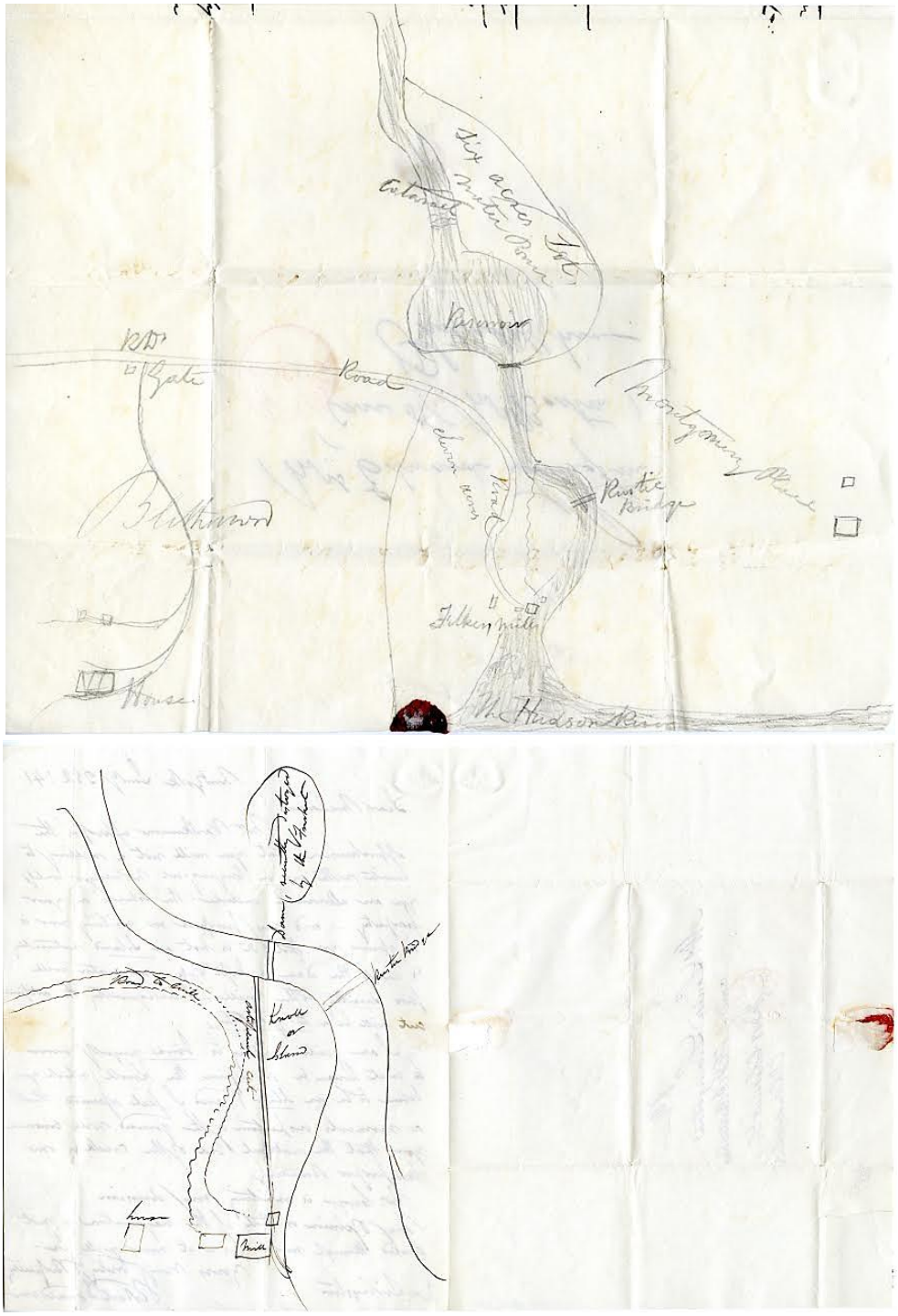
We walk up the dirt road, past the waste treatment plant, to where it turns into the paved road that connects to the Blithewood main road. The incline of it makes me glad to pause as he gestures towards the wideness of the road.

“Even this road feels old, doesn’t this road feel old to you?” He imagines what this area used to look like. The road is lower than the ground. Like eroded stream banks, the edges are exposed to show roots. He can picture it at its original height when it sat flush to the edges, now sunken by time. “You can walk on certain paths and feel as though you are the first person to walk there in however long, fifty or a hundred years.”

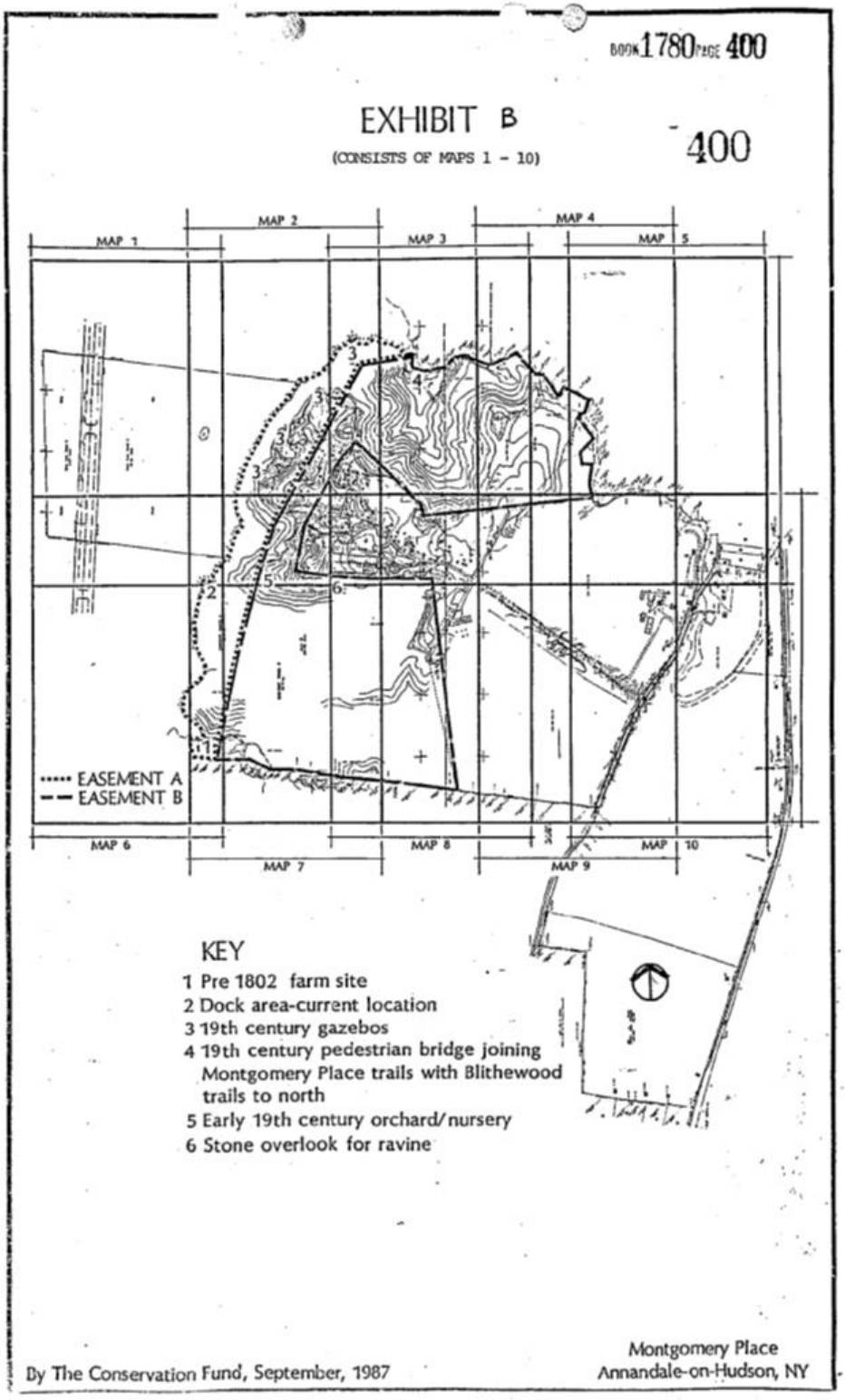
Now that I am seeing the road how Dan sees it, it does feel old. The whole area feels older than it did before. There is a history here, and one that for the patient learner, can be unraveled through reading the woods. Through his identification, Dan has told me histories of disturbance based on the kinds of trees growing, histories of arrival from non-native species, histories of movement from trails and possible crossings, as well as the unknown or unidentifiable history we cannot read yet. By knowing the trees, he knows the history of the forest; an understanding of a place built through knowing the color of the bark, the ways the limbs branch out, the shape of a leaf.

When walking in the woods recently, someone pointed out a Tulip Tree to me. It is easily identifiable with a straight trunk that branches near the top, ridged bark, and leaves that almost resemble a tulip shape. Something about it has stuck with me, and I look for it each time I go out. So far, I have found it on the Montgomery side of the Saw Kill, and I wonder what it can tell me about this place. This might just be my spark tree.

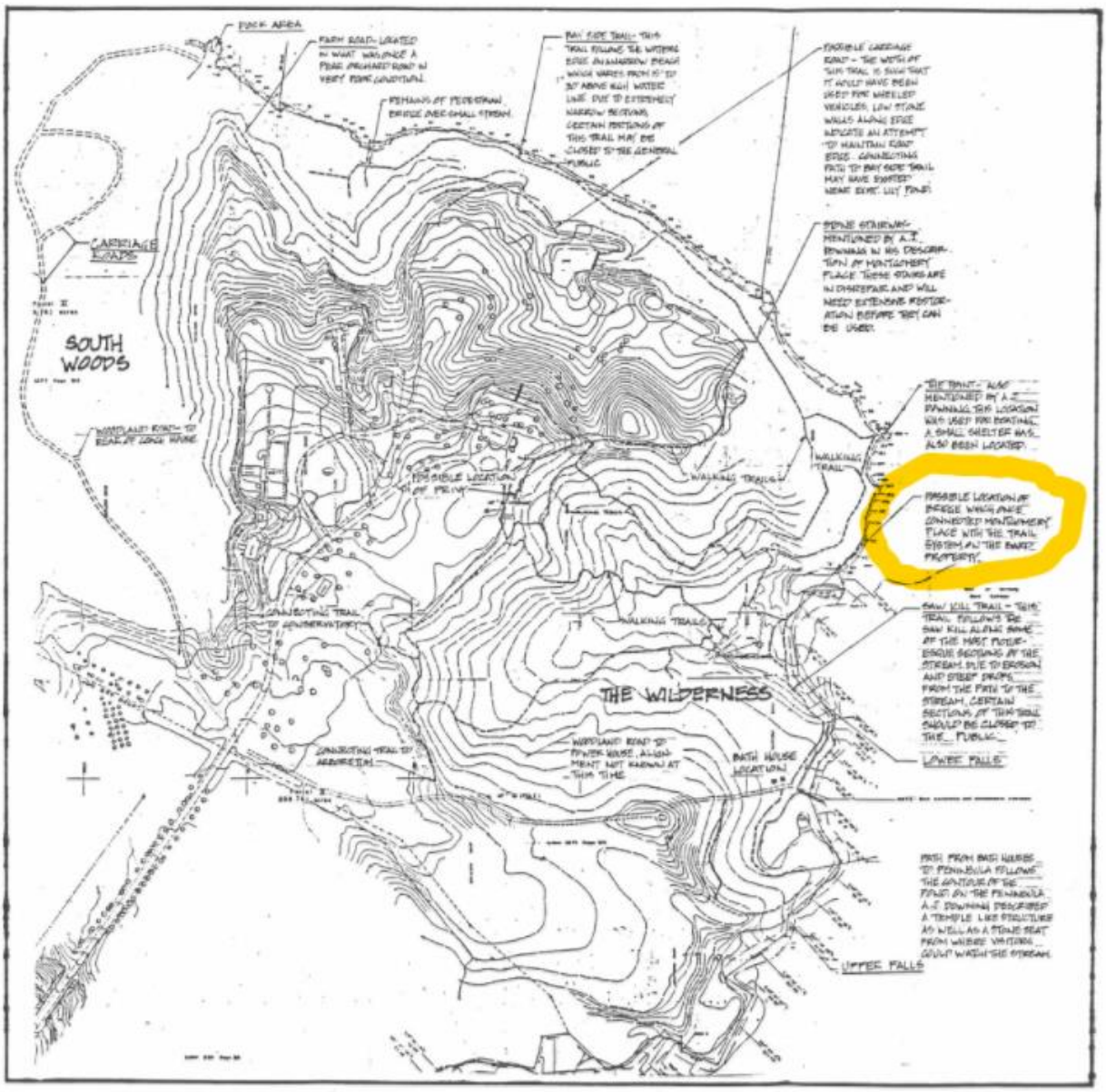
Figures



Figures 19 and 20: Images taken from the series of letters from 1840-41. The two depict the "rustic bridge." In both images the course of the Saw Kill looks as though it curves more than it does now, suggesting the course was changed (Courtesy of Helene Tieger and the Bard Archives).



Map 21: 1987 Easement map from The Conservation Fund showing "19th Century Pedestrian Bridge Joining Montgomery Place Trails with Blithewood Trails to North" (Map courtesy of Amy Parrella).



Map 22: Part of Stefan Yarabek's 1986 Montgomery Place Master Plan. The yellow circle highlights the possible location of the bridge. It reads "Possible location of bridge which once connected Montgomery Place with the trail system on the Bard property" (Map courtesy of Amy Parrella).

Seventh Reflection:

Dan showed me two kinds of maps. One he drew, describing it as he went, and creating an accurate representation of the stream's path. The map (Map 20) had all the aspects of a traditional map — landmarks, directions, roadways. The second map was the one he created vocally and physically as we walked together. Through travelling the trails next to the Saw Kill, he pointed out landmarks, questions, and stories that did not make it onto the classical map representation of the drawing. The walking map he created was both entirely specific in the plants he identified, as well as incredibly imagined as his questions posed new narratives onto the land.

Geographer, Dennis Wood wrote, "Love it? Don't talk to the cartographers, talk to the poets. What if mapmaking were an expressive art, a way of coming to terms with place, with the experience of place, with the love of place?" (Wood 2011, 18). In Wood's work, he views maps as an object of love for a place. Map making is thus a mode of expressing that love or a way of learning to love a place. Wood's words remind me of a line, the only line I have ever memorized from a book, from one of my favorite books, Michael Ondaatje's *The English Patient (*1992): "Give me a map and I'll build you a city" (143). The line speaks to the generosity of map making; the idea evident to me in both the verbs *to give* and *to build*, and the implication that the act of map making or building from maps is a multi-person endeavor. It shows the potential for working together to build something larger, such as stories or history, from something as ordinary as a map.

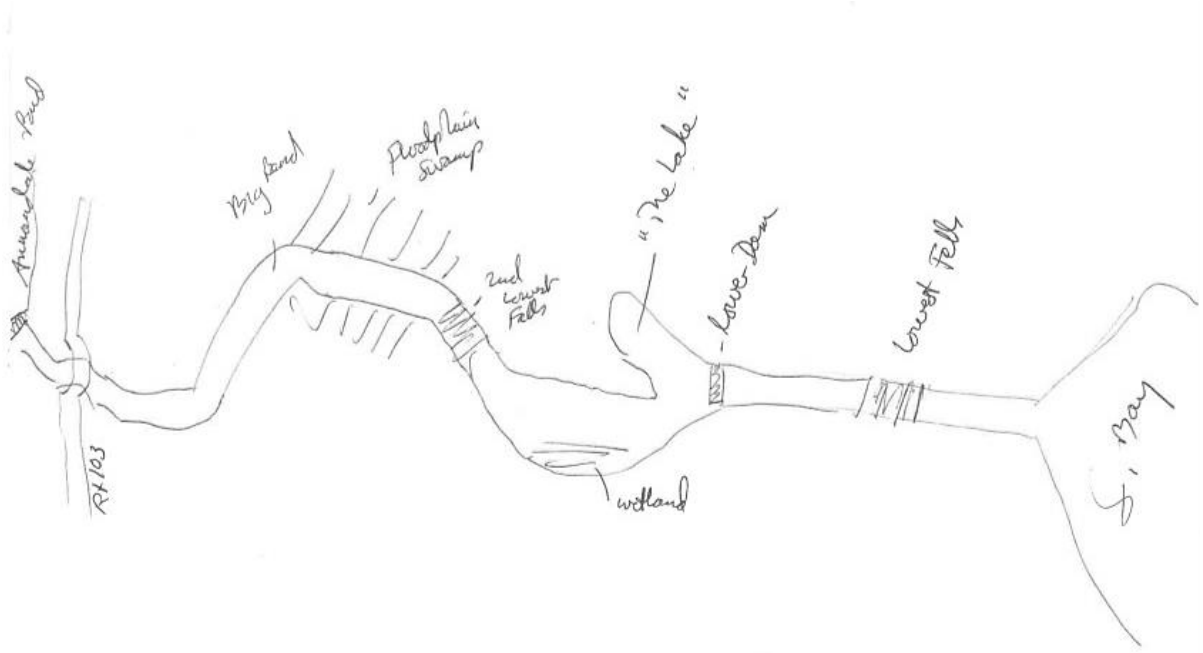
By walking through the woods with me, Dan was generous in sharing his knowledge and love for this place he refers to as a home. Both Ondaatje and Wood allow maps to go beyond giving directions to become an act of sharing. The maps Wood describes are legitimate maps,

"with all of the science and technology that this implies, yet they have fingerprints all over them...they have heart" (Wood 2011, 22). The image of a finger printed map is one that gives me goosebumps. To me, the fingerprints imply the act of giving.

Fingerprints or footsteps? Tim Ingold says, "we make our way through the world not over it" (2000, 241). Picturing Dan's drawn map, *over it* conjures an image of giant footsteps placed on top of the two-dimensional features. *Through it* places the viewer inside the map, just as we were when walking, where everything is three dimensional and landmarks are blocked from view by the trees in front of them. *Through it* recognizes the individuality of each map reader's experience. The map becomes more than a directional device by taking forms other than the folded-up paper map or the Google Maps in one's pocket, to find new ways of representing or expressing how people experience place.

The North and South Woods Near the Mouth: Erik Kiviat

Erik Kiviat was the first person I reached out to concerning my project. He agreed to meet me in his office at the Bard Ecology Field Station, which overlooks the mouth of the Saw Kill. Erik is the co-founder and Executive Director of the nonprofit Hudsonia, founded in 1981, based at the field station, an "institute for research, education, and technical assistance in the environmental sciences" (Hudsonia n.d). Their research on rare species conservation, wetland and stream ecology, invasive species, and human environmental relationships, is used by individuals and organizations in decision making processes. While Erik's work takes him to other areas within and outside the Hudson Valley region, the area around the Saw Kill and the Bays has held his attention throughout his forty-five plus years working here. The area is also where his mother, Esther Kiviat, photographed and wrote her own book, Changing Tides: Tivoli Bays: A Hudson River Wetland (1999), and where in 1965 Erik attended Bard College to study literature, later returning as a student in Bard's adult degree Continuing Studies Program for the sciences. Our conversation focused on the plight of the Hemlocks around the Saw Kill, and the conditions surrounding this event. I have included pictures from a follow up meeting when we looked at his photographic archives, and information from his guest lectures to my course on Montgomery Place. What follows is a story of how different parts of the Saw Kill landscape interact with, or change, one another.



Map 23: The map Erik drew of the area of the Saw Kill he knows best. The landmarks he names are the names most commonly used for features such as "the big bend," and "the lake." He also points out an interesting ecological zone, the "floodplain swamp" (Map courtesy of Erik Kiviat).

The outside makes its way in. A branch of curly dock, cut because he was surprised to find a Red-Winged Blackbird nest in some, lies across the desk, and a large bug crawls along the floor. “They keep coming in." Like sunlight, the room is bathed in a yellowish light. Not yellow, but the glow of a thousand paper Manila folders. The folders line every surface of the room, along with boxes and binders, an archive of photos, documents, and perhaps additions to the herbarium. The accumulation of stuff suggests the expansive history contained in the space, and the outdoor invasion suggests the interests of the person who occupies it.

This room is situated in the field station, the base of Hudsonia. It overlooks the mouth of the Saw Kill where it enters the Tivoli South Bays.[58] Here, the mouth interacts with the Hudson River, visible beyond the train tracks, making it tidal. It is late October, and the invasive water chestnut that covers the bay is starting to disappear as it does in the colder months. From the bay, moving upstream past the lowest falls, the lower dam, “the lake," the second lower falls, the floodplain, past the big bend, to the Annandale Dam — these are the landmarks Erik locates when I ask him to draw a map of the Saw Kill (Map 23). It takes him only a moment to sketch it precisely from memory, his familiarity with this reach coming from his years of study of this place.

[58] I refer to the bay where the Saw Kill empties as the South Tivoli Bays, however Erik is consistent in his calling them the Tivoli South Bays.

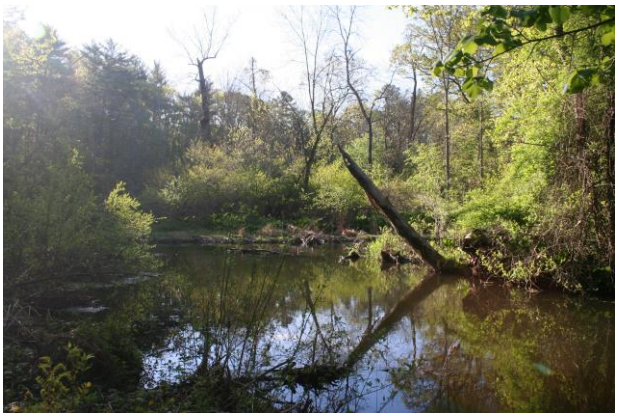



Image 19 (*left)* and 20 (*right):* The first image shows a tree down in Annandale Mill Pond, the second shows the floodplain swamp above the second lowest fall (Photos courtesy of Erik Kiviat).


Image 21 (*left)* and 22 (*right):* The first photo shows the waterfall next to the old swimming pool. The second shows another tree down in "the lake," or what Erik also calls "the backwater" (Photos courtesy of Erik Kiviat).

As an ecologist, Erik is interested in examining the whole picture; whole being the plants, animals, soils, native and non-native species, the water, and the people who interact with these features. Once while I was on a bird walk with him, he positioned himself as not interested in simply identifying a single species of bird, but rather he wanted to know what the bird ate, where it nested, the other birds around it, all contextual clues into how the bird fit into its surrounding environment.

In order for me to better understand this environment and the events taking place here, including what Erik refers to as "the biggest event" on the Saw Kill,[59] he conveys the importance of understanding the geologic history within which it all takes place. He starts with the bedrock, the surface supporting soil and subsoils. The bedrock was created some four hundred and fifty million years ago, as sediments slid down the continental slope, in what he calls "turbidity events," creating layers of compressed sand and clay. The compression created layers of sedimentary rocks; the clay became layers of shale, and the sand, sandstone. The smooth layers of rock were broken up by geologic activity, creating folds and breaks. The results of geologic activity are visible in places such as the waterfalls on the Saw Kill, where ledges of bedrock are exposed. The ledges were created as shale, more prone to erosion than sandstone, wore away, leaving behind thick ledges of the stronger sandstone.

The soil composition above the bedrock is determined by deposits from glacial Lake Albany, which was formed 12,000 years ago by a natural barrier near Beacon. The lake rose one hundred fifty feet above sea level, ending right near Annandale Road where Erik's map cuts off. During this time period, alternating seasonal layers of silt and clay were deposited. The history of large clay deposits created soils difficult for agriculture as it is not easy for water to move through them. Sands from surrounding streams were also deposited and distributed around the lake by currents. When the lake retreated, it left behind a silty clay called "glaciolacustrine,"

[59] I was struck by the word "event" that Erik used to describe the problems affecting the Hemlocks. Since Erik is an ecologist, I researched the ecological definition of the word to better understand what he meant by his use of it. A definition I found describes an event as "an abruptly occurring process which significantly affects variables of an ecological unit for a period longer than its duration" (Volker Grimm qtd in. Bissonette and Storch 2007, 60). This means that something occurs, and by its occurrence it creates long lasting ecological effects. Juxtaposed with the suddenness or abruptness of the occurrence, the effects take time to unfold. Unlike other natural phenomena that will always be slightly mysterious because of their operation in geologic time, an *event* can take place in time measurable by us. The implications of it become visible within a lifetime.

Through a brief search, I found that an event may also be known as a disturbance. One of the accepted understanding of a disturbance is White and Pickett's definition (qtd. in Battisti et al. 2016, 8): "any relative discrete event in time (and space) that disrupts ecosystem, community, or population structures and changes resources, substrate availability, or physical environment." A disruptive event, to me, best suits the story Erik is recounting, as it is one unfolding in real time and has disturbed the Saw Kill ecosystem.

glacial lake sediments. More recent deposits in the streambed are called alluvium, which is essentially mud deposited by flowing water.

The soil history has influenced the surrounding flora and fauna. Today, the area around the Saw Kill has native vegetation and animal life, non-native visitors that have embedded themselves, rarer species, such as the spring breeding bird, the Louisiana Waterthrush,[60] and species of statewide concern, such as the four species of turtle Erik has found near the bay. Among the expected flora is the species around which the aforementioned "event" is centered, the Canada Hemlock.

Canada Hemlocks, also known as Eastern Hemlocks, are a common evergreen. They "dominate" on the south side of the Saw Kill, in the North Woods and the South Woods. The North Woods border the south side of the Saw Kill and the South Woods are behind the facilities of Montgomery Place (Map 24). While both woods most likely endured logging when the first saw mill was built on the Saw Kill, evidence of such activity is more evident in the North Woods. It is full of hardwoods including, broadleaved trees such as Oak, Beech or Ash. The South Woods, for some reason, were not logged after a certain point, and because this is a rarity in the Northeast region, they are one of the area's oldest forests. The forest was "unusually protected by their historic human inhabitants." Erik likes to think the inhabitants of the estate in the 1700s to 1800s, saw the trees as "a sacred grove."[61] The oldest Hemlock found in the South

[60] The Louisiana Waterthrush is a warbler that breeds and makes its home near forest streams. I found one scientific study that suggested, because the bird's life history is stream dependent, based on their nesting spots and diet of benthic macroinvertebrates, they are a good indicator species for determining the water quality of a freshwater stream (Mattsson and Cooper 2006).

[61] When talking to Amy Parrella, Director of the Arboretum at Bard College, she said she had heard there was a historic pact between the first landowners of Montgomery Place and the Native Americans who preceded them, to protect the South Woods. She sent me an email from Stefan Yarabek, who wrote several of the Montgomery Place master plans during the 1980s, who confirmed this. He said, "there was a note, I believe, by Violeta White Delafield attributed to Louise Livingston that Janet Montgomery promised to 'uphold Van Benthuysen's promise to the Native owners to maintain the 'about 72 acres of woods' (shown on the earliest survey) as spirit woods, never to be altered except to lay fallen trees to the side of minor trails, and a house site near the former Native encampment at the shore." He added that Wil Alexander, who was the Major Delafield's gardener, confirmed this Livingston tradition.

Woods is over two hundred sixty years old.[62] Erik calls both woods "Old Growth Forest," however he acknowledges that some biologists would prefer the term "Ancient Forest," as the former implies unlogged, which Erik presumes is not true for these woods.

The event Erik was referring to is the "morbidity and mortality" of the Hemlocks, which began some forty years ago with the introduction of a new invasive species, the Hemlock Woolly Adelgid. The creature resembles a black aphid (USDA 2005). Native to Asia, they have made their way through large spans of the United States, most recently into the northeastern section. They make their homes and feed on Hemlocks. As they mature, they create a white wool looking substance, cobweb like, to cocoon themselves and their eggs for protection (USDA 2005). Evergreens should not shed their leaves, but as the winter months come, the insects feed on the base of their needles, taking the starches necessary for the trees' survival and eventually stripping the needles.

The invasive has affected both woods but is most apparent in the South Woods. Erik first researched the South Woods forty years ago, and again in 2011, at which point two-thirds of the Hemlocks crowns were thinning. Now most of those are dead, and they are starting to die in the North Woods. The Adelgid's large scale of disturbance, for me, places them in the invasive species category, along with other undesirable species such as the Eurasian Water Chestnut that covers the South Bay in warm months, and the Phragmites lining the banks and wetlands of the Hudson. The attitude towards these nuisance species is best summed up in the poster on Erik's bulletin board: "Phragmites, shoot first ask questions later." Recently on a walk in the South Woods with Erik and a class, he asked us to define the term invasive species. Each student had a

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He also referenced a *New York Times* article that claimed the South Woods as one of five remaining virgin forests within the New York area. Erik would disagree with their designation as a "virgin forest," as it implies the woods have never been logged, which he presumes they have.

[62] In 2011, the oldest tree in the South Woods Erik found was around two hundred sixty years old.

slightly different answer: some required an invasive to be a non-native species, while others said a native species could be invasive, others decided the scale of impact determined invasive status, and others defined it as a species that had any negative impact on the growth of other species. Our lack of a cohesive definition made Erik's point that the topic of invasives is more complex than just good and bad.

With the death of the Hemlocks it will be years before the canopy layers are filled in by other trees. While the canopy is more open, the rain may hit the ground with greater force. More force hitting the earth can cause greater erosion, leading to more sediment or nutrient runoff into the waterway. With less canopy to shade the stream, the water may reach higher temperatures than before. Higher temperatures affect the level of dissolved oxygen in the water, which in turn affects the stream's flora and fauna. The first trees to fill in the new canopy will not be other Hemlocks, but deciduous trees such as Oak or Sugar Maples. These trees have a different chemical makeup than Hemlocks. An Oak leaf, for example, has high levels of tannin, which make them difficult for some leaf-eating creatures to consume. Leaf matter, known as detritus, in the water is the first step in the stream food chain, followed by the Benthic Macroinvertebrates that eat it, and then the fish that eat those. Therefore, a change in leaf chemistry has the potential to upset a whole food chain. However, change is not all bad — a dead fallen Hemlock can help a stream by creating a debris dam, which healthy stream ecologies need. Regardless of good or bad, the mouth of the Saw Kill could look very different over time.

As Erik points out, it is impossible to know what might happen in the next forty years. As a scientist, he is tuned in to the effects events like this might have, but he cannot predict the future. Factors, such as changing climate or the arrival of new species, have the ability to change whatever predictions one might make. In the meantime, he focuses on what he can learn from the

present, and this research over time provides valuable information to an ever-changing environment. Erik's photos from the field show his attention to detail as he moves through the area. They include close-ups of rare plants such as the Winged Monkeyflower or White Water Crowfoot, and examples of plants that should not be there like Hosta or the Daffodils, which must have escaped from someone's garden.[63] A picture he took in the Annandale Mill Pond shows a type of nest. Erik thinks it is an American Goldfinch or Yellow Warbler nest, and if the picture showed fecal pellets around the rim he could confirm it as Goldfinch. The nest is built on Purple Loosestrife, a common plant for the area, and like the Curly Dock branch resting on his desk, he is curious about this.

Image 23: Hosta that must have escaped from a nearby garden (Photo courtesy of Erik Kiviat).

[63] Looking back, the daffodils in his field photos might be the ones that replanted themselves after being taken out of Ruth Oja's garden by the flood and swept downstream.

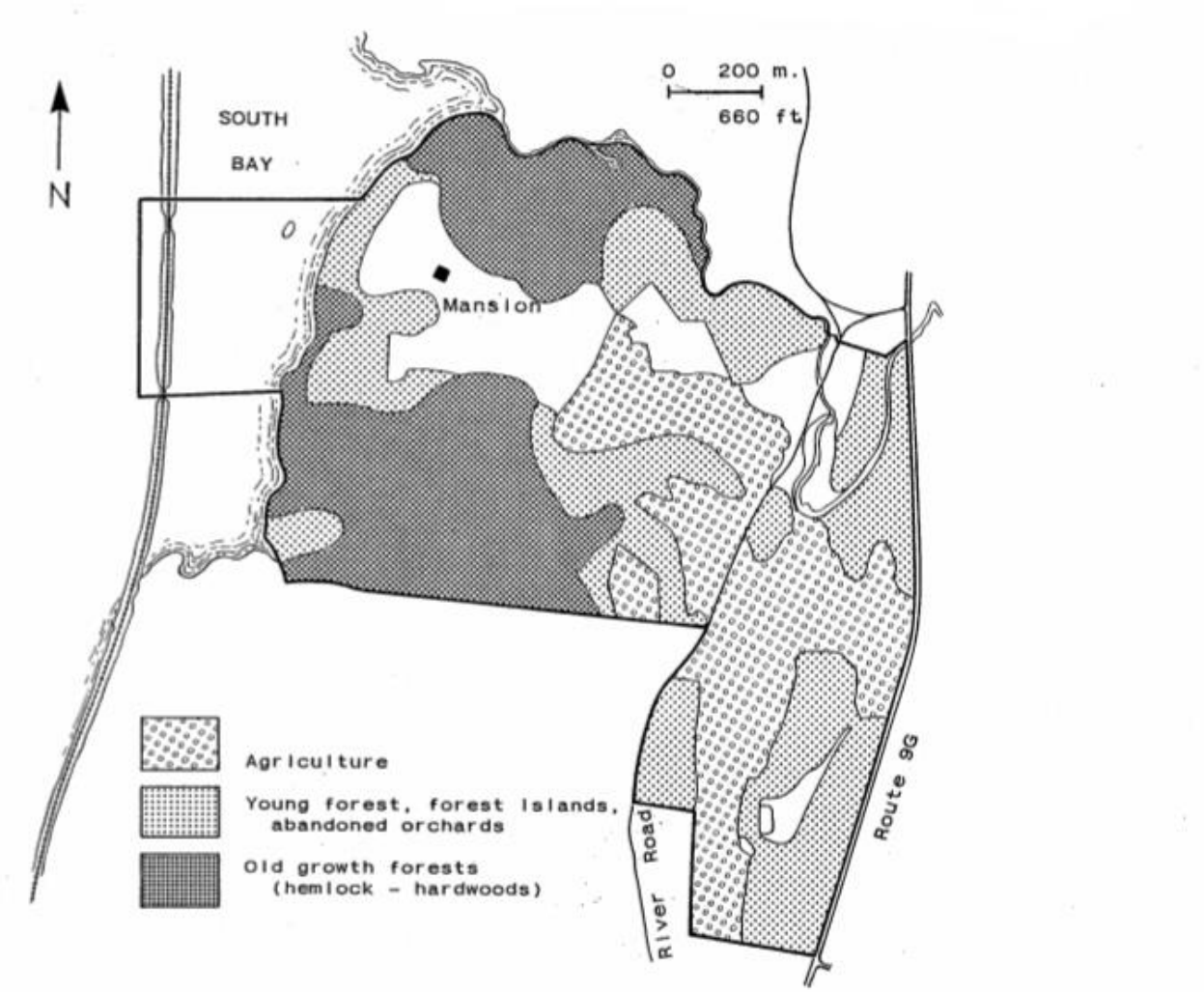
Image 24: Close-up of the rare Winged Monkeyflower (Photo courtesy of Erik Kiviat).

Image 25: Goldfinch or Yellow Warbler nest built onto Purple Loosestrife in Annandale Mill Pond (Photo courtesy of Erik Kiviat).

The photos are archived carefully in labeled cd's with corresponding documents. As I go through them, with Erik there to decipher Latin names and locate them for me, I begin to build a better detailed understanding of the area. While listening to Erik's memories of the "little things" he remembers along the Saw Kill, the scientific archive expands to include the personal, more intimate details of the place. Memories of a student playing jazz towards sunset near the mouth of the Saw Kill, the notes of it, I imagine, could become stuck in the head of someone whose' second home is here too. Or the installation connecting the waterfall to the dam with string and

geometric measuring triangles, the edges just barely dipping to the water. I include these memories of his in the documentation of this place and imagine them archived in the thousand Manila folders worth of information and material around us.

Figure



Map 24: "Generalized Terrestrial Vegetation at Montgomery Place," drawn by Kathleen A. Schmidt and Kathy Ann Schmidt. The dark shaded gray shows the old growth forests: the northernmost, bordering the Saw Kill, are the North Woods, and the southernmost, below the mansion, are the South Woods (Source: Kiviat 1991, 4).

Eighth Reflection:

Every second Friday of the month finds me in Erik's stretch of the Saw Kill sampling with the Saw Kill Watershed Community (SKWC) citizen science monitoring program. As a sampler, I am part of a group that collects two liters of water for the Bard Water Lab, records temperature and conductivity, and makes observations at each site. There are four sites along this stretch; one at the mouth, another at the small island, one at the sewage outflow pipe, and one right below the first dam. Recording observations is my favorite part of the process. The observation sheet gives space to record the weather, any changes at the site, water levels, and anything else samplers might find important to notate.

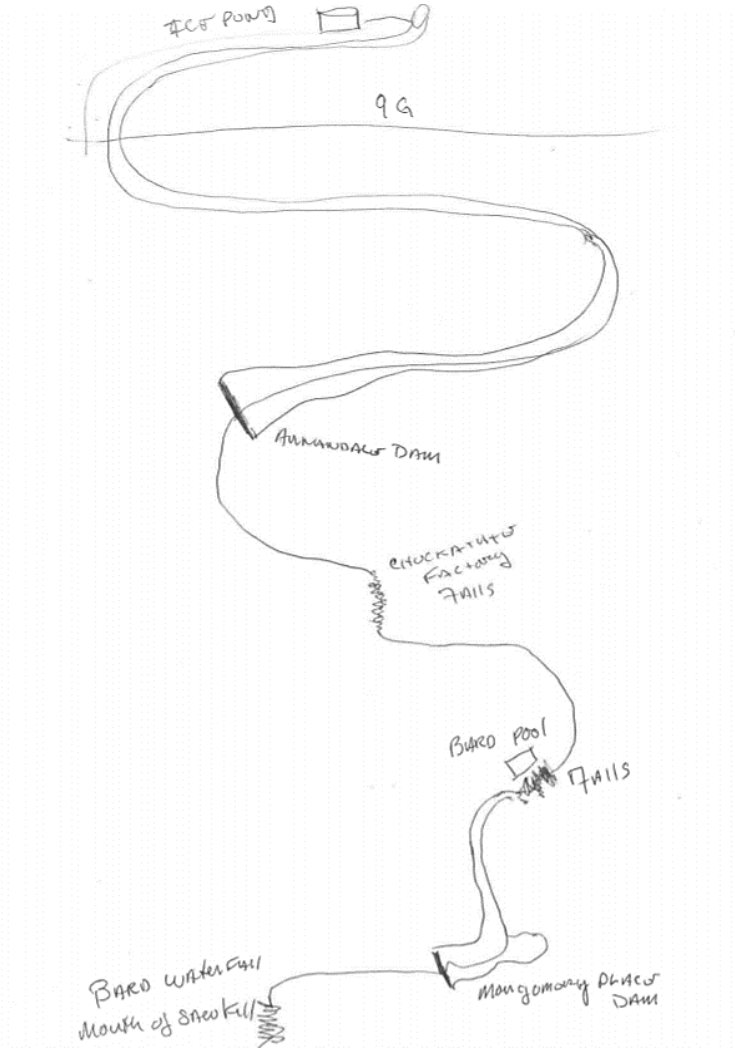
Two weeks past sampling in October, I met with Erik. After our conversation and while writing his story, I thought of the observation sheets and what makes it into documented scientific research and what does not. The observation sheets have space for only a few words, so concise phrases such as "sunny, clear," "high tide," or "low flow" are most commonly used. Not recorded on the sheets, are the debates on whether a fallen tree limb was there the month before, or how everyone tried to describe the exact location of a juvenile Bald Eagle to the one person who could not see it, instead, under flora/fauna "1 juvenile Eagle" is noted. "Trash" might be written down when a fellow sampler prys up a lone flip-flop from the mud or scrapes melted wax from a rock into a ziplock bag. An October day's note of "sunny, clear, very little cloud cover" does not include my recounting the story of the time sampling last winter in snow-shoes. The observations we record help those working with the data to understand the conditions under which the lab findings of bacteria, nutrients, and turbidity took place. For the samplers though, including myself, the noticing or group observing is what invests me in the sites I visit. Each

time I go, my knowledge of the site grows, and noticing the changes gives me a type of ownership over it.

The observations of the different sites add up to a larger picture, that put together with the data, builds an understanding of what the stream was like on a particular day each month. This reminds me of the details Erik records, both the individuals species he photographs and the sections of the forest he selects for research. Putting the data and observations side by side, or sectioning the landscape into parts that make up a whole, supports Tim Cresswell's Assemblage Theory (2013). The Assemblage Theory maintains that a landscape is a convergence of the interactions of its parts, parts which are always changing. In turn, the interactions are what create place from the landscape (2013, 53). Cresswell's parts are what makes up the physical landscape: the soil, the mountains, the trees, the rivers, and the human components — the houses, roads, train tracks, and towns. Erik, in our conversation, included these parts such as the bedrock, soil, the hemlocks, the Saw Kill, and the built environment around it. He then broke these parts down further into the individual plant species he finds, the rare migrating bird, and the brief moments of human interaction, such as a jazz musician or a temporary sculpture. All of these details assemble into a greater detailed view of the Saw Kill as a landscape and a place.

The Mouth, into the South Bay and the Hudson: Bob Bard

Bob grew up on Bard College's campus, as his parents worked for Blithewood and the college. He and his family, together with other staff, faculty and students, used the Saw Kill for both subsistence and recreation. His memories of the characters and landscape from his childhood describe a Bard very different from the campus I know today. After attending Bard in the 1960s, where he studied ecology, Bob went to work for the New York Department of Environmental Conservation (NYDEC), then later operated a saw mill and worked in construction. His interests in fishing, boats, and planes have persisted throughout his lifetime, as has his concern for the health of the Saw Kill. Although our conversation took place at his home in Milan, I have placed his story at the end of the Saw Kill, because we focused on his childhood memories and his favorite place at the mouth of the stream, as well as his connection to the Tivoli Bays and the Hudson River.



Map 25: Bob's depiction of the lower stretch of the Saw Kill, includes landmarks from his youth such as the "Bard Pool" and the "Ice Pond." He marks the "Chocolate Factory falls," which he remembers as the Bard Dump before the Ojas cleaned it up (Map courtesy of Bob Bard).

At the beginning of this project I considered the Rhinebeck Aerodrome as a potential perspective, since I was interested in what would be visible from air. What would the Saw Kill look like from a planes eye view? My project evolved, and the aerodrome was forgotten, until my meeting with Bob. Towards the end of our conversation, he brought up his passion for building stick and tissue rubber band planes and for the aerodrome where he helps build larger model planes. This moment reminded me of my project's beginnings, and a way of looking at the Saw Kill from further away than I had in previous meetings. Keeping a plane or birds eye view of the Saw Kill in mind as I wrote Bob's story was necessary for capturing the scope of his history and the role of the Saw Kill in it.[64] While we sat in his home in Milan, he told me stories of his youth on Bard's portion of the Saw Kill, which led him later in life to the Bays, the Hudson, and beyond. Now, he passes the Saw Kill on a backroad on the way to the aerodrome, where he tracks the waterfall as it goes from flood stage in spring to narrower come late summer and fall.

Robert Louis Bard, better known as Bobby or Bob Bard, was born in Rhinebeck Hospital and grew up living in Sands House at Bard where his parents worked. Until 1951, a wealthy family, the Zabriskies, owned the large expanse of land from the Hudson almost to Red Hook and included the Saw Kill.[65] He grew up having the run of the place. "I spent my formative years [there]. In those days, I was allowed to run wild. I could go out by myself, go fishing. Be gone for the day, spend time along the bay and the stream." He would tie his trout flies, take his fishing rod, and go fishing in the Saw Kill, from his youngest days going out with his

[64] Bob's passion for planes and his history around Blithewood merged in an aerial photograph I found from 1974 (Figure 22).

[65] According to Bessina Harrar's history of Blithewood (2009), Captain Zabriskie and his wife Frances bought Blithewood in 1899. Their family were the longest established owners of the home, occupying it in the summer months. They tore down the Donaldson house upon buying it and built the mansion that stands there today. They also commissioned the Italian garden that faces the Hudson River. The Captain bought an approximate seven hundred acres of surrounding land to add to the estate. Their son acquired the estate from his mother in 1936, then gifted the eight hundred twenty-five-acre estate to Bard in 1951 for one dollar (Harrar 2009; Figure 23).

grandfather and later by himself. He would roam along the stream with his trap line to set traps for mink and muskrats. He and his dog explored "every square inch" of the Saw Kill, but always with a special attention to the mouth of the stream, made interesting because of its constantly changing nature from its relation to the tidal Hudson River.[66]

Images 26 (*left)* and 27 (*right)*: Dorthy Humphry, wife of Bard literature and writing professor William Humphry, took these photos of Bob when he was a kid. She wanted the photos to be a story in Life magazine, instead the photos ended up in Sports Illustrated. William Humphry was one of Bob's "early fly fishing mentors," and included fly-fishing in his novels, such as "The Spawning Run" (Photos courtesy of Bob Bard).

[66] The Hudson River Estuary both impacts and is impacted by the Saw Kill. The Saw Kill is a tributary of the Hudson River, therefore the stream and the area of land around it are part of the Hudson River watershed. Because the Saw Kill is connected to the river by the South Bays, the mouth of the stream is affected by estuary activity, such as tides. As an estuary, the Hudson River is tidal with two low tides and two high tides a day. It also has currents, and therefore, runs in both directions depending on the time of day and the tides. This inspired a Native American name for the river, Mahicantuk, the river that flows two ways. Lastly, the Hudson has an influence of salt water, however, the salt front ends much further south near Newburgh. The Hudson River begins in Lake Tear of the Clouds on Mount Marcy in the Adirondacks and runs three hundred fifteen miles until it connects to the Atlantic Ocean. From NYC to Troy, around one hundred fifty-three miles, the river is considered an estuary with the former listed three features; salt, currents and tides.

In his memories, the Saw Kill was a “pristine landscaped stream." The stone walls that lined much of the stream were still standing, the stream ran with fish, and the Zabriskie pool at the base of the waterfall was still in use. As a teenager he was a lifeguard at the pool and spent much of his time there (Figures 21 and 24). He used the word “pristine,” while acknowledging the pollution from dairy farms upstream and a gravel pit in Milan where they would wash the gravel. Although most of the Saw Kill is rocky, which helps scour out silt, silt from the gravel washing would carry downstream and build up in impoundments behind the dams. At the Montgomery Place Dam, near the sewage outflow, workers drained the water from the impoundment to clear out the silt in order to run the power generator they operated at the foot of the falls (at one point they changed over to a diesel run generator which caused oil spills into the Saw Kill). The clear impoundment was a regular fishing spot, where Bob and his family went down in the evenings to “catch next night’s dinner."

Figure 21: Bob showed me a postcard from an alumni reunion, which used this same image of the pool at the falls (Source: Griffin Paper Co 1960-70).

"Our life centered around fishing and getting food... a lot of which came from the Saw Kill." In the spring they would spear white suckers, *Catostomus Commersonii*. White Suckers are bottom feeding fish that would arrive from the Hudson and collect in the Saw Kill at the base of the lower waterfall. At that time, Bob added, no one knew about PCBs which affect such bottom feeders.[67] They would go at night with lanterns made from chemical pellets they mixed with water to create a settling gas. The lanterns reflected the white body of the suckers, making it easier to spear them. Further downstream at the mouth, there were large runs of spawning Herring, sometimes over one hundred and fifty. They would collect them, clean them, and salt them in a large crock with a big stone on top. During the summer, they would take the Herring out of the crock, where they had become rock hard from the salt, and freshen them through freshwater rinses, after which they would be ready for pickling or herring in wine sauce, "a delicacy."

They would catch these along with the regular catches of Shad, Bullheads, and American Eels. The eels he would observe in their younger elver stage climbing up over rocks, wet moss and the waterfall on their spring migration upstream.[68] Later in the year, he might catch the older eels as they grew up in places such as Annandale Pond. He does not believe the eels they caught

[67] PCB's stand for Polychlorinated Biphenyls. They were used as a fire preventive and insulator in manufacturing because of their ability to withstand high temperatures. Between 1947 to 1977, two General Electric (GE) plants dumped an estimated 1.3 million pounds of PCBs into the Hudson River. PCBs settled at the bottom of the river becoming mixed in with the sediments. The Environmental Protection Agency (EPA) prevented the discharge of PCBs in 1977, however the thirty-year history of dumping built up a large number of PCBs, which do not naturally break down. Therefore, the EPA declared two hundred miles of the river a superfund site, and along with organizations such as Riverkeeper and Clearwater, they have pressured GE into cleaning up the PCBs through dredging projects.

PCBs affect human health through a process of bioaccumulation, meaning they move up in the food chain. As zooplankton or benthic macroinvertebrates consume detritus at the bottom of the Hudson, they pick up PCBs, then as small fish eat those creatures, they build up concentrations of the PCBs, until a larger fish at the top of the food chain can accumulate large concentrations of PCBs considered too high for human consumption (EPA 2017).

[68] Although eel migration is explained earlier in this project, for clarification, the elver stage occurs directly after the migrating glass eel stage of the American Eel. From an elver, they grow into their yellow eel stage and will remain so until becoming sexually mature Silver Eels, at which point they migrate back out to the Sargasso Sea to spawn and die. Bob's observation of the eels climbing outside of the stream is one of the unique features of the eel. The layer of mucus on the outside of their body allows them to breathe through their skin and protect them as they travel over land to reach water.

in the Saw Kill were too affected by PCBs because they had not spent their adult lives in the Hudson. However, the PCBs did end commercial fishing in the Hudson.[69] And, the end of commercial fisheries ended Bob's commercial shad fishing. He kept his one-hundred-year-old boat for the day the fishing might reopen.

Images 28 (*left)* and 29 (*right)*: More photographs by Dorothy Humphry of Bob exploring the Saw Kill (Photos courtesy of Bob Bard).

Although for Bob, the stream was a "public place" where he fished and played, it was owned by the Zabriskies who "were out of a different world." They lived part of the year in New York City on Park Avenue and the rest at Blithewood, which they intended to mirror a "pastoral

[69] A *New York Times* article from 1984 reports the end of the Striped Bass commercial fishery in 1976, directly after PCBs were discovered. The article was written because the EPA had just announced that as of March 15th, 1985, commercial fishing for the fish species Pumpkinseed, Goldfish, Carp, Bullheads, and Black Crappies would no longer be allowed. The change came from the FDA changing the acceptable concentrations of PCBs in fish from 5 parts per million to 2 parts per million. (Harold 1984).

The American Shad fishery remained the only open commercial fishing for many years but was closed in 2010. However, the NYDEC sites declining population as the reason for the fishery closing (NYDEC, n.d.a). Today, the New York State Department of Health has a Hudson River Fish Advisory that details which fish are safe to consume in the river; the advisory is dependent on factors such as fish type and where the fish was caught, as well as the consuming person's gender and age (NYDOH, n.d).

English estate." [70] They did not like noisy machinery, so horses replaced tractors. The limousines were kept in the carriage house (which Bard later turned the varnished floors into a dance studio and the old stables into a theater). Men would bring them game or pheasants shot on the property, which would be traditionally hung in the larder since they did not have a refrigerator for many years. The White Pine lined avenue from the Gate House to Blithewood, where Bob often saw Bald Eagles, was periodically raked, so the limousine would leave fresh tire tracks in the white marble chipped avenue when Mrs. Zabriskie went to town.

During World War Two, the Zabriskie's lost much of the labor they relied on for the running of the estate. It was during this time Bob remembers his mother having to learn how to raise a hog, split wood, and drive their Model A Ford, all jobs his father, who fought in the war, would have done. The Zabriskies too helped them through this time. They received milk and cream from a nearby farm, and they continued to receive their weekly block of ice for their ice box that was part of his father's payment. On Bob's map, he notated the ice pond where men

[70] Bessina Harrar (2009), in her work, gives a full account of the history of Blithewood, which I will detail shortly here. Blithewood, like Montgomery Place, was part of the 1688 Schuyler land claim. Barent Van Benthuysen was sold the portion that now encompasses Bard and Blithewood in 1725. The Van Benthuysens lived and operated a mill on the portion of the property that was Cedar Hill until 1790. The Livingston's were prominent in the area around Blithewood and eventually through Alida Livingston and General Armstrong, who acquired more land in the area during their marriage, bought Blithewood at some point between 1795 to 98. They called the property "Mill Hill" after the mills they had acquired on the Saw Kill. The Armstrongs converted a standing barn into a "federal style residence," as well as planted the alley of white pines. In 1801, they sold it to Mrs. John Allen who named it Annandale after her family's home in Scotland. In 1810, she sold it to John Cox Stevens, a relation to the Livingstons.

1833 saw a new owner, John C. Cruger, but in 1835, he sold it to Robert Donaldson who would renovate the house, landscape the property, and, with his wife Susan, name it Blithewood. Donaldson was a well-known figure in landscape design. He used Blithewood as a study in his 1840 work *Landscape, Gardening and Rural Agriculture.* In the work, he describes the Saw Kill as "a pendant to this graceful landscape, there within the grounds scenery of an opposite character equally wild and picturesque — a fine bold stream, fringed with woody banks, and dashing over several rocky cascades, thirty or forty feet in height, and falling, altogether, a hundred feet in half a mile. In short, we can recall no place of moderate extent, where nature and tasteful art, are both so prodigal of beauty, and so harmonious in effect" (Historical and Genealogical Record...1912).

From Harrar's (2009) history, the Donaldsons sold the property to John and Margaret Bard in 1853, who renamed it Annandale. In 1899, after the property went into foreclosure and sold to St. Stephen's College, it was sold again to Captain Andrew Zabriskie who renamed it Blithewood.

would carve out the ice, carry it on horse drawn sleds to one of the ice houses either near Sands House or the mansion where they would pack the ice with sawdust. Today, a house stands where the ice pond was filled in.

The close-knit community Bob described through his family's relationship to the Zabriskies and ties among the students, professors and staff, seems to have extended upstream. As Bob described landmarks along the stream, many of them were named for the people who owned them, which suggests to me a community who was well-known to one another. For example, he linked each of the dams along the Saw Kill to a person or family. Bob named the Albert Gaye saw mill and dam at Rock City, then the "mafia guys… 'Fat Tony' Selarno's" dam on Oriole Mills Road. On Mill Road was Olly Rider's dam, one of the last mills in use, as well as known for trapping upstream animal waste indicated by periodic large algae blooms. Last, were the two family estate dams, Annandale and Montgomery; behind the former was the slowest nearby portion of the stream where Bob would launch his canoe. Later in life, Bob joined the history of mills when he operated a small saw mill. He started with ancient equipment, eventually modernizing until it all burned down.

The Saw Kill he remembers, over time, began to change. The built infrastructure around the stream at Bard increased to meet the growing student body. A water treatment plant replaced the water tower fed by the Annandale Dam. He remembers shortly after the plant went in, an overflow of flushing water from the treatment plant ran down the hill to form a ravine, the clay and sandy soil disallowing the water to saturate into the ground, and instead, filled in the upper part of the pond. During Bard President Dr. Reamer Kline's time, a sewage treatment plant was constructed downstream from the water intake, the same one in use today. And the pool that had been the center of Bob's teenage summers eventually became misused by students, as well as

could not accommodate the increasing student population. As more and more buildings popped up, especially around his old home in Sands House, he began to feel as though "every part of my childhood has been paved over." A new Bard was forming, and along with it, a different Saw Kill. "You can't go back, you can't go home" he said, it is impossible for a place to stay exactly as it exists in one's memories.

However, one remaining unchanged feature from his childhood at the mouth of the Saw Kill is the Eurasian Water Chestnut that characterizes the bay during the summer months and into the fall. Bob told me the water chestnut was introduced during the 1920s or 30s on the Mohawk River by a priest who used it ornamentally on his pond. From there it spread onto the river and beyond, now covering large areas of the Hudson and its tributaries. The view from Blithewood onto the bays is a "carpet" of green during the warm months. In 1965, the NYDEC created an eradication program for the water chestnut. Bob was hired for this program after college and stayed on to eventually become foreman. The program started and continued for ten to twelve years using helicopters and airboats to apply chemicals such as 2-4-D to the invasive. If the weather on the day they applied chemicals was too hot and windy, the mist could rise and move away from the intended zone, in one instance falling onto the Delafield's flower garden.[71] Chemicals were used because the invasive is difficult to eradicate. They had to be persistent and kill every crop and seed, otherwise a dormant seed could lie in the mud for ten plus years before sprouting suddenly and reversing any previous work. They eventually switched to removing the chestnut by hand, which employed a large number of young people during the summer. Bob ran the program for twelve years before it was cancelled in 1978. He still feels as though this was a

[71] John Ross Delafield, a Livingston descendant, and his wife Violetta were the occupants of Montgomery Place during the 1920s through Violetta's death in 1949, and his in 1964. It was during this era of Montgomery Place when the Saw Kill was diverted to generate more power from the dam. Their son, John White Delafield, took over the property until his death in 1985, at which point J. Dennis Delafield gifted the estate to Historic Hudson Valley (American Arcadia 2011b).

mistake. All the work they had done, the jobs that had been created, and all of the chemicals they had put into the river was for naught, as the chestnut came back quickly following the ending of the program.

The bays were a prime site for the program in those warm months. Once winter arrived and the chestnut went dormant, it would freeze over, becoming perfect for ice boats. Bob first saw them one day as a kid coming home from school. The bus passed Astor Point at the Barrytown Crossing, where he saw masts coming from the Hudson River, which was a strange sight to him when the river was fully frozen over. Ice boats resemble traditional sailboats, but with additional ski or skate like runners that allow the boat to move across the ice. Ice boating is dependent on perfect conditions, thick ice with no snow, and wind. These perfect conditions do not happen often, but the few times in a season they do are, according to Bob, worth the wait. Ice boats have been on the Hudson River since the early 1800s and for a long time, these boats were one of the fastest modes of transportation. Their speed, history, and relation to the river, attracted them to Bob. On the bay or the Hudson these historic boats still meet up to race. In a video of a Hudson race Bob recommended I watch, they shoot across the ice like some strange heron or gull.

Image 30: Bob and his ice boat on the Hudson River (Photo courtesy of Bob Bard).

Bob turns the conversation away from the river to the sky. “Always falling into holes cause I’m always looking up.” Like the model airplanes, birds have Bob’s upwards attention. For many years he was a master falconer, flying Prairie Hawks, Harris Hawks, Red Tailed Hawks and a Goshawk. He still pays attention to the fall migration of hawks, where identification is done by observing flight patterns. Recently, he has noticed a lack of Goshawks and an increase in Red Shouldered Hawks. Out the window of the dining room where we are sitting, we can look out to see some smaller birds — a Blue Jay, Black-capped Chickadee, Dark-eyed Junco, Tufted Titmouse, and a Red-bellied Woodpecker. They gather at the birdfeeder Bob has hung for them.

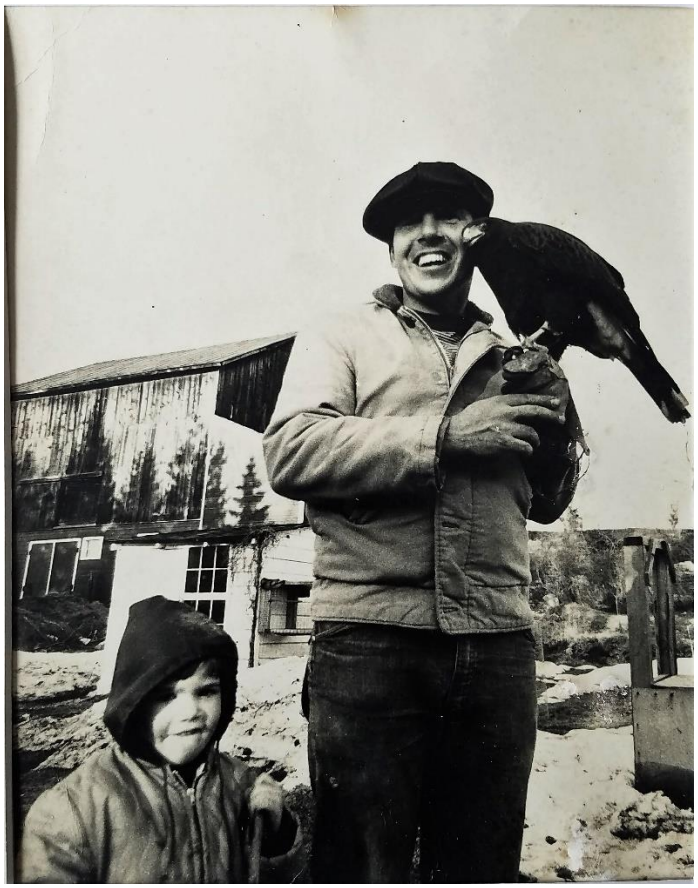


Image 31: Bob with one of his Harris's Hawks (Photo courtesy of Bob Bard).

Somethings like model airplanes you can return to. For Bob, it was a childhood hobby that as he got older was replaced by TV, then teenage interests of girls and cars. However, the interest never fully went away, and it was in his first car, a '49 Chevy, he was driving in high school when he saw an airplane on the side of the highway. He pulled over and was introduced to the aerodrome where he began to work on larger planes on and off throughout the years. Certain things in his life have changed, trees he planted are now all grown, as are his children. Places he knew so well like the Saw Kill have changed so that he cannot experience them in the same way he used to. Yet, he says "the ties that you had when you're younger to certain places, they linger as memories." Those lingering memories from when he and the Saw Kill were

“inseparable," stayed with him in a lifetime of fishing, a career in a Saw Mill and invasive species removal, and now the occasional trip to Annandale to catch a trout or two for old times’ sake. The room in his home full of stick and tissue rubber band motor model planes is a testament to the ability to return to those lingering memories.

Figures

Figure 22: *Aerial View of Blithewood.* I thought it fitting to include an aerial image to correspond with Bob's interest in airplanes (Source: Hudson River Valley Heritage).

Figure 23*: Zabriskie's Waterfalls*. The description of the photograph reads: "In this image taken in the summer of 1945, the Zabriskie family still owned Blithewood and much of the land adjoining Bard College. As evidenced by this image labelled 'Zabriskies Falls', a good deal of student trespassing transpired before Christian Andrew Zabriskie gave his estate to Bard for one dollar in 1951." While I have never heard the falls referred to as "Zabriskie's falls," they are still labelled as such on Google Maps (Source: Hudson River Valley Heritage).

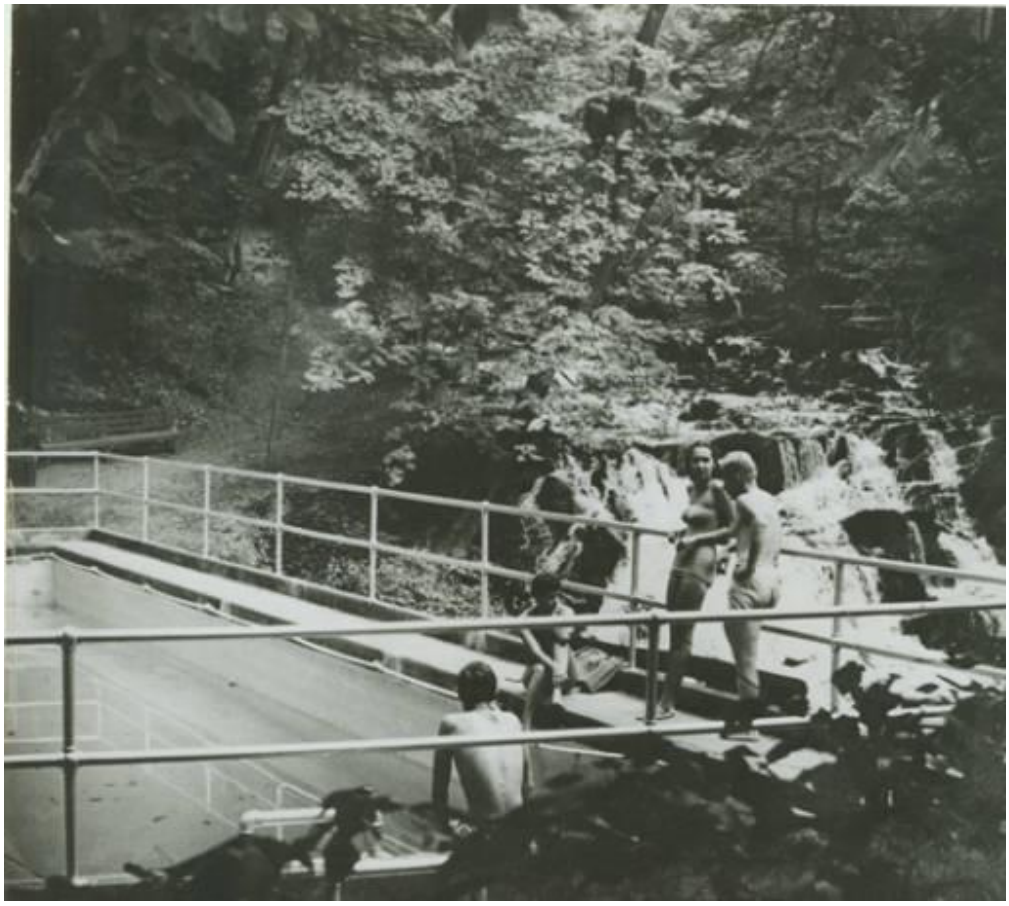


Figure 24: *Blithewood Swimming Pool.* The description of the photo reads “In the spring 2005 issue of About Town magazine, Dorothy Crane writes about the 'pool by the falls': ‘The pool was an integral part of summer life at Bard for 20 years after the college acquired it. A green canopy of overhanging trees shaded the surrounding wooden deck. Faculty sat in their lawn chairs, smoking cigarettes, drinking gin and tonics, and discussing politics and the latest college gossip. Children perched tentatively on the edge at the shallow end, carefully watched by parents because even the shallow end was pretty deep. Students did cannon balls off the diving board. My husband's friend put his kayak in the pool to practice rollovers. There was no chlorine smell, only the fresh. churned-up mist generated by the falls and the roar of the cascading water. It felt more like a swimming hole than a pool. My husband and his friends who grew up on and around the campus describe the pool as a sort of Garden of Eden. When he and I were first getting to know each other I had the sense that meeting the stream and the pool was almost as important as my meeting his parents.’ Back of photo identifies student Carolee Schneeman standing, left, with Shane Riorden, Business Manager” (Source: Hudson River Valley Heritage).

Ninth Reflection:

"The human landscape is an appropriate source of self-knowledge...because it is our unwitting autobiography, reflecting our tastes, our values, our aspirations, and even our fears" (Groth and Bressi 1997, 5). Paul Groth and Todd Bressi claim that a landscape is the autobiography of those who actively experience it (1997). During my conversation with Bob, I learned about his life starting as a child to his teenage years, his post college job, his following careers, and up until today. The Saw Kill was a consistent presence throughout his stories, whether as a main actor or a backdrop. One afternoon could not capture his entire biography, but it hinted at how a lifetime in a place can affect the landscape, and the landscape the person.

The reflection of "our tastes, values, and fears," became apparent through what he and others chose to talk about in our conversations. The people I met all had opinions on what should happen to the stream, why the stream is how it is, or what has changed. These opinions, to me show a deep care, but also maintain the Saw Kill as part of a human-landscape. By describing the landscape as a "source of self-knowledge," Groth and Bressi are saying we can learn about ourselves through the landscape (1997). This is seen in the physical landscape, such as the ruins, the bank changes, and the impoundments, that teach us about what used to be, and often how people have changed the landscape. The stream itself too, as a topic of conversation, reveals the knowledge people build up around their homes, their daily observations, and the minute changes, that balances between knowledge of self and place.

An autobiographical landscape fits my structure of creating individual stories for each person I met. I hope that by putting the stories together, they take on a more Ingold-like or general feeling that "the landscape tells — or rather is— a story." (Ingold 1993,152). A story, as my mother used to tell me, requires a beginning, middle, and end. That structure creates a

continuity or connectedness. Thankfully, the structure of the stream provides both the beginning, middle, and end, as well as flows through the geographically connected stories. But, the collective stories too, have written a story onto the landscape, one that I can read in this project, and visible to me as I make my way through it.

Driving back from Bob's home in Milan, I wound through the hills I remember from driving to Sheila's home. The radio was turned up, so I could sing along. The roads were clear, but remnants of salt were evidence of the recent snow storm. I will come to remember this spring defined by the snowstorms, with a nor'easter each week of March. Driving back to Bard campus, I passed the Saw Kill where it crosses under 199. I know it continues on the other side of the golf course I drove adjacent to. I continued on 199 through the village, but if I were to have taken Echo Valley Road, I could have passed Chris and Claudine, then continued on 9 to Mill Road, passing Sheryl, and Gayle and Gary. Instead, I went through the village, where I met Brent, to meet back up with the Saw Kill at Kelly Road. I stayed right at the triangle, near to where Ruth lives, passing the road to Blithewood where I met Dan, and parked. I was just in time for my 1:30pm class where my professor announced that Erik will be going on a walk with our class the following week.

Reflecting on this drive, the landscape is full of the stories of the people I have met throughout this work. Their homes or where we met have become important landmarks for me. Their histories, and the experiences I have collected along the way, have defined the landscape. The stream is shaped around their memories, which in turn have been shaped by the stream. I will end with Wallace Stegner's (1989, 4) idea that a place *needs* a history — it needs stories, legends, landmarks, monuments to shape itself around. The Saw Kill, through the stories that take place along and within it, the falls, dams, or bends that become landmarks, the ruins that

line it, the physical and ecological changes it has endured, has accumulated a history; this history defining the place as we know it.

Where It Empties

A Final Conversation

In early March as I was finishing writing the nine stories, I met with Susan Ellis, a member of the original sampling program with the Conservation Advisory Council (CAC) in the 1970s and a current Saw Kill Watershed Community (SKWC) member. We met in the village of Red Hook, what I view as the core of the watershed perhaps because this is where the SKWC meets each month. Although a critical member of the group, she did not use the term watershed when talking about the area, but instead she used the word "streamshed." The word stuck with me throughout our lunch as the conversation bounced around different areas and aspects of the Saw Kill. To me, a streamshed is more specific to the Saw Kill than a watershed. It emphasizes the stream as a unique water body and honors the effects this kind of water body will have on the area of land around it. Perhaps it was her streamshed view or because our conversation took place near the end of the project, that our talk felt like a conclusion. We touched at elements of what others have said, as well as raised the question "what next" as we discussed community engagement in the streamshed.

Like Chris Klose, Susan remembers when Red Hook was a farming town with dirt roads. She too, like Sheryl Griffith and Ruth Oja, was a CAC member during the actions around gravel mining, the proposed nuclear plant and landfill, and the pie factory site in the village of Red Hook, where she recalls it was the Rod and Gun Club that brought the attention of the CAC to the site to clean up the bloodworms and the gray colored water. And she pointed out other places along the Saw Kill that were of concern, such as the asbestos board factory and the Anagnos water bottling activity. She cited these places, and afterwards described the importance of knowing the historical land uses of a place to understand it today. She has seen the progression

of development in the community and monitors certain wetlands, open lands, and vernal pools, such as the one near the Department of Transportation salt shed, to make sure they do not become filled in or overdeveloped. And again, like others, she knows the area near her home the best, but through her time here, she has a history that travels throughout the streamshed.

Like others, she has a position on the area. Sheila Buff wanted to name unnamed tributaries and protect the headwaters, Chris Klose wanted to preserve farmland, Gayle and Gary Beatty emphasized the importance of knowing local history, Sheryl Griffith prioritized keeping the ecological history of the impoundments, Brent Kovalchik wanted a sewer system to protect downstream and the aquifer, Ruth Oja wanted to preserve the Saw Kill as it is today with no new developments, Dan McKenna wanted to learn more about the history and see trails connect the properties, Erik Kiviat wanted to preserve the area for research, and Bob Bard wanted to ensure a continued stewardship over the land. It is impossible to know the place in a non-situated, non-positioned way. I believe this is a sign of care. For Susan, she would like to see that care extended throughout the community.

What Susan has found in her work, is that people know their place; while they may not have the same words for something, they have similar knowledge. When she first started wetland mapping during the 1970s, most of the Environmental Management Council members were farmers. She remembers them saying, “you don’t have to go out there and identify the trees and identify the this, that, and the other thing. We know. We’re on our land, we know where it gets wet, we know where this is. They just didn’t know it by the (scientific) words, but anybody who has been involved in farming has had a feeling what happens with the cycles or the weather, and everything that’s involved with their livelihood.” This corresponds with my original key value of prioritizing multiple forms of knowledge: the experiential, tacit, scientific, observational,

academic, or job-oriented. She followed up with the question, what is the average person today involved in? What are they doing already that clues them into this place? Is it boating? Fishing? Walking? Birding? Together, we wondered how to connect what people already care about or know about to the stream, to continue creating a knowledgeable community around the Saw Kill.

But any work around the Saw Kill, she continued, cannot be solely based on the individual, i.e., one person's septic tank problem. Rather, care and preservation of the Saw Kill "has to become integrated as part of. . .the community social structure." Once the community is engaged, "there needs to be an understanding of the kind of compromises that allow groups and community to be able to function. . .you have to do the best you can, it's not perfect, but you're still allowing the environment to be workable." Her idea of compromise suggests a community in relation to the Saw Kill, one that works alongside or in conjunction to the stream. If people, we determine, are concerned most over their home, land, or community, then how can the Saw Kill be made to be seen as one of those categories? A community based in relation to and integrated with the stream, is one where instead of the, as Susan says, "not my backyard" mindset, the Saw Kill becomes a continuation of the entire community's backyard.

Forming a Water Ethic

"That land is a community is the basic concept of ecology, but that land is to be loved and respected is an extension of ethics" (Leopold 1949, ix).

Added to the other nine stories, my final conversation with Susan Ellis tells a larger story of the Saw Kill. This story is geologic, involving the soils and bedrock. It is ecological, the plants and wildlife that make up the habitat around and in the Saw Kill. It is a story of land use; how the roads and infrastructure have changed, how population has grown, and new buildings constructed. It is a personal story, of when people moved here and how they made their homes.

At times it is factual and others more sentimental. Placed throughout are my stories, which are stories of my process and my research around place. The different lenses of storytelling combined provide a history that attempts to show a fuller view of this small stream. The ecological, political, sentimental, historical are mixed and matched, woven together, with none prioritized over the other.

Together, the stories create a community. Similar memories connect storytellers, and so do I as I bring up topics or share what I have learned from one conversation into another. At the very least, by putting these people's stories in relation to one another on the stream, it creates a geographic community. However, I believe it does more, in that it begins to create a community around knowledge. What people know about their place is important on its own, but when joined with others it becomes a valuable resource. As people echo one another's memories, report similar observations, build on what others have said, and identify landmarks or places of concern, they create a place built by the knowledge people have around it.

Throughout the year, I have continuously referred to Aldo Leopold's pivotal 1949 work on the "Land Ethic." My project resembles *The Sand County Almanac*, in which the "Land Ethic" essay is included, in that it is a series of written stories on place based largely on observations, as well as historical and ecological knowledge. From these observational writings, Leopold creates what he calls a "Land Ethic." Leopold (1949, 203) defines an ethic as:

> A mode of guidance for meeting ecological situations so new or intricate, or involving such deferred reactions, that the path of social expediency is not discernable to the average individual...ethics are possibly a kind of community instinct in-the-making.

His land ethic requires the formation of a community to address the ecological situation, as well as necessitates including the land, with all its soils, waters, plants and animals, as an important member of the community (Leopold 1949, 204). Including the land as community means respect and appreciation of the land must go beyond its use as an economic resource to something that is

loved. “We can be ethical only in relation to something we can see, feel, understand, love, or otherwise have faith in” (Leopold 1949, 214).

To create this larger ethic around land, Leopold (1949, 221) describes the need for our social conscience to extend towards the land as “an ecological conscience.” An ecological conscience is an individual's feeling of responsibility towards the health of the land (Leopold 1949, 221). The obligation towards the land changes to an ethic when it becomes a duty not prescribed by governmental laws or validated by economic reasoning, but rather from the ecological conscience of the individual, and celebrated by the community.

I had in mind that through this project I could end with a Leopold-inspired ethic specific to the Saw Kill. I cannot claim to have discovered this, but I hope that by presenting the stories, ideas, and personal ethics people have relayed to me, and by putting them together, an ethic for the Saw Kill can begin to take shape. The ethic taking form around the Saw Kill could be called a water ethic, or taking Susan Ellis’s term, a “streamshed” ethic. It would be based on Leopold’s concept that the land’s features, such as the Saw Kill, are part of the community, and therefore, the health and prosperity of that feature is part of the community’s ecological conscience.

What I have found through my conversations, is that sharing knowledge is essential to promoting an ecological conscience. Understanding responsibility towards the stream requires knowledge of the stream, especially its history. This knowledge can come from many sources; however, I believe knowledge founded in the community is essential to creating a localized ethic, one that is situated in and responsive to its place.

I would keep the following phrase from Leopold’s work in mind when developing a water ethic: “Nothing so important as an ethic is ever written” (Leopold 1949, 225). An ethic is meant to evolve as land, technology, and people all change. It may be initiated by an individual,

yet will only take on its role as an ethic once adopted and changed by the land's, or in this case the Saw Kill's, community. This is why it cannot be written in concrete terms, and why I only hint at a formation of an ethic here, because it is meant to change.

It is meant to change, and it aspires towards action. The water ethic idea formed by doing the action of the project. To me, it is started by having conversations throughout the streamshed. Then, rather than individual stories taking place on individual parcels, the stories are put in relation to one another in a way that shows their connectivity. Ruth's daffodils end up in Erik's field notes, the silt from a gravel pit across the pond from Gayle and Gary collects in one of Bob's fishing spots, and Dan looks for evidence of the same bridge in the print Sheryl showed me. A stream is an ideal feature for facilitating this kind of connected community because its natural movement travels through people's homes, where they play, where their drinking water is collected, and along the roads they travel. The upstream to downstream connection requires care in the direction of the water's flow, while the cyclical nature of water joins the different reaches.

Through the collection of stories, the stream is placed in dialogue with those who affect and are affected by it, giving it a role in the community. The collection, too, creates an environmental history. The history facilitates a larger view of the stream, as well as a collected community voice. I imagine this project continuing and adding more and more voices to the stream. The people I talked to were mostly long-time residents and centered in certain spots of the Saw Kill such as the mouth, Mill Pond, and the village. The continuation of the project would benefit from more perspectives, as well as fill in the geographic gaps. These voices and connections formed along and around the stream are what will determine the direction of the water ethic.

The past nine months have been an education. Through the people I have met and our conversations, my own research, and time spent on the Saw Kill, I have gathered a very situated type of knowledge. The process of getting to know the stream and the people who care for it, have turned this place into something more special than a home. It goes beyond somewhere I feel comfortable and at rest, into a site of learning I share with a whole community. It is a small stream, but the connections it has made, the ideas that have come from it, and the research around it, are big.

Today, I walked down to the mouth of the Saw Kill. Spring is finally here, felt in the warming air, and heard in the chorus of bird calls. It is low tide, so the mudflats are exposed in the bay. I know where the water entering the bay has been, and I know this stream more fully than I did this fall standing in the same place. If streams could talk, I wonder what it would say. Would it tell the same stories I have heard and retold, or is it happy to remain a silent presence, audible only in the feet splashing through it, its cascade down rocky ledges, a fishing line hitting the surface, or its murmured gurgle over riffles. Its unique voice interpreted or translated through the people who choose to listen.

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