How did the geology of Vergennes help win the War of 1812? A look at Vergennes and its role in the defense of Lake Champlain

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Background

Despite America having “won” its independence from Britain a couple years earlier, in 1812, the two countries came to blows once again. Britain sought to divide the country by gaining control of important waterways. One of these waterways was Lake Champlain.

Lieutenant Thomas Macdonough, sent to command the American fleet on the lake, chose to bolster his strength by building more ships and, in 1814, he set up winter quarters below the falls of Vergennes (Macdonough Centennial, 1914).

“Her site was in the midst of a fertile and productive country, her water power was unrivaled, the whole body of water in Otter Creek, with a fall of thirty-seven feet was available for industrial purposes, the location for mills were particularly free from danger by reason of freshets, her means of transportation were all that could be desired, her people were intelligent, numbering among them some of the brightest minds in the state.” – Comment About Vergennes at Macdonough’s Centennial Celebration

Vergennes, already having established a shipyard below its falls, was a logical site for Macdonough to construct the vessels that would eventually lead him to deny the British control of the waterways and help to win the war of 1812.

An Iron Defense

Iron deposits found in nearby Monkton were critical to the war effort. In the early 19th century, iron was used for making weapons, building ships, and for making ammunition, or “shot.” So, the fact that Vergennes had a ready supply of iron and sites that were already built for extracting and working with iron was no coincidence.

The first iron works in Vergennes had been established in 1780 but went through many difficulties and closed down in 1811. However, the War of 1812 reinvigorated operations at the iron works as they were required to supply 300 tons of shot to prepare for the war (Rolando 1992). This ammunition was a key factor in Macdonough’s victory in the Battle of Plattsburgh where he outmaneuvered the monster of a ship George Washington by ramming her with 615 holes versus the 55 that the American Saratoga took (Millard 1997).

How did the iron that was to be used in the Battle of Plattsburgh form? And why can it be found in Monkton? Unfortunately there has not been very much research done on the iron deposits of Vermont, but by studying the surrounding geology, the history of Monkton’s iron ore can be pieced together. It all begins millions of years ago when the Grenville supercontinent was broken up and the parts of the sea bed were pushed above other surface rocks in the Iapetus Ocean (Millard, 1997).

When the Iapetus sea bed was still thousands of feet below sea level, the iron deposits that are found now in Vermont would have most likely been forming. Iron deposits would have formed at divergent zones where sea water would enter into faults, become heated, and pick up trace metals as well as sulfuric gases which would combine to form iron sulfides and then be incorporated into the seafloor ocean ridge. This iron would have later been incorporated into the landscape where Monkton is now, creating an important resource (Chernicoff 2009 and Amidon, 2012).

The Power of the River

Vergennes was a very strategic location for a shipyard. The river itself afforded protection for the shipyard, putting some distance between the lake shores and the shipyard. Vergennes was a sheltered location, far enough away from the lake to be inconvenient for British attack (especially with Fort Cassino’s defense of the river mouth), but close enough to allow quick response to other lake threats (lcmm.org). The delta and the river itself are also wide and deep enough to allow Macdonough’s warships weighing as much as 700 tons with drafts of 6 ½ feet (Hughes, 2012) easy passage to the lake.

Of course, none of this would have mattered without the falls at Vergennes, which gave the river the energy necessary to establish itself as an industrial center, which in turn became the foundation upon which Macdonough built his ships. Early on, the falls were harnessed for their power to run “eight forges, two furnaces, a wire factory, a rolling mill, gristmills, and sawmills” (lcmm.org). Without this solid base, the ships would not have been able to be constructed in the rapid manner that they were, if at all. The ship, Saratoga, was converted from growing trees into a 143 foot long frigate in only 40 days—20 less than expected. The quick turnaround was necessary to keep the British and deny them access farther down Lake Champlain. Over the course of the winter of 1814, nine ships were constructed at Vergennes: Saratoga, Ticonderoga, Allen, Beaver, Burrows, Centipede, Nettie, Viper, and Eagle/Surprise (Macdonough Centennial, 1914).

The change in water flow may also have been the reason that the vital falls exist today. The fact that there are waterfalls in this river indicates that it is a recently formed waterway, or that it has changed its course drastically enough that it has yet to erode the waterfall/knickpoint. Knickpoints are formed when there has been a shifting of the land creating a sharp change in the stream’s path. So, when a river runs over different materials creating different rates of erosion. For example, downstream may have eroded away easily where the river was flowing over softer rocks, whereas upstream, if the river was flowing over harder rock, it would erode its surroundings slower. This may have been the case with the Vergennes Falls which drops a full 37 feet and, like all knickpoints, slowly migrates upstream due to erosion at the lip of the falls (Chernicoff, 2009).

However the Vergennes Falls were formed, they were undoubtedly crucial to the development of the city of Vergennes and the building of Macdonough’s ships that helped America win the war of 1812.

Works Cited


Hughes, Brenda. (2012, January 27). E-mail Interview.

