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**BLENDON LANDING:
A MIDDLE NINETEENTH CENTURY
LOGGING RAILROAD, SAWMILL AND SHIPYARD VILLAGE
IN WEST MICHIGAN**

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ABSTRACT

Operating between 1856 and the late 1860's, Blendon Landing was one of many river landing communities on southwest Michigan's Grand River involved in timber production and trade during the heyday of the upper Great Lakes Lumber industry. Blendon Landing was the location of intensive timber harvesting and processing for market using a combination of railroad and river drive transportation technologies. Furthermore, the mill at Blendon Landing produced timbers used in a small shipbuilding operation located at the landing. Using an interdisciplinary perspective drawing on archaeological, archival, and land use history methodologies, this paper examines the impact of harvesting, transportation and production processes on the surrounding environment, and on the subsequent logging practices in the region.

INTRODUCTION

Blendon Landing, located on the south bank of the Grand River between Grand Rapids and Grand Haven Michigan, was the site of a major lumbering operation between 1856 and mid 1860's (Fig. 1). The lumbermen chose the site that became known as Blendon Landing for a very simple economic reason. The site was to become the riverbank terminus of a seven mile logging railroad that was built to transport logs from a 2500 acre tract of almost solid pine to the Grand River (Bajema 1991). The land agent/timber cruiser John Ball had located and purchased this land 20 years earlier for New York investors during the winter of 1836-37. Ball (1925) described:

finding some 2,500 acres of good pine almost in a body, on a part of which there was some good white oak. One oak tree was seven feet in diameter with a clear body say of seventy feet high and fine spreading top, the largest tree I ever saw in Michigan. It was sawed and sent east for navy purposes.

The original plan was to dump the pine logs from railroad cars into the Grand River where they could be rafted downstream and sawed by the Norton sawmill at Nortonville, just upstream from Spring Lake then known as Mill Point (Grand River Times, May 6, 1857). The original plan was abandoned after a year and one of the largest sawmills on the Grand River was built at Blendon Landing. A ship building/repair yard was added by the end of 1860. Blendon Landing was now the terminus of a logging railroad, the site of a large sawmill and small shipbuilding/repair yard. Blendon Landing began dying in 1864 when its sawmill burned. It was well on its way to becoming a ghost town by 1870. The sole reason for its existence--the timber tributary to the logging railroad--had been cut.

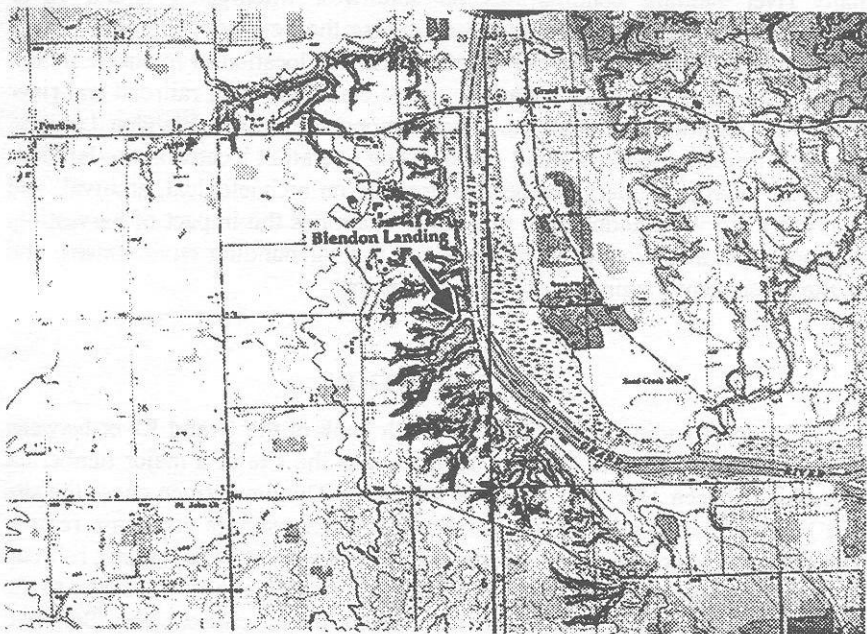


Figure 1. Map of Blendon Landing.

The late Professor Richard Flanders began conducting archaeological research at Blendon Landing in the 1960's for another very simple economic reason. The landing is located less than one mile from the archaeology laboratory at Grand Valley State University and is owned by the University. Blendon Landing became one of "Doc" Flanders' primary outdoor field

teaching sites. Professor Flanders created an field laboratory environment where college students and a wide variety of people in the community learned about the history of the area adjacent the GVSU campus as well as the methods and techniques of archaeology.

As colleagues, Blendon Landing has been an excellent choice for us to study for two reasons. One, it is part of the regional environment where we teach. Second, the Blendon Lumber Company was the first lumber company in the United States to employ a steam locomotive to haul logs. The use of railroad technologies to haul logs affected the environmental history of forests in two very important ways. First, logging railroads accelerated the rate at which forests were destroyed. Second, logging railroads played a major role in the shift from selective cutting of just the larger pine trees to clear cutting--making it profitable to cut and carry away not only the smaller pine trees but also most of the hardwoods.

PHYSICAL ENVIRONMENT

Blendon Landing is located in what is locally known as the "Claybanks" which the Grand River cuts through on its way to Lake Michigan. Most of the village buildings were located on a fairly flat plateau above and adjacent to the flood plain while the sawmill (built in 1858/59) and shipyard (built in 1860) were built at the mouth of the small unnamed creek valley on the north side of the plateau (T7N R13W Sec 32). The pre-settlement forests of Ottawa County have been reconstructed using the original surveyor's records of trees on section lines that were 4 inches in diameter or larger (Kenoyer 1942). The vegetation of the pre-settlement forests in the vicinity of Blendon Landing which is located in the Canadian-Carolinian biotic province contained a mosaic of northern hardwoods and conifers (hemlock as well as pine) and oak-hickory Carolinian.

METHODS

The archaeological excavations at Blendon Landing have been conducted over a period of about 25 years. They include mapping the site and limited test excavations in both the domestic and industrial portions of the site. Only preliminary analyses of the archaeological artifacts have been undertaken thus far.

A variety of historical records provide both historic content and specific detail about the Blendon Landing lumber community site. They include: (1) oral interviews with the local citizens whose ancestors worked there or who grew up on the family farm that included Blendon Landing site prior to the

farm being purchased by Grand Valley State College (now University); (2) plat maps; (3) correspondence between the agent for the Blendon Lumber Company and the out-of-state owners who lived in Lansingburgh, New York; (4) entries in the Ottawa County Register of Deeds records; (5) U.S. census products of industry records; and (6) news accounts and an advertisement published in Grand Haven and Grand Rapids newspapers.

HISTORICAL CONTEXT

The 2500 acre pine timber tract that the Blendon Lumber Company logged was purchased for them by John Ball, their timber cruising and legal agent, during the Michigan land rush of 1836. The physical distance of this cluster of pine from the river and the financial panic of 1837 made logging this tract unprofitable for more than a decade (Benson 1989). The completion of the Lake Michigan-Illinois river ship canal in 1848 lowered transportation costs so much that it became profitable to sell Michigan lumber in the prairies of the Mississippi River valley. The rapid improvement in economic conditions during the 1850's made lumbering an even more financially rewarding activity. Consequently the Blendon Lumber Company investors instructed John Ball in 1855 to begin obtaining the necessary right-of-way easements for a logging railroad to be built from a terminus on Grand River into their 2500 acre "pinery" (Whipple 1855).

BLENDON LANDING--THE HISTORICAL SITE

Professor Richard Flanders used to like to tell the senior author that Blendon Landing was a flourishing sawmill village during the 1840's that even had its own logging railroad. The senior author smugly knew that "Dick" was wrong. Michigan history textbooks clearly stated that the first logging railroad in Michigan was built in 1876 by W. S. Gerrish to transport logs from Lake George to the Muskegon River in Clare county (Dunbar 1965). To make a long story short, Professor Flanders' estimate was wrong but he was more correct than the Michigan history textbooks. The May 6, 1857 issue of the Grand River Times, a Grand Haven newspaper, reported that Blendon Lumber company had just placed a steam locomotive on its tracks which would enable it to bank a very large quantity of logs daily. Archaeological evidence that documents the existence of the logging railroad includes a cut in the terrain that is the only part of the grade located so far that has not been disturbed by plowing and numerous pieces of broken strap iron rail (Fig. 2)

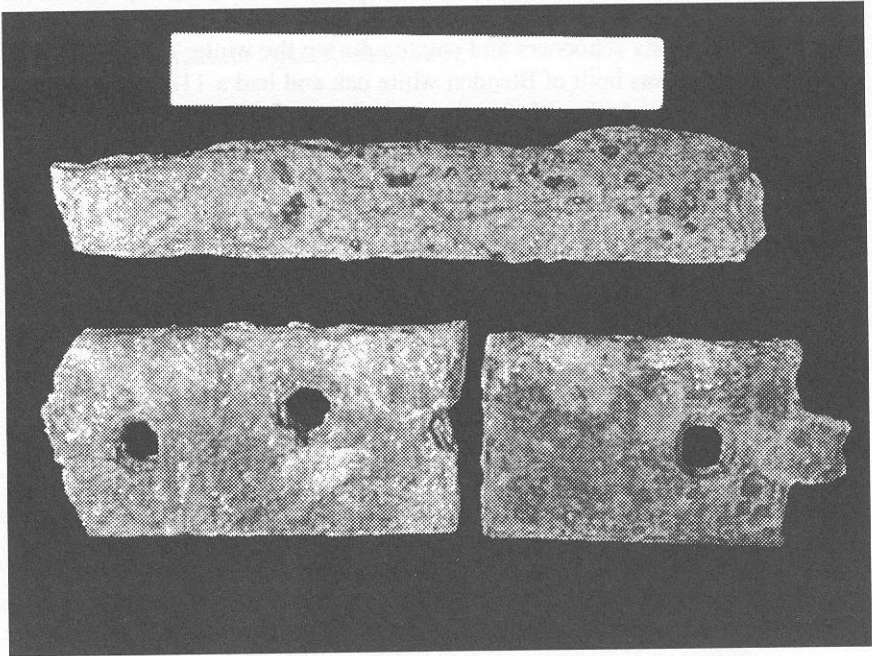


Figure 2. Example of broken strap iron rail from mid-nineteenth century logging railroad at Blendon Landing.

Documentary evidence indicates that one of the largest sawmills operating on the Grand River before the Civil war was built by A. C. Litchfield at Blendon Landing in 1858. The 1860 U. S. census of Products of Industry reported that this steam powered sawmill was operating 4 circular saws and 40 upright saws. The Litchfield & Co. sawmill represented a capital investment of \$40,000 and employed 35 men to cut 4,000,000 board feet of lumber from pine logs during the year ending June 1, 1860.

The sawmill burned down on June 28, 1864 (Grand Rapids Daily Eagle, June 30, 1864) and was not rebuilt. A newspaper advertisement selling the machinery of the burned sawmill provides information concerning the size of the operation (Grand Rapids Daily Eagle, Aug. 16, 1864). Three boilers, two engines and an iron smokestack 4 feet in diameter and 80 feet in height were among the equipment for sale. Archaeological evidence at the sawmill site include brick and the bottoms of the long iron stays that held the iron smokestack in place.

A. C. Litchfield, the owner of the sawmill, built a shipbuilding and repair yard adjacent to the mill in 1860 and constructed the first of at least four and maybe as many as six schooners and one tug during the winter of 1860/61. The 250 ton schooner was built of Blendon white oak and had a 112 foot long deck covering a hull that had a 26 foot beam and was 9 1/2 feet in depth. This schooner was christened Major Anderson and it carried a load of black walnut lumber from Blendon Landing through the Welland Canal, the St. Lawrence river and to either Liverpool, England or Boston where the load may have been transferred to another ship. Other ships built at the Blendon Landing shipyard include the schooners Eveline (fall 1861), and the Lumberman (summer 1862), and the tug Come (spring 1862). The archaeological position of the ship yard needs to be identified to gain a better understanding the relationship of the flood silt ship yard with respect to the flood silt buried dock and lumber storage deck planks of the sawmill.

One of the ships built at Blendon Landing is now a favorite underwater archaeological site off the shore of Oak Creek, Wisconsin. The schooner Lumberman sank in Lake Michigan during an April 1893 storm and its remains now lie in 65-70 feet of water (Harrington 1991: 152).

BLENDON LANDING: THE VILLAGE

While documentary evidence provides considerable information about the industrial and commercial portion of the site, relatively little information is provided about the people living and working in the community. The limited test excavations conducted by Professor Flanders have produced materials suggestive of a community of perhaps 30 to 40 households. Mortar, brick fragments and fragments of wooden boards and nails suggest that a combination of brick and lumber housing was used. Preliminary analysis of artifact distributions indicate that most use of the upper terrace was a substantial residential community, with artifacts including plate window glass, a variety of bottle glass types, fancy glass serving pieces, various functional and formal types of mid-nineteenth century earthenwares, buttons, and other domestic items.

One artifact found at the village site in 1985 takes on a little extra meaning given that this paper was originally presented in Cincinnati, the home of Proctor & Gamble and its century old "Man-in-the-Moon" logo. This Proctor & Gamble logo came under attack in 1985 because some people contended that the logo was a symbol for satanism. The brass Blendon "Man-in-the-Moon" medallion is badly deteriorated (Fig. 3). Although it is not a replica of the Proctor & Gamble logo it does provide evidence to support "the contention that

the moon and stars were widely used as a decorative - perhaps good luck symbol" during the nineteenth century when Proctor & Gamble adopted the symbol as its corporate logo (Keeler 1986).

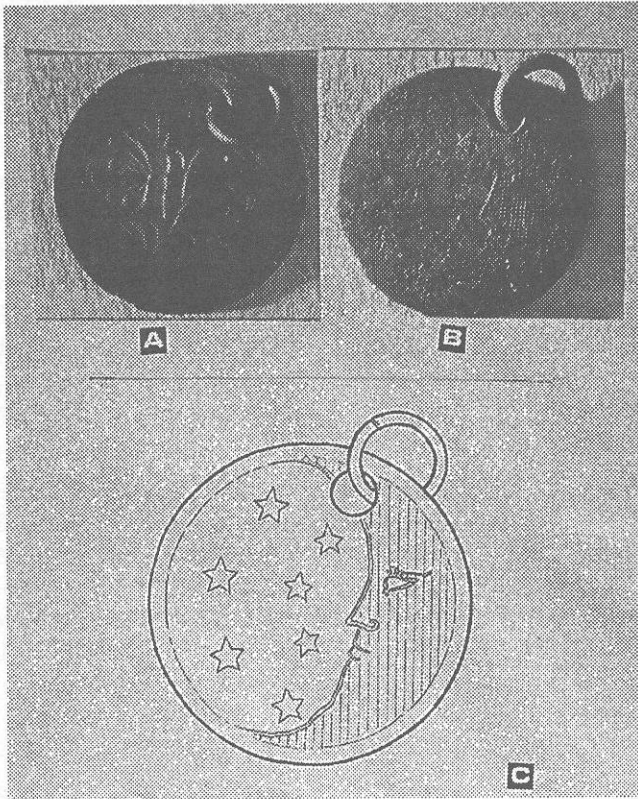


Figure 3. A. Front view of brass Blendon "Man-in-the-Moon" medallion; B. Back view of Blendon medallion; C. Sketch of the back view.

TECHNOLOGY TRANSFER (BORROWING)

Transporting sawlogs from the stump to the mill has always been a major cost that has made many logging operations unprofitable (Rector 1953; Benson 1989). Overland transport by go devils, bobsleds, sleighs, and wheels is slow and consequently expensive. At least six animal powered logging railroads had already been built and operated built in Michigan between 1850 and 1856 (three in the Grand River valley) when the Blendon Lumber Company

constructed the fourth logging railroad to the Grand River in Ottawa county. What stimulated lumbermen to invest in railroad technology to transport sawlogs?

Lumbering became very profitable in Michigan during the early to middle 1850's for two reasons. First, the completion of the Illinois-Michigan canal opened up the prairie states lumber market. Second, the general economic expansion/boom caused prices to rise. Michigan lumbermen could not convert their standing timber into lumber fast enough to take full financial advantage of the very profitable lumber market in Chicago and in New York (Benson 1989; Bajema 1991).

Logging railroads provided lumbermen with the opportunity to move more logs daily, to extend the log hauling season beyond the winter months and to avoid the financial disasters that accompanied open winters when sawlogs often could not be moved after they had been skidded. Insects frequently destroyed much of the value of sawlogs left on skids from one winter to the next. Much of the economic value of fire-damaged timber could be retrieved but only if lumbermen could move the logs to the mill faster than the insects could attack the fire damaged timber (Bajema 1991).

The Blendon Lumber Company probably adopted railroad technology because it had to haul its sawlogs a long distance (3 or more miles) and it was going to log a large area with an estimated minimum yield of 30,000,000 board feet of saw logs (Grand Rapids Daily Eagle, Oct. 17, 1859). The investors obviously predicted that the economy of scale of the lumbering operations would more than compensate for the initial investment costs (grading, ties, wooden rails) and later investment costs (steam locomotive, strap iron rails and maintenance costs). The Blendon Lumber Company purchased a steam locomotive as it began its second season of hauling logs on rail cars in 1857 (Grand River Times May 6, 1857; Thayer 1899).

ENVIRONMENTAL IMPACT

Logging railroads enabled lumbermen to shift from selective cutting toward clear cutting in two very important ways. First, it was now profitable to cut and haul away sawlogs from smaller pine trees. Shingle bolts of pine also could be easily hauled to the terminus of the railroad. Second, it often became profitable to cut other species of trees. The Blendon Lumber company operations is a very early (if not the earliest) example of extensive clearcutting. The Blendon Lumber Company shipped black walnut, cherry, oak and hickory lumber to New York, New England and even to Liverpool, England (Grand Haven News, May 9, 1860 and June 6, 1860; Grand Rapids Daily Eagle, Oct

12, 1863). Some of the oak timber processed by the sawmill was used to build and repair schooners and tugs at the landing. Some of the hardwood was chopped into cordwood, delivered to Blendon Landing, loaded on barges and towed upstream to Grand Rapids where it was used for fuel (Daily Democrat, Grand Rapids, April 25, 1867).

Lumbermen who were aware of the Blendon Lumber Company logging railroad operations did not construct logging railroads in the 1860's. They were more interested in another innovation in transporting logs. The rafting of logs by each individual lumber company was costly. The success of combined log driving on the Muskegon and other Michigan rivers provided lumbermen with a new lower cost method of transporting logs. Numerous log driving companies were organized during the 1860's to build dams, construct channels and to simultaneously drive the branded logs of numerous logging companies downstream to sawmills on rivers (Rector 1953; Benson 1989).

At least one Michigan lumberman may have adopted railroad technologies pioneered at Blendon Landing when he built a logging railroad in the middle 1870's. Russell A. Alger, a shingle buyer, visited Blendon Landing on numerous occasions before the Civil War and obviously observed Blendon Lumber Company's logging railroad in operation (Alger 1859/60). Alger, who was to become Governor of Michigan in the 1880's, built and operated a logging railroad from Harrisville on Lake Huron into his pinery in 1876/77. The success of Alger's logging railroad undoubtedly contributed to the rapid adoption of logging railroad technology by lumbermen in Michigan in during the open winter of 1877-78.

SUMMARY AND CONCLUSIONS

The first archaeological studies of the Blendon Landing sawmill/shipyard community were undertaken because the site was within a mile of the archaeology laboratory at Grand Valley State University. Hundreds of college students have gained valuable field experience while working on this site.

The Blendon Landing sawmill/shipyard community is a significant historical site because the Blendon Lumber Company was the first company in the nation to employ a steam locomotive to haul logs (1857). The history of the adoption of railroad technology to transport logs best fits the numerous independent variations (adoptions)--selective multiplication theory with respect to the history of technology (Cziko 1995). Numerous lumbermen applied railroad technologies to transport logs to streams and sawmills in Michigan and Wisconsin between 1850 and 1875 (Rohe 1984; Bajema 1991). Logging railroads such as W. S. Gerrish's railroad which delivered logs to the Muskegon

River in Clare County and Alger, Smith & Co.'s railroad which delivered logs to Lake Huron in Alcona County quickly became case studies in profitable transportation of logs via rail during the open winter of 1877-78 when the lack of snow and lack of frozen ground bankrupted numerous lumbermen.

The adoption of logging railroad technologies enabled many lumbermen to shift from selective cutting to clear cutting. The historical record indicates that the Blendon Lumber Company cut down numerous species of hardwoods (ash, cherry, hickory, oak and walnut) in addition to white pine. Thus, the site may afford the opportunity for ecologists to better understand long term effects of clear cutting on an area and its biodiversity. Unfortunately both the GVSU faculty club and farmers occupying land once owned by the Blendon Lumber Company have selectively cut the wood lots that still exist. Future investigations at Blendon will include reconstruction of the historic landscape over the last 140 years and additional archaeological excavations to locate key features at the site and distribution--analyses of excavated remains.

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