



# Archeology Program

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## Archeology at the U.S. Armory, Harpers Ferry NHP

*What does the National Park Service do when a park acquires a new piece of property? Part of the Service's responsibility is to take inventory of resources. When 6 acres of the former Armory were added to Harpers Ferry National Historical Park in West Virginia, the park acquired not only the original site of John Brown's Fort but also the archeological remains of other important structures including the Wager Warehouse and the Smith and Forging Shop. Archeologists surveyed, tested, and mapped these important resources.*

The Harpers Ferry NHP Archeology Program is currently in the second year of a three-year long study of the historical U.S. Armory Grounds. The Armory at Harpers Ferry is a site of the first order of significance, and has associations with nationally important historical figures, such as George Washington, Meriwether Lewis, Robert E. Lee, and John Brown.

Harpers Ferry's role in supplying munitions is equally important to the history of the United States. For nearly 65 years, between 1799 and 1861, factories at Harpers Ferry made the nation's weapons. During the time of its operation, weapons manufacturing at Harpers Ferry Armory evolved from a craft-oriented process to a system of mass production of interchangeable parts. This archeological investigation provides a tremendous opportunity to learn about 19th century manufacturing in general, and arms production in particular.

### Background to the Project

In 2001, the NPS acquired title to 6 acres of land along the Potomac River where a portion of the Armory, known as the Musket Factory, once stood. This particular 6-acre tract included the site of "John Brown's Fort," where Brown and his supporters took refuge during their ill-fated uprising in 1859. John Brown's Fort, emblematic of the town and its history, was originally constructed as an Armory building.



With the acquisition of the property came the responsibility to inventory the site's cultural resources, and interpret them in a meaningful and informative way. In order to meet these responsibilities, the Archeology Program at Harpers Ferry NHP initiated at three-year research project. Funds for this project came from the NPS National Capital Region's Cultural Resources Preservation and Protection (CRPP) monies.

Project research design includes a combination of historic research; historic map and photograph analysis; archeological field investigations; and feature and artifact analysis. Public outreach is another important component of the project. Public outreach at Harpers Ferry NHP includes providing educational opportunities to interns and volunteers; providing tours of the site to special interest groups; and other ways of reaching out to the public.

### History of the Armory at Harpers Ferry NHP

The Armory was established at Harpers Ferry in 1798. The site was selected personally by President George Washington over the strong objections of several of his advisors. Where Washington saw "the most eligible spot on the whole river in every point of view," his advisors saw an isolated, frontier setting that was prone to flooding. One early visitor to the town called it "an abominable little village." In the end, however, Washington prevailed and the Armory was built at Harpers Ferry. The first guns were made at the Armory in 1801.

Some of the equipment for the Lewis and Clark expedition of 1803 was made or requisitioned from the Armory. Items that the Corp of Discovery requisitioned from the Armory included rifles, spare parts, presents for Native Americans, and a curious collapsible iron boat frame.

Another building of historic significance at Harpers Ferry is the "Wager Warehouse," a 100 foot-long frame building that actually predates the Armory. It was originally a part of Robert Harper's 18th-century ferrying business on the Potomac River. Later, it was converted to a temporary workshop where arms were re-conditioned. Later still, it was converted to living quarters for the Armory superintendent. The building was dismantled in 1809, but maps show that it stood near the east edge of the Musket Factory Yard. One of the goals of the Harpers Ferry archeological inventory project is to identify archeological resources relating to this building.

Two major expansions were made to the armory facilities. The first expansion occurred from 1808 to 1810 in preparation for the War of 1812. At that time, the number of workshops in the Musket Factory increased from 5 to 12. A second row of factory buildings was added on the river's edge and a 70-foot wide street was built in between the two rows of workshops. The number of Armory workers increased from 20 in 1798 to almost 200 in 1810. By the mid 1820s, the site was a full-fledged industrial center.

The second major expansion to the physical plant of the Armory began in the early 1840s. Like the construction program three decades earlier, the 1840s-era expansion was also a great period of change at the Armory in terms of buildings. By the 1840s, most of the buildings were in poor condition and were no longer adequate for their intended use. The Army's Chief of Ordnance wrote, "The strongest necessity exists for the improvement of the public buildings at Harper's Ferry Armory—they are at present exceedingly unsightly and unworthy of a National Establishment..."

The Superintendent of the Armory, who also happened to be a talented engineer, resolved to fix the problems and totally renovate the armory's architecture. He insisted that all new buildings be well-designed, built of the best materials, and of good workmanship. Settling on a Gothic architectural style that featured crenellated gable ends and distinctive arches, he achieved an architectural and functional unity that the Armory had previously lacked. In all, 25 new buildings were constructed during the building program that began in the 1840s and lasted into the 1850s.

#### **Harpers Ferry in the Civil War**

Harpers Ferry witnessed one of the earliest acts associated with the Civil War. On the night of October 16th, 1859, the abolitionist John Brown and a band of 21 men raided the Armory's arsenal, intending to seize weapons and spark a slave revolt. The raiders easily overpowered the Armory watchman and captured the arsenal, taking hostages in the process.

A group of Marines under the command of Robert E. Lee arrived during the night of October 17, and Brown and his followers were soon captured. Brown's trial, conviction, and death by hanging, perceived by many as an act of martyrdom, polarized the nation on the eve of the Civil War.

When the Civil War did break out, the residents of Harpers Ferry and Armory workforce found themselves uncomfortably on the border between North and South. As Confederate forces advanced on the Armory in April 1861, Federal soldiers set fire to the arsenals and some workshops, and then abandoned the town. The townspeople and armory workers, not wanting to see their livelihoods go up in flames, worked quickly to extinguish the fires before too much damage was done. Much valuable machinery and tools were saved. A short time later the machinery and tools were confiscated by Confederate soldiers and shipped elsewhere to aid Confederate efforts. Eventually, some of the shops were partially refurbished and used as a Quartermasters Depot to support military operations, including Major General Sheridan's 1864 Shenandoah Valley campaign.

After the Civil War ended, the federal government abandoned the premises and the property was allowed to deteriorate. Floods ravaged the grounds; building materials, particularly bricks and cut stone, were scavenged and used for other building projects in the region.

The Armory site passed into private hands in 1868 and, in 1892, the last remnant of the Armory, the large brick chimney of the Smith and Forging Shop, was torn down. In 1894, the B&O Railroad realigned its track and constructed an earth and rubble embankment that covered the main entrance to the former Musket Factory Yard, the original site of John Brown's Fort, and most of the workshops and canal. In 1916, to help promote Harpers Ferry as a tourist destination, the railroad company landscaped the former Armory grounds and planted trees and ornamental shrubs and established flower beds. They also took steps to interpret the site by installing wayside signs and built false foundation outlines to show the locations of the Armory buildings.

In 1931, the Harpers Ferry train station was relocated from a spot slightly downstream to its current location, which necessitated the enlargement of the fill embankment covering the former Armory site, and further obscured the locations of historic buildings. By the time that Harpers Ferry National Monument was established by Congress in 1944, the Armory site had reverted to a natural state. By 1980, it was completely covered with trees and underbrush. It remained that way, largely undisturbed, until the NPS acquired the property in 2001.

#### **Harpers Ferry Armory Archeological Project—Results of the First Year**

The archeological investigations, which began in April 2005, have revealed much information about the archeological potential of the Armory site. A total of 42 five by five foot units were excavated the first season. The majority were contiguous, to achieve a size that permitted a full view of the specific feature under study. These larger block excavations also provided space to reach a sufficient depth in the fill-laden site to record the site's stratigraphy.

Study during the first season centered upon the area once covered by two buildings: the Warehouse, erected in 1841; and the Smith and Forging Shop, built 1845 to 1848. At both of these building sites, excavations were focused on key architectural features, primarily the intersections of foundation walls. A herringbone-patterned brick floor in the inspector's office portion of the Smith and Forging Shop was also uncovered. The exact locations and dimensions of both buildings were recorded, important information that is guiding work this field season and next.

Excavations at the Warehouse revealed several architectural features. The remains of a fire suppression system was documented near the southwest corner of the building. Identified

components of the fire system included part of an 1850s cast iron fire hydrant, a lightning rod, and a carved stone splash guard or spout stone. In addition, a 16' deep excavation, done by hand and machine, was made into the Warehouse's basement.

Excavations at the Smith and Forging shop revealed interesting stratigraphy of the depositional history of the site. By-products of the manufacturing process such as borax, lime, fly ash, and cinders were present adjacent to the workshop as were the ash and rubble deposits that accumulated during the destruction of the armory.

A number of interesting artifacts were collected during the course of the excavations. The artifacts span the entire occupational history of the site, including items from prehistoric times through modern periods. Among the notable finds was a cache of 75 to 100 three-piece, long-range rear sights for the U.S. Model 1855 rifle in a small deposit at the corner of the warehouse. Several tools used by armorers in the gun-making process were also recovered, including rasping files, a wrench that was made from a broken file, and inspector's stamps. The inspector examined each weapon and, if it was of sufficient quality, he stamped either the metal or the wood of the gun using a mallet and a stamp.

Other unusual artifacts include a piece of china from plates commissioned by the railroad to commemorate the founding of the B&O Railroad. Another interesting find was an apothecary's weight, used to measure out medicine on a scale. Several concentrations of Civil War-era artifacts were also found, evidence of the extensive usage of the site during the war.

The creation of an accurate base map was a significant accomplishment of the first season of the project. An electronic Total Station was used to capture the survey data which consisted of thousands of individual points. The base map depicts the topographic conditions, above ground landscape features such as the Armory boat ramp and river wall, and the extent of all archeological excavations to date.

Public outreach efforts have been a significant component of the project. During the first season, four college students donated their time and efforts, totaling hundreds of hours, both in the field and in the lab, and gained practical experience and training in historical archeology. In addition, "Behind the Scenes" tours and presentations were made to several groups including other Park personnel, Civil War history groups, Potomac River Heritage enthusiasts, professional archeological colleagues, and several school groups. Radio and television stories, newspaper coverage, and daily interaction with the visiting public has helped raise the profile of this nationally significant site and generate interest in the local community.

During the 2006 field season, archeologists are turning their attention to the interior of the Smith and Forging Shop, the largest of all the Armory structures. Efforts are underway to identify and document the various inner work spaces of the building. Features related to the mechanical workings of the building identified so far include a brick-lined trench that housed gearing and shafting, as well as a flue that supplied air to the workshop's double row of forges. Excavations are also underway in the area where a massive 90'-tall smokestack once stood. In all their activities, the archeologists at Harpers Ferry NHP are dedicated to keeping the NPS commitment to responsible management of the cultural resources on the lands that it administers.

*For more information, visit [Harpers Ferry NHP](#)*

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