

## VALLEY FORGE

After being forced out of Philadelphia by the British, George Washington's Continental Army spent the harsh winter of 1777-1778 at Valley Forge along the Schuylkill River, about 25 miles northwest of center-city. Archaeological investigations conducted by the National Park Service for more than a half-century included large-scale excavations, remote sensing, such as ground-penetrating radar and sophisticated metal detectors to locate concentrations of artifacts, and architectural foundations of buildings and structures used by Washington's soldiers. Even though Washington ordered living quarters to be neatly laid out in rows, archaeology proved that the huts were haphazardly placed in groups by battalion. Dietary evidence indicates the soldier's diet included beef and pork in somewhat better conditions than historians describe.

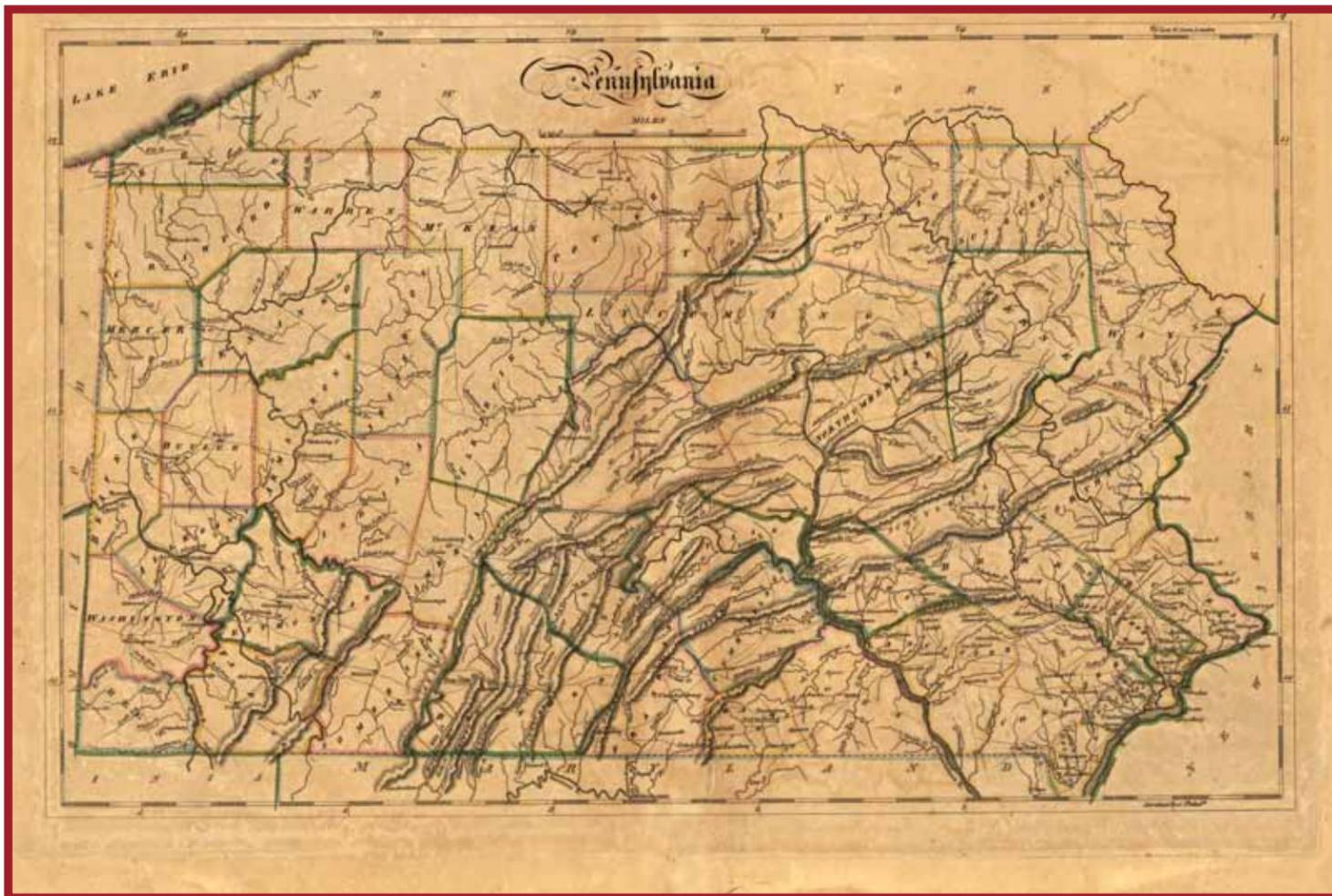


1777 U.S. uniform button.

## CHEVAL-DE-FRISE

In September of 1777, after his victory at the Battle of Brandywine, General Sir William Howe and his British army marched into Philadelphia. However, General Howe encountered a supply problem. He was surrounded by George Washington's Continental Army; more importantly, the Royal British Navy could not move supplies up the Delaware River to the city because two American forts protected the river. Historic documents reference installation of a line of defense for Fort Mifflin and Fort Mercer. Large spikes, known as *cheval-de-frise* (the plural of which is *chevaux-de-frise*) were placed at an angle

in the river to prevent British ships from supplying Howe's army. A *cheval-de-frise* is a log up to 29 feet long with an iron spike on the end that was used to puncture the hull of large sailing ships attempting to move up the Delaware. The spike was notched to hold fast once the hull was punctured. These spikes were secured in a square frame or box weighed down with rocks to hold them in place in the river. The recent discovery of a *cheval-de-frise* in the Delaware River has provided archaeologists an opportunity to examine a nearly intact example, and suggests possible placement of additional *chevaux-de-frise* not recorded in historic documents.



## THE HOSPITAL

The medical needs of the Continental Army had grown dire by autumn 1777. More than 20 percent of the 18,000 soldiers were either sick or wounded. Military hospitals were established in several outlying Pennsylvania communities while General George Washington quartered his troops at Valley Forge for the winter. The religious community of Ephrata, Lancaster County, known today as Ephrata Cloister, was one of the selected hospital sites. Archaeological excavations conducted by The State Museum of Pennsylvania between 1999 and 2003 discovered hundreds of artifacts, proving that the community's Mount Zion dormitory and prayer house were used for this purpose. The recovered artifacts include lead musket balls, gun flints, gun parts, a bayonet, marked regimental buttons, glass medicine vials and an iron brazier (similar to a camp stove). By June 1778, the Ephrata hospital was closed. Of the 250 sick and wounded soldiers who received care, 57 died. In addition, several Cloister members made the ultimate sacrifice during their service as nurses and succumbed to an outbreak of typhus or typhoid fever.



Revolutionary War era brazier recovered at Ephrata Cloister.

## THE NIAGARA

"We have met the enemy and they are ours; two brigs, one schooner, and one sloop," Commodore Oliver Hazard Perry wrote in his famous report to General William Henry Harrison.

On June 17, 1812, the United States declared war on England. Not long after, men and supplies poured into Erie to construct a fleet of ships which would ultimately prove to be an unstoppable fighting force. The Battle of Lake Erie on September 10, 1813, saw the defeat of the British at Put-in-Bay, Ohio, and gave control of the Great Lakes to the United States, eliminating the threat on the northwestern frontier by British forces and raising the morale of Americans. Hastily built in 1813 — and victorious in battle — Commodore Perry's relief flagship *Niagara* was scuttled in 1820 to preserve it from being crushed by ice on Lake Erie. To commemorate the centennial of the battle in 1913, the remains of *Niagara* were raised and a ship rebuilt upon them. The cycle was repeated in 1943 and 1988. The process of reconstructing the vessel enabled maritime specialists to examine this significant symbol of the nation's military might while preserving an icon of American history and archaeological heritage. It also allowed them to identify a number of technical problems in the design of the vessel, particularly its broad deck and tall masts which caused it to be top-heavy and unstable in strong winds.



The Flagship Niagara in 1913.

## THE CIVIL WAR

A visitor's accidental discovery of human bone fragments in the northern section of Gettysburg National Military Park resulted in perhaps the only archaeologically-recovered burial from the historic battlefield. Historic documents indicate significant casualties occurred in this railroad cut between Union and Confederate troops on July 1, 1863, the first day of the Battle of Gettysburg. In the aftermath of the three-day bloodbath on Adams County's farmlands and fields, thousands lay dead and were hastily buried. The archeological excavation, analysis and interpretation of this burial resulted in initial identification and subsequent reburial in a marked grave at the park. These skeletal remains contained an archive of clues about the life and death of this soldier who fought during the American Civil War that were revealed through archaeology.

APRIL 1775

First shots fired of Revolutionary War at Lexington and Concord, Massachusetts

JULY 1776

Declaration of Independence is signed in Philadelphia

DECEMBER 1777

Washington's troops endure harsh winter at Valley Forge

OCTOBER 1781

British defeated at Battle of Yorktown, Virginia which marks the end of the Revolutionary War

JULY 1794

Whiskey Rebellion occurs in western Pennsylvania as a result of outrage over excessive taxation

JUNE 1812

War of 1812 begins over trade issues

OCTOBER 1834

Opening of the Main Line of Public Works- Canal and railroad system included the Columbia and Philadelphia Railroad

FEBRUARY 1838

Pennsylvania revises Constitution. Blacks lose right to vote (are disenfranchised)

SEPTEMBER 1850

Fugitive Slave Act passes making it illegal to aid escaped slaves

JULY 1863

Battle of Gettysburg

APRIL 1865

Confederate Army surrenders at Appomattox Courthouse ending the Civil War

# ARCHAEOLOGY

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## TROUBLED NATION

### 1775-1865

Pennsylvania is often referred to as the “birthplace of freedom” and the “keystone of the nation,” but earning these epithets did not come easily for the early colonists who helped establish the United States. Chartered in 1681, William Penn’s colony was comprised of a diverse ethnicity dominated by Germans, Scots-Irish and English with equally varied religious practices. The social and religious dynamics of Pennsylvania are important in understanding its initial reluctance to join the War for Independence.

An internal revolution in the commonwealth erupted in 1776 when the first state constitution was drafted in Philadelphia. It replaced the hierarchical colonial society under the proprietary rule of the Penn family. In its place was a freer, more democratic state constitution. This break from Penn family rule and its Quaker pacifist tradition empowered the Scots-Irish on the western frontier and led to radical movements to break from British rule. The abundance of raw materials in Pennsylvania played a critical role in commerce with England. In turn, Pennsylvania was a large consumer of imported goods. However, growing resistance to taxation by England and a rising sense of patriotism in the colonies prompted a call to arms for Pennsylvanians.

At the dawn of the American Revolution Pennsylvania was the third largest colony and contributed abundant supplies and labor, essential to the development of our new nation. Philadelphia was the largest city in North America with a population of nearly 30,000 residents. It served as our nation’s capital during most of the rebellion and as an important ocean port to the Delaware Bay. The city’s location was important for the shipping of supplies destined for the military. The British recognized its strategic significance and, after taking New York, moved to capture Philadelphia.

Attempts by Pennsylvania to halt the advance of British forces included the installation of a line of defense in the Delaware River between 1776 and August 1777. A series of *chevaux-de-frise* were sunk between Fort Mercer and Fort Mifflin. General George Washington’s successful crossing of the Delaware on December 25, 1776, buoyed the morale of patriots which aided in securing guns and supplies for American troops. The Philadelphia Campaign of 1777 by British forces resulted in Washington’s ill-fated battles at Brandywine and Germantown and forced his retreat to Valley Forge for the winter of 1777-1778. His troops endured harsh winter conditions, in addition to disease and breakdowns in the supply system. The archaeological evidence of this

difficult period for American troops has been documented at several sites including Valley Forge and Ephrata Cloister. British troops captured Philadelphia on September 22, 1777, and eventually took control of the Delaware River, but the victory was short-lived. France joined forces with America in the spring of 1778. The French brought much-needed financial support, skilled troops and naval strength which led to the eventual defeat of the British.

Thirty years later, the War of 1812 placed Pennsylvania again at the forefront. The Battle of Lake Erie on September 10, 1813, saw the defeat of the British Navy at Put-in-Bay, Ohio, and gave control of the Great Lakes to the United States, eliminating the threat on the northwestern frontier by British forces. The flagship *Niagara* was hastily built to serve during this battle, but was scuttled shortly afterward to prevent ice damage. The recovery of these underwater remains aided in restoration of the *Niagara* — commandeered by Commodore Oliver Hazard Perry as his relief flagship during the battle — and contributes to our understanding of its pivotal role in this significant naval engagement.

Over time the commonwealth’s constitution underwent additional revisions. Initial versions of the constitution allowed all men, including free Negroes to vote. Pennsylvania’s support of the abolition movement was demonstrated early on as one of the first colonies to pass the Gradual Abolition of Slavery Act in 1780. These laws provided opportunities beyond those of many enslaved in the South. Support of the antislavery movement led to the advancement of the Underground Railroad and often provided safe passage for escaping slaves to Canada. The archaeological evidence of this secret network of safe houses has been difficult to identify, but the encouragement of Pennsylvanians for the antislavery movement was key to our involvement in the American Civil War.

Pennsylvania’s industries had grown into a factory system, a shift that resulted in increased production in textile manufacturing, leather making, lumbering and tobacco. The coal industry fueled iron furnaces and forges for iron production, as well as steam locomotives and factories. Iron and steel production had facilitated the fabrication of half of the nation’s iron by the Civil War. The expansive railroad system which had begun in the 1830s enabled Pennsylvania to efficiently transport supplies to Union forces. Upwards of 350,000 men enlisted in Pennsylvania’s regiments, including 8,600 African Americans. More than 33,000 Pennsylvanians were killed in action or later died of wounds, disease or illness.

## PRESERVING ARCHAEOLOGY

Archaeology enhances and enriches all our lives, but prehistoric and historic sites are non-renewable resources. Unfortunately, sites are ruined daily due to development and urban sprawl. When a site is destroyed, information about the past is lost forever. Because unrecorded archaeological sites are those most often destroyed, every effort must be made to locate, evaluate and record their content for the future, before a development project is undertaken. If you know of locations where artifacts have been found and wish to assist with the preservation of archaeological sites, we encourage you to record these locations with the Pennsylvania Archaeological Site Survey (PASS).

We also encourage you to donate your collections. These artifacts represent our connection to the past and should be preserved. Information, recording forms, instructions and additional resources about Pennsylvania archaeology can be obtained at

[www.paarchaeology.state.pa.us](http://www.paarchaeology.state.pa.us)

[www.pennsylvaniaarchaeology.com](http://www.pennsylvaniaarchaeology.com)

[www.twipa.blogspot.com](http://www.twipa.blogspot.com)



THE STATE MUSEUM OF PENNSYLVANIA'S ARCHAEOLOGY AND ANTHROPOLOGY GALLERY

Archaeologists preserve the past and educate the public about the role of archaeology in preserving our heritage. In Harrisburg, The State Museum of Pennsylvania's Archaeology and Anthropology Gallery focuses on the cultural heritage of Pennsylvanians. Visitors can explore nearly 16,000 years of human occupation, from Native American prehistory through European colonization. The museum is also the official repository for state and federal archaeological investigations and curates these collections for future generations.



The State Museum OF PENNSYLVANIA



PHMC/PHOTO BY DON GILES

Adjacent to the Pennsylvania State Capitol in Harrisburg, The State Museum of Pennsylvania offers extensive collections interpreting the state’s fascinating heritage. With exhibits examining the dawn of geologic time, the Native American experience, the colonial and Revolutionary eras, a pivotal American Civil War battleground and the Commonwealth’s vast industrial age, The State Museum demonstrates that Pennsylvania’s story is America’s story.

THE COMMONWEALTH'S OFFICIAL MUSEUM

MUSEUM HOURS: Wednesday through Saturday

9 a.m.–5 p.m., Sunday noon–5 p.m. Closed major holidays.

Hours may be subject to change.

*Admission charged.*

The State Museum of Pennsylvania

300 North St. (between North and Forster Sts.)

Harrisburg, PA 17120

717-787-4980 [www.statemuseumpa.org](http://www.statemuseumpa.org)

The State Museum of Pennsylvania

is one of 26 historic sites and museums on the Pennsylvania Trails of History®

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