

“Make sure you Aim, for one Shot well pointed is worth a Dozen thrown away”

Evidence of a Musketry Range at Valley Forge
National Historical Park, Pennsylvania

WADE P. CATTS AND JOSEPH F. BALICKI

Valley Forge is an American icon. American schoolchildren are raised on the story of the bitterness of the “Valley Forge Winter,” the miserable condition of the log hut “city” constructed by the soldiers, the “godlike” Washington’s ability to hold the army together, the stoic strength and resilience of the undersupplied Continental soldiers, and the role of Baron Friedrich Wilhelm von Steuben in the creation of a disciplined American army capable of engaging the Crown forces on equal terms.

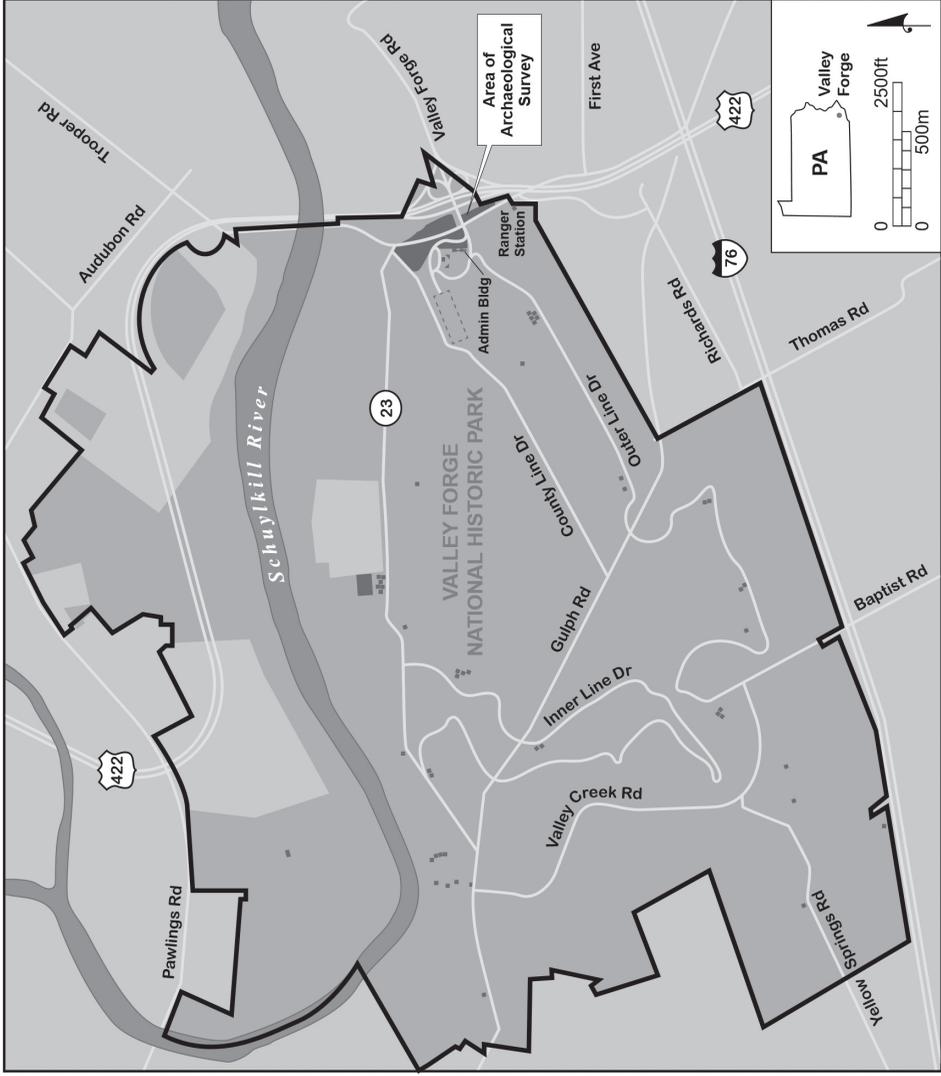
After a grueling six months of hard campaigning in New Jersey, Delaware, and Pennsylvania that resulted in the loss of the American “capital” of Philadelphia, the 11,000-man Continental army commanded by General George Washington established winter quarters at Valley Forge on December 19, 1777. With the onset of harsh weather, armies traditionally ceased active campaigning and established long-term camps in defensible positions beyond direct contact with the enemy. Sometimes the soldiers were quartered in private dwellings in towns or villages, as the British army did in Philadelphia. At other times, as at Valley Forge, the camps were purpose-built for the situation. The American army would remain at Valley Forge for six months, until June 19, 1778, when the summer campaign culminated in the battle of Monmouth began (Bodle 2002; Taaffe 2003).

The encampment location provided strategic and tactical advantages for the Continental army and the revolutionary cause. Valley Forge is about twenty miles northwest of Philadelphia. From this position the Continental

army was close enough to harass the British garrison in the city but far enough away to discourage a British attack. The encampment site is situated on a river terrace east of Valley Creek and south of the Schuylkill River, drained by Valley Creek and its numerous tributaries. The site was sheltered by the large hills of Mount Joy and Mount Misery (both names applied to these topographic features prior to the encampment) on the west, a steep ridge to the south, and rolling hills to the east. These natural defenses were strengthened with constructed fortifications. The elevations surrounding the site's open area provided excellent observation of the countryside, allowing soldiers to defend the fortified encampment easily (Trussell 1976, 49–52).

An important element of the Valley Forge encampment was the time afforded to the Continental army to discipline and drill the troops (Wright 1983, 121). If American formations had received any training before this, they had been largely “self-taught” by their individual officers, using a variety of English, French, Prussian, and other European manuals (Wright 1983, 138–39). Given the dominant English ancestry of most American colonies along the eastern seaboard, the English military manuals were overwhelmingly preferred. Some manuals went through numerous printings in major North American cities for local militia use (Gruber 1986, 4). In the years preceding the war, individual infantry companies and battalions were capable of small unit cohesion, but coordination among larger formations was more difficult to attain: cohesion was dependent on the training abilities of the officer commanding. The previous winter (1776–1777) the American army was in a state of flux, with expiring enlistments, supply shortages, dispersed winter cantonments, and the recruiting of new, long-service regiments. In 1777–1778 the camp at Valley Forge provided the place, time, and opportunity to train troops and officers in a uniform system of military discipline so that the American army would be on par with its British and German adversaries when active campaigning resumed in the spring. Importantly, the training was not just as individuals or small units (companies) but as part of larger military formations, such as battalions, regiments, and brigades (probably the best analysis of the von Steuben manual and its ancestry in various other manuals is Ernest W. Peterkin's *The Exercise of Arms in the Continental Infantry*).

Beginning in March 1778, American regiments were taught a standardized routine of marching, deploying, moving and changing formations, firing, and using the bayonet, all under the direction of von Steuben. Von Steuben's training began with the selected men of Washington's Life Guards



Map 1.1. Valley Forge National Historical Park, showing the general area where the target range archaeological survey was undertaken in 2005. Illustration by Robert Schultz.

company. They were used as a model company to train additional inspectors, who then proceeded to train companies, battalions, and brigades (Benninghoff 2001; Palmer 1937; Trussell 1976, 52–62). For a six-week period, from mid-March to early June 1778, the Continental army continuously drilled, following von Steuben's manual of arms.

The degree of standardization that the drilling brought to the troops was immediately apparent to the officers and other observers (Bodle 2002, 200). Training an army of several thousand men presented a remarkable and varied scene of controlled activity. In his study of von Steuben, author John Palmer (1937, 150) described the first day of training:

by ten minutes after nine o'clock, Valley Forge presented a busy scene. All of the army was at drill. Each regiment was divided into squads of twenty men. Each brigade inspector was supervising the exercises of his brigade. The Baron galloped from parade ground to parade ground, taking a hand here and there, impressing his personality everywhere. Thanks to the example already given by the Guard Company, all of the drillmasters and most of the soldiers knew exactly what to do because they had seen it done.

The military discipline taught by von Steuben and his inspectors transformed Washington's army into a more effective military force. The standardization of marching and maneuvering and the steps toward creating small-arms uniformity by company and battalion allowed the Continental army to move and fight as a single formation. In his study of the command structure at Valley Forge, Herman Benninghoff (2001, 112) summarizes the significance of von Steuben's training program:

the Valley Forge soldier learned to deploy, march, maneuver, function cohesively, acquire competence in the manual of arms, and to quickly form a line to the front when meeting the enemy. The army trained and marched in two ranks, at all hours of the day or night, exactly as von Steuben instructed, drilling endlessly in aiming, firing, and executing a bayonet charge. Soon, ten or twelve battalions could maneuver with the precision of a single company. Troops practiced daily tactical exercises, including attack and defense positions.

The culmination of training was reached on May 6, 1778, when the entire army celebrated the alliance of the United States and France (Trussell 1976). An elaborate celebration was prescribed in the orders for that day, consisting of assembly, prayers, several cannon salutes, marching and

maneuvering, and displays of musketry firing. The musketry was presented in a “running fire,” where each regiment and brigade fired in sequence from one end of the formation to the other (Weedon 1971, 307). The celebration was deemed a great success by many observers: the Continental army of June 1778 was a more efficient, disciplined, and trained army than the one that had entered winter quarters in December 1777.

THE PROJECT

Archaeologists with John Milner Associates, Inc. (JMA) conducted investigations on a fifteen-acre project area in 2005 in connection with proposed improvements to the gateway entrance of Valley Forge National Historical Park. The investigation was funded by the Pennsylvania Department of Transportation. A small archaeological area of potential effects consisting of six discrete sections, separated by walkways and roads, was defined. Much of this area had been previously disturbed by development activities, such as construction of the Park Visitor’s Center and road system. The map prepared by French engineer Duportail, drafted in December 1777 during the early occupation of Valley Forge, is now considered the most accurate representation of the American encampment. Georectification of the Duportail map places the archaeological project area near the eastern end of a fortification line known as the outer line of entrenchments.

Fieldwork combined a range of techniques, including traditional archaeological excavations, geophysics, mechanical trenching, and a metal detector survey (Siegel et al. 2006, 22–25). Of these methods, metal detecting proved most appropriate for investigating the military archaeological resources. Metal detecting occurred in two phases. The first phase was 7.5-meter interval testing for expedient determination of the presence or absence of archaeological resources. The second phase employed a different approach and built upon the results of prior investigations. The strategy of the second phase was repeatedly to pass over an area, at different times, with different detectorists, and with different machines. We believe that this technique greatly increased the rate of recovery and accuracy (Siegel et al. 2006, 22).

It should be noted that the second phase of metal detecting was not systematic in the sense that each area was covered in predetermined sweeps spaced at predetermined intervals. Rather, the metal detection was intensive in terms of coverage both in area and in the number of times that places were checked. Metal detectors can be unreliable machines that easily