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Joseph H. Last

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What We Have Learned: A Retrospective on Parks Canada War of 1812 Military Sites Archaeology

Joseph H. Last

Over the past five decades, Parks Canada archaeology has advanced the understanding of War of 1812 sites in Ontario. Delineation of the original 1796 traces at Fort George and Fort Malden provide enhanced appreciation of their transformation from defensible supply stations to works of greater strength. Investigations at Forts Mississauga, Henry, and Wellington illustrate how British Royal Engineers rethought defense, varying designs as the war progressed. Fort Wellington also demonstrates British engineers willingness to stray from Vauban-influenced systems by adopting the bastion-less trace in their later works. Excavations at Fort George illustrate American use of entrenchments as an expedient means of perimeter defense. In addition to site design, alterations, and future archaeological potential, excavations also reveal insights about occupation and activities: from raucous dinner parties to evocative caches of flints and buttons. In hindsight, the usefulness of employing a long-term/small-scale cultural resource management approach to Ontario military sites archaeology is briefly evaluated along with recommendations for future study.

Au cours des cinq dernières décennies, les recherches archéologiques effectuées par Parcs Canada ont fait avancer notre compréhension des sites associés à la guerre de 1812 en Ontario. La délimitation des tracés originaux du fort George et du fort Malden offre une meilleure appréciation de leur transformation, passant de stations d'approvisionnement défendables à des ouvrages défensifs de plus grande envergure. Des recherches aux forts Mississauga, Henry, et Wellington illustrent bien comment les Royal Engineers britanniques ont repensé les défenses, variant leurs formes à mesure que la guerre avançait. Le fort Wellington démontre également la volonté des Britanniques de se détourner des systèmes défensifs inspirés de Vauban, adoptant un tracé sans bastions dans leurs travaux ultérieurs. Des fouilles archéologiques au fort George illustrent l'utilisation de la stratégie de retranchement par les Américains comme moyen rapide de défense du périmètre. En plus de la conception du site, des modifications et du potentiel archéologique futur, les fouilles révèlent aussi des informations sur l'occupation et les activités : des dîners bien arrosés aux caches de silex et de boutons. Avec du recul, l'utilité de l'approche préconisée dans la gestion des ressources culturelles des sites militaires ontariens, soit sur le long terme et à petite échelle, est évaluée. Des recommandations quant aux recherches futures sont également formulées.

Introduction

In 1920, the newly founded Historic Sites and Monuments Board of Canada, under the chairmanship of Brigadier General Ernest Cruikshank, recommended for commemoration nine Ontario historic sites associated with the War of 1812. By November 2015, the number of National Historic Sites associated with the war had increased to 64 in Ontario and 91 nationally, making the War of 1812 the most commemorated conflict played out on Canadian soil (Pelletier 2006: 136; Parks Canada 2015).

Included in this list of designations are the principle British forts built to defend the shores of Upper Canada: Fort St. Joseph on St. Joseph Island, Fort Malden at Amherstburg, Fort Erie on Lake Erie, Fort Drummond at Queenston Heights, Fort Chippawa at Chippawa, Fort George and Fort Mississauga

in Niagara-on-the Lake (then Newark), Fort York at Toronto (formerly York), Fort Henry in Kingston, and Fort Wellington at Prescott. Many of the earliest designations were transferred from the Department of Defence to the Dominion Parks Branch of the Department of the Interior—the precursor of Parks Canada. Beginning with the acquisition of Fort Wellington in 1923, the transfers between the two departments have continued and, most recently, include Fort Henry's conveyance to Parks Canada in 2001. While Fort Erie, Fort York, Fort Chippawa, and Fort Drummond are all National Historic Sites, they are not administered by Parks Canada. As a consequence, they have not been part of the Parks Canada's archaeological research program and, thus, are beyond the scope of this article.

With the evolving mandate to protect and interpret to the public these nationally significant

sites, archaeological investigation has been integral to good site management through developing inventories and assessing potential impacts on resources. The earliest excavations began in 1963 at Fort St. Joseph, with subsequent work between 1973 and 1979 (Lee 1974; Emerson, Devereux, and Ashworth 1977). The first investigations at Fort Wellington started in 1965 and continued into the 1970s (Coleman 1966; Baker 1971). Fort Malden saw minimal testing in 1965 and 1966, with large-scale excavations beginning in 1977 and continuing to 1980 with the assistance of field schools. Fort George saw intensive surveys from 1969 to 1974 (Henderson 1973; Wilson and Southwood 1976). Parks Canada initiated excavations at Fort Mississauga in 1978 and 1979, but then not again until the late 1980s.

Since the establishment of Parks Canada Ontario Region in 1976, each of the sites has seen successive, but smaller-scale, excavations, with the exception of the latrine excavations at Fort Wellington from 1990 to 1992, the archaeological program at Fort Henry from 2001 to 2010, and the extensive palisade repairs at Fort George between 2009 and 2010. This ongoing research has provided a unique opportunity to support key commemorative messages, as outlined for each site (Last 2007), and to advance public appreciation of what has been called the “Forgotten War” through examining site design, modification, and occupation (Coles 1971: v; Stanley 1983: 403–406; Hickey 1989: 1; Latimer 2007: 1).

What follows is a brief overview of the defense of Upper Canada on the eve of the war. This article then summarizes five decades of intermittent archaeological investigations undertaken by Parks Canada on six of the primary forts garrisoned in Upper Canada during the War of 1812. Instead of tracing the development of each fort separately or reviewing them geographically, the article presents specific subjects regarding the defenses in Upper Canada, drawing sites into the discussion whenever germane. Topics include determining site extent and alterations; rethinking defense: new designs during the war; and, finally, aspects of site occupation and artifact assemblages. This is followed by recommendations and conclusions.

Defense of Upper Canada

While the Treaty of Paris of 1783 officially ended the American War of Independence, the British continued to garrison the Great Lake posts of Fort Michilimackinac, Fort Detroit, and Fort Niagara until the ratification of the 1794 Jay Treaty. In accordance with Article 2 of the treaty, Britain was obliged to retire from these northwest American posts by June 1796. As a result, Gother Mann, then commanding royal engineer in Canada, initiated the construction of three replacement works: Fort St. Joseph; Fort Amherstburg, later renamed Fort Malden; and Fort George (FIG. 1). All were built in the shadow of or striking distance from the forts that Britain had just abandoned. While these new forts eventually contained defensive elements, they were primarily conceived as storage depots and meeting places for the British Indian Department, rather than strongly defended works.

Fort St. Joseph, on St. Joseph Island, was on the direct canoe and shipping route from Upper Canada to Lake Superior (FIGS. 1, 2c). It was envisioned by Lord Dorchester (Sir Guy Carleton, 1st Baron Dorchester), to be “a Rendezvous for the Indian Traders with furs from their wintering grounds ... besides Indians of various Tribes who resort to the Rendezvous for presents, or for news and sometimes to make Peace under the King’s protection” (Emerson, Devereux, and Ashworth 1977: 31–32). Dorchester intended Fort Malden, on the Detroit River opposite Bois Blanc Island, to act as a supply depot for military and marine stores transferred from Detroit (FIGS. 1, 2b). Fort Malden would also provide a logistical support and defense for the King’s Navy Dockyard planned just south of the fort (Carter-Edwards 1980, 1983: 33). Similarly, Gother Mann positioned Fort George on the heights 0.9 mi. (1.4 km) south of the mouth of the Niagara River to support and defend the Provincial Marine naval establishment located there between 1775 and 1791 (Flemming 1976) (FIGS. 1, 2a). Each work was a temporary complex of modest strength and remained so until the declaration of war.

Like all royal engineers, Gother Mann was well educated and honed in the arts of defense and war. Besides taking classes in French, drawing, and mathematics at the

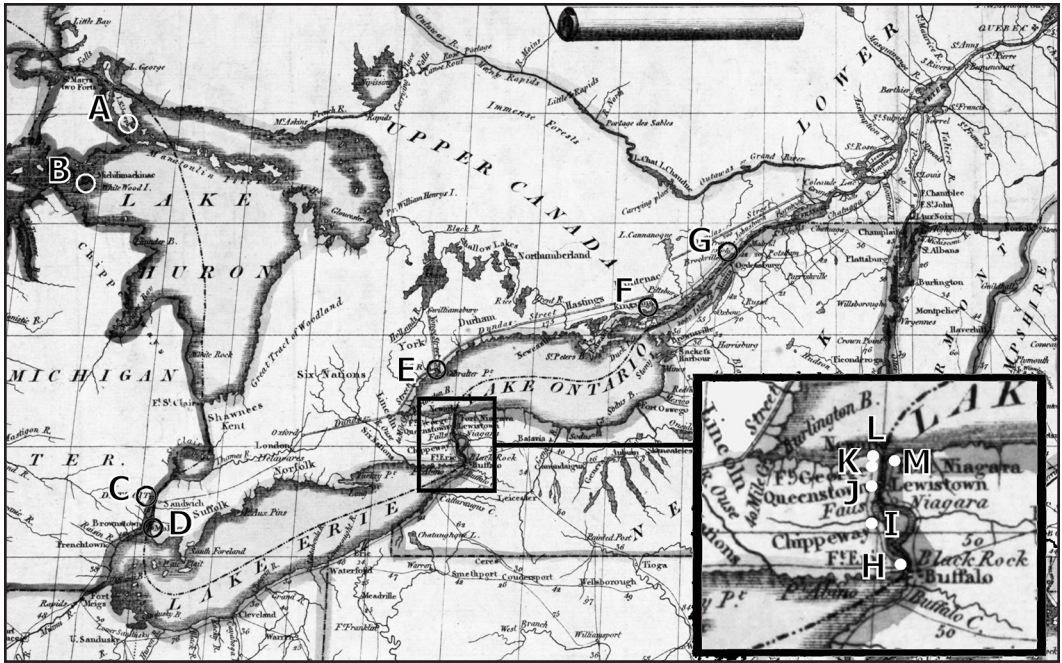


Figure 1. Locations of the major forts along the Great Lakes and St. Lawrence River in Upper Canada, including sites abandoned by the British as the result of the 1794 Jay Treaty: A. Fort St. Joseph, B. Fort Michilimackinac, C. Fort Detroit, D. Fort Malden, E. Fort York, F. Fort Henry, G. Fort Wellington. Inset: H. Fort Erie, I. Fort Chippawa, J. Fort Drummond, K. Fort George, L. Fort Mississauga, and M. Fort Niagara. Locations are superimposed on detail of the *Map of the Seat of War in North America*, John Melish, Philadelphia, 1815. (Figure by author; base map courtesy of Library and Archives Canada [LAC], National Map Collection [NMC], 6770.)

Royal Military Academy at Woolwich, exercises included

A dummy fortress was to be erected 'near the warren of Woolwich ... made of earth and turfed' and consisting of 'two Demi-Bastions, Two Flanks and a Curtain between them, with a Ditch, Ravelin, Covertway, Place of Arms and a Glacis. Every other summer this imposing dummy was to be attacked by students 'under the direction of the Engineers belonging to the Ordnance'. Instruction continued with precision: 'Parallels shall be drawn and Trenches opened. ... Batteries shall be raised by the Besiegers at proper distances and proper places. ... Mines shall be made by the Besieged to blow up the Batteries, and the Besiegers shall also carry on Mines to make Breach'. Meanwhile the mock siege was to be frequently interrupted by 'the Chief master who (shall) ... give lectures and instructions on the reason for the several operations therein performed.' (Glover 1963: 188)

Along with the other students, Mann was instructed in the systems of Vauban, Cohorn, and Cormartagne (Landmann 1852[1]: 69), and saw the work of Vauban firsthand during the

siege of Valenciennes in 1793 (S. Lee 1893: 40–41). Closer to home, Mann was employed in the defenses at Sheerness and Medway, where he would have gained intimacy with the works of Bernard de Gomme, whose demi-bastioned land-front and staggered, waterfront curtain wall protected the dockyard (Saunders 2004: 169–191; Kendall 2012: 35). During the Restoration (1661–1685), de Gomme, in his position as "Engineer of all the King's Charles Castles etc. in England and Wales," and, later, as chief engineer, was instrumental in integrating the Dutch School into British design in an attempt to improve defenses after the Dutch raid on the Thames and the Medway estuaries in 1667 (Saunders 1989: 92, 96; Saunders 2004).

However well versed Mann was in the French and Dutch principles of fortification, his proposed fieldworks in Upper Canada were less than sophisticated. Maintaining the dictum of flanking fire and raking

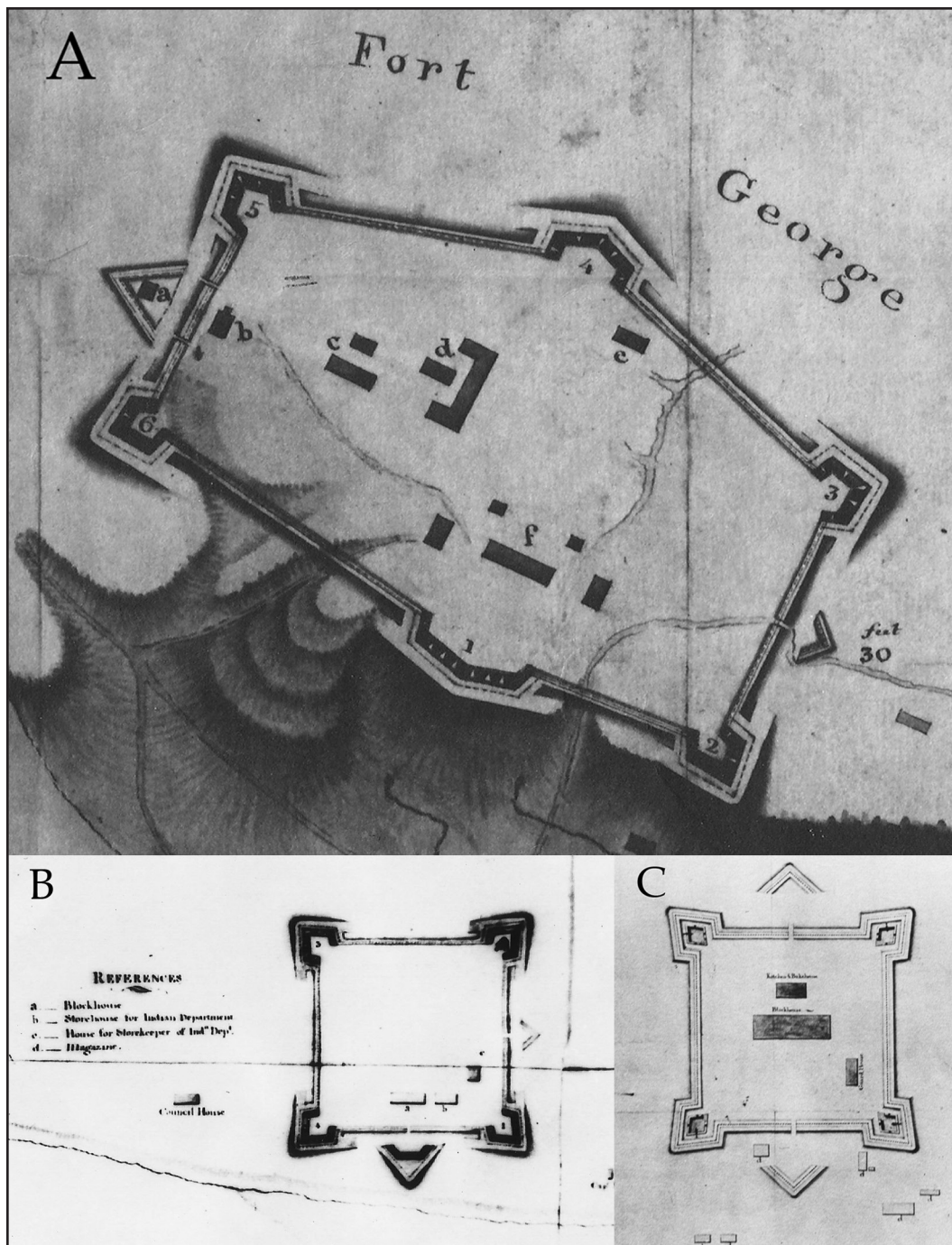


Figure 2. Gothen Mann's fortification designs: A. Detail from *Plan of Fort George Upper Canada Shewing the Works of Defence Order'd to be Constructed 1799*. (Map courtesy of LAC, MNC, H1/440/Niagara/1799/Fort George.) B. Detail from *Sketch of the Post at Amherstburg, Upper Canada with a Plan and Section of the Works of Defence, 1800*. (Map courtesy of LAC, NMC, H1/440/Amherstburg/1800.) C. *Plan of the Post on the Island of St. Joseph in Lake Huron, 1800*. (Map courtesy of LAC, MNC, H2/450/St. Joseph's Island/1800/Military Post).

defense, his designs for Fort St. Joseph and Fort Malden were simple four-bastioned works, devoid of a masking glacis or any outworks. Save for ravelins that guarded the fort entrances, there was little consideration given to defense in depth or the use of cavaliers, crown works, counterguards, or the like (FIGS. 2b, c). Only at Fort George, with its six-bastion trace, did Mann move beyond his more conventional designs (FIG. 2a). But, even at Fort George, the configuration of the fort came as an afterthought, with the bastions working more as independent batteries than as an integrated fortified work.

Prior to and during the War of 1812, defense increased to 11 forts defending the 1,000 mi. (1600 km) border between Upper Canada and the United States. Joining Fort St. Joseph, Fort Malden, and Fort George were Fort Erie II on Lake Erie (1805); Fort Chippawa along the Niagara River at Chippawa (built 1791, but strengthened in 1814); Fort Drummond at Queenston Heights (1814); Fort Mississauga in Niagara-on-the-Lake, then Newark (1814); Fort(s) York at Toronto, formerly York (garrison 1793, blockhouse and palisade 1797, strengthened 1811 and again 1814); Fort Henry in Kingston (blockhouse and battery 1812, enclosed and fortified 1813/1814); and Fort Wellington at Prescott (1813) (FIG. 1). This loose chain of forts was further augmented by the addition of blockhouses and batteries along the Great Lakes and upper St. Lawrence River.

Considering the length of the Upper Canada/U.S. border, surprisingly few forts were constructed. The defense strategy for British North America relied on the premise that the Royal Navy remain the superior force on the North Atlantic, and that Quebec City be the primary defensive stronghold (Hitsman 1999: 8). By concentrating forces in the Maritimes, Montreal, and Quebec, reinforcements could be sent to Upper Canada whenever they could be spared (Hitsman 1999: 8; Dale 2001: 18–19). Sir George Prevost, governor general of Canada, recognized the importance of Quebec and realized the possibility of abandoning Upper Canada. He wrote, on 18 May 1812, to Robert Jenkinson, the 2nd Earl of Liverpool and soon to be prime minister: “Quebec is the only permanent fortress in the Canadas:—It is the Key to the

whole and must be maintained:—To the final defense of this position, every other Military operation ought to become subservient, and the retreat of the Troops upon Quebec must be the primary consideration” (Hitsman 1999: 286). Lieutenant Governor Simcoe argued against such a withdrawal from Upper Canada, maintaining that a strong naval presence on the Great Lakes and on the St. Lawrence at Montreal would bolster the cause, while being the “cheapest mode of defence” (Hitsman 1999: 9). The eventual result was concentrating defenses at Fort Malden, Fort George, Fort York, and Fort Henry, where the Provincial Marine and Royal Navy were established.

During the war all the major forts saw modifications and, for several, total site destruction. Postwar developments varied greatly. Fort St. Joseph was never reoccupied. Fort Malden became an asylum for the incurably insane before being sold off to private enterprise and later was used for public housing. Fort George was remodelled after the war, occupied as Camp Niagara during the First and Second World Wars, and was eventually restored to its pre-War of 1812 configuration. Fort Mississauga became a golf course. Although the trace of the first Fort Wellington remained intact, site alterations during the 1837 Rebellion completely altered its interior. Lastly, the first Fort Henry was greatly impacted by the construction of the second, and remains of both forts were affected by 1930s reconstruction activities. Given the diverse developments seen by these sites, archaeology is well-suited to examine their complex history and assist in the understanding and appreciation of their role during the War of 1812. What has been learned is outlined below.

Determining Site Extent and Alterations

Fort St. Joseph

Crucial to any commemoration is the need to know the location and physical boundaries of the site in question. Given that 19th-century fortifications normally possess well-defined elements that are all easily read on the landscape, one might think War of 1812 sites would require little, if any, spatial “ground truthing.” This was the case at Fort St. Joseph, on the southern tip of

St. Mary's Island and some 385 mi. (620 km) north by water from Amherstburg.

Although portions of the site were cleared of vegetation and levelled by bulldozer in 1948, finding the trace of Fort St. Joseph was relatively straightforward. Using discernible, extant features (the powder magazine, stores building, new bakery, and blockhouse) as a guide to orient the initial test trenching, the fort's layout became readily discernible. Archaeological investigations revealed the fort's trace and internal arrangement to be similar to that depicted in a plan dated 1800 (FIG. 2c). The curtain walls measured 265 ft. (80.78 m) and were constructed of a single line of palisade posts, although documentation states they were of a double-post design. The excavations discovered one of the two ravelins—one may never have been built. Investigations also delineated only a small portion of the ditch enclosing the northeast bastion, suggesting that this defensive feature may never have been completed (Emerson, Devereux, and Ashworth 1977). By 1813 the importance of Fort St. Joseph had waned. Lieutenant Colonel de Boucerville, aide-de-camp to Sir George Prevost, wrote:

St. Joseph in its present state cannot be of any importance. All the serviceable artillery have been transported to Michilimackinac, there still remain four 12-pounders, spiked and without carriages (Emerson, Devereux, and Ashworth 1977: 156.)

Burnt by the Americans in 1814, a modest rebuilding of the stores occurred before the British abandoned the remains of Fort St. Joseph for a station on Drummond Island in 1818.

Fort Malden

Unlike Fort St. Joseph, impacts resulting from heavy urban encroachment and period reconfigurations (by American forces during the War of 1812 and by the British Royal Engineers during the 1837 Rebellion) have masked or removed much of Fort Malden's original 1796 fortification elements (Carter-Edwards 1980: 300-302). This has made it difficult for site visitors to envision the defensive nature of the fort (Parks Canada 1983; Parks Canada Agency 2011). Much of the archaeological and interpretive work undertaken at Fort Malden has attempted to make the site more "readable" to the visiting public (Last 2000: 93-97).

As proposed by Gother Mann, Fort Malden's primary role was to anchor the southwestern defenses of Upper Canada. Similar to Fort George, it began simply as a supply post supporting the Indian Department and the proposed King's Navy Yard. Located along the east channel of the Detroit River, opposite Bois Blanc Island, it was only 17.4 mi. (28 km) south of Fort Detroit—the fort that it replaced. By 1800, it possessed a classic four-sided trace with embrasured corner bastions, faced and revetted with timber. The bastions were connected by a line of pickets, estimated through archaeology as being 450 ft. (137 m) long and partially covered by a raised glacis. A well-developed ravelin, complete with embrasured parapets and supporting palisade, screened the west-face entrance, while another protected the south-face sallyport (FIG. 2b).

Major General Isaac Brock, upon his 1812 visit to the site, issued orders to strengthen the fort and secure the region. What followed was a series of modifications: installation of fraising (inclined storm poles) about the bastions; repair of the gun platforms; replacement of the palisades; and deepening of the ditches (Carter-Edwards 1980: 96-98). With General Hull's capitulation of Fort Detroit to Brock on 16 August 1812, further strengthening of Fort Malden became less urgent.

The fall of Fort George in May 1813 and the buildup of the American navy on Lake Erie placed a stranglehold on Amherstburg. The British held Fort Malden until September 1813, but with Perry's naval victory over Barclay at the Battle of Lake Erie, defense of Fort Malden became untenable. With little recourse, Major General Henry Procter made a hasty retreat, burning the fort as he left.

Evidence of Procter's retreat came to light during investigations on the east flank of the original 1799 northwest bastion. The exposed, charred remains of the bastion's timber revetment, mortised sill plate, and severed palisade bear witness to the thoroughness that Procter gave to razing Fort Malden before his departure (Last 2004: 111-116) (FIG. 3). Although a court martial found him guilty for the manner in which he withdrew up the Thames, archaeological evidence indicates that he made a concerted effort to deprive the U.S. Army of a defensible position at Fort Malden by

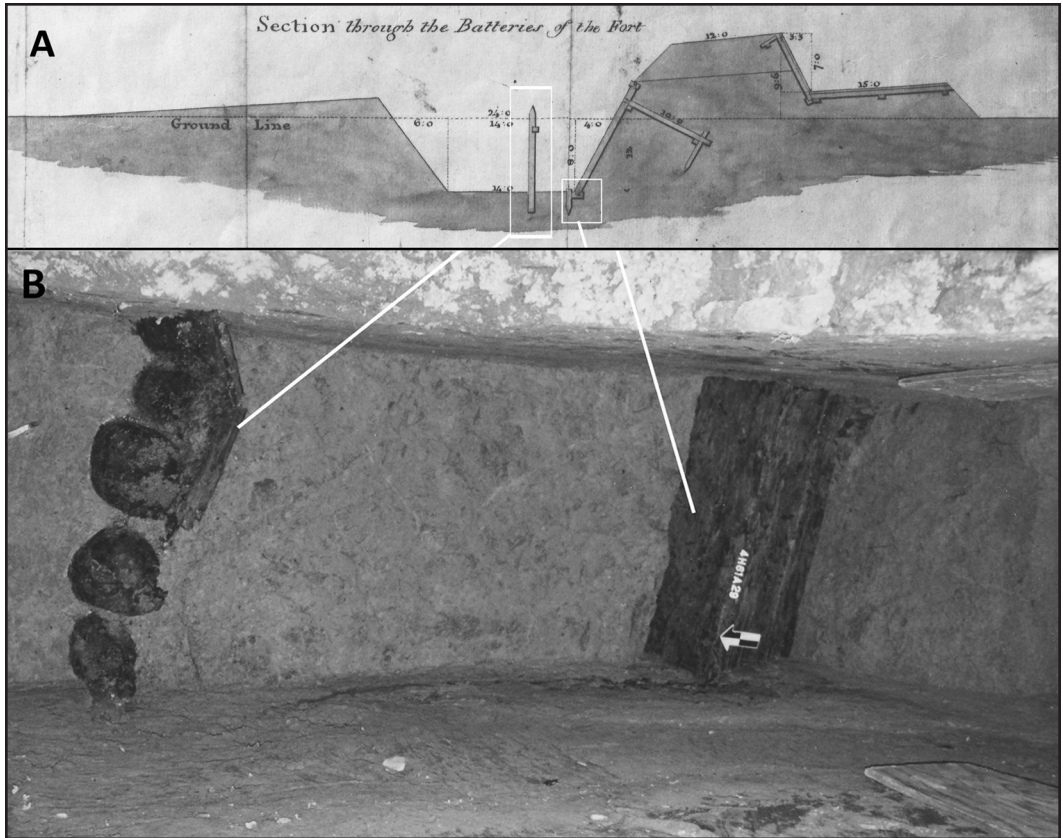


Figure 3. Excavation of the 1799 bastion at Fort Malden: A. Section through the bastion detailing method of construction from *Sketch of the Post at Amherstburg, Upper Canada with a Plan and Section of the Works of Defence*, 1800. (Map courtesy of LAC, MNC, H1/440/Amherstburg/1800.) B. View of the palisade line (far left) and mortised revetment sill plate (right) uncovered in Excavation Unit 4H61A. (Photo by Peter Sattelberger, 2000; courtesy of Parks Canada, Cornwall, 4H-252W.)

burning palisade lines, bastion revetments, fraising, and structures within the fort.

While the wooden defensive elements and structures were raised by Proctor, the bastions and associated ditches remained intact. Upon occupying Fort Malden, the Americans began the process of reworking the burnt site. Duncan McArthur instigated significant changes by reducing the body, or enceinte, of the fort by nearly one half (FIG. 4). Using the existing southwest bastion, he designed a square, four-bastioned work with curtain walls measuring 253 ft. (77 m) and with a demi-bastion projecting from the fort's southeast corner. Besides integrating the original southwest bastion into his design, Duncan McArthur may have employed other elements of the British work. Excavations, in

conjunction with documentary plans, reveal that the Americans did not infill the northern ditch of the earlier fort; neither did the Americans level the 1796 northwest bastion. It is reasonable to presume that McArthur may have used the bastion as a battery to train additional fire power on the northern channel of the Detroit River.

The British, upon their return after the war, never attempted to reinstate the original fort of 1796. Perhaps recognizing the advantages of the smaller work, over time they focused on strengthening the fort that they inherited from the American occupation. Abandoned between 1825 and 1836, the fort was reactivated during the rebellion period. As a result of the rebellion, the ditches were palisaded; the bastion parapets were increased in thickness; additional embrasures were cut to accommodate extra

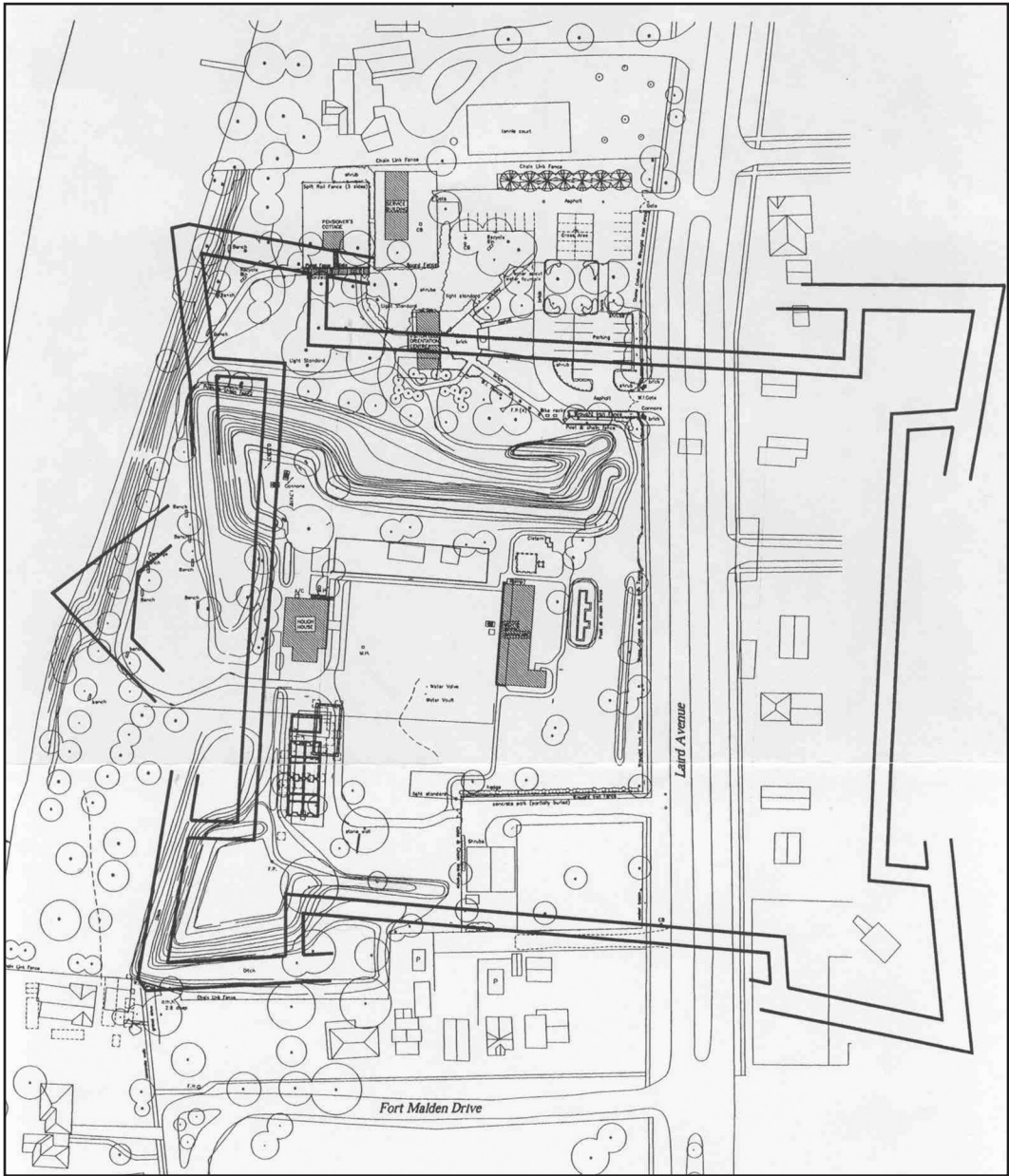


Figure 4. Outline of the 1796 trace of Fort Amherstburg, now Fort Malden (dark solid line), superimposed over the present landscape. Contours of the southwest and northwest bastions of the American and later British fort are clearly visible. (Composite image, "Fort No. 1, Fort Amherstburg 1799 to c. 1802," 1997; courtesy of Public Works and Services Canada, HOFM97/R14.)

artillery in the northwest and southwest bastions; and the demi-bastion was protected by a wood stockade (Carter-Edwards 1980: 183–186). All the while, the trace of the 1813 American fort stayed relatively intact. Although

maintained after the rebellion, Fort Malden was struck from service in 1859, when it became an asylum for the incurably insane.

With archaeological delineation of the 1796 Blockhouse No. 1, the 1798 Indian Department

storehouse, and the 1799 northwest bastion, it was possible to create a scale plan of the 1796/1812 British fort. Importantly, this provided a means by which to compare the relationship between the American and the earlier British work (Public Works and Government Services Canada 1997) (FIG. 4). It also offered a means by which the outline of the 1796 fort could be superimposed upon an aerial photograph of the present town of Amherstburg. The result revealed that the town's suburban development had consumed approximately one-third of the original body of the fort. Consequent to urban sprawl, the northeast and southeast bastions, along with the east curtain wall and powder magazine now lie beneath Laird Avenue, with its bungalows and the General Amherst High School and its gymnasium (FIG. 4).

Archaeology has also provided information necessary for small-scale restoration of the site. This included removal of Hugh House, once the residence of the asylum superintendent, which dominated the southwest bastion, and redefining the bastion ditch to recreate the 1796/1812 landscape. Investigations also provided information for the delineation of the south and west curtain walls, 1796 blockhouse, and 1798 Indian Department storehouse to increase understanding of the fort configuration and layout.

Fort George

Perhaps the greatest challenge encountered on Parks Canada War of 1812 sites is defining the numerous period construction and repair phases and establishing which are British and which are American in origin. Adding to the multifaceted nature of the sites' evolution, especially at Fort George, is the 1930s reconstruction effort that displaced historical deposits and significantly altered the cultural landscape.

The archaeology at Fort George is perhaps the most complex and serves well as an example regarding site formation. Save for the ravine that shelters the powder magazine, there is little in the present landscape that suggests the nature of the fort's original terrain (FIG. 5). This is due to the methods employed in carrying out the 1921 recommendations of Historic Sites and Monuments Board of Canada that Fort George be restored (Haldorson 1991).

Armed with only a handful of plans, Ronald Way, a 28-year-old Queen's University

graduate in history, accepted the daunting task of overseeing the project and its research (Way 1973). The Brennan Paving Company undertook the reconstruction employing the same heavy equipment that they used to build the Queen Elizabeth Way, the landmark thoroughfare joining Toronto to Fort Erie. In their efforts to reshape the site to its 1796 configuration, the center of the parade as well as the southern remnants of the British 1814/15 work were scoured and pushed to the south. Consequently, the above-grade relationship between the original 1796 work and that of the American/British remodeling was not only obscured, but eradicated. Another result of the grading was an infilling of the three natural gullies that once truncated the southern interior of the fort.

Since 1973, the understanding of the defensive evolution of Fort George and the attempts of engineers, both British and American, to work the imperfect terrain has emerged (Last 1998: 93–94; Mills 1998: 98–101; Sattelberger 2004). To date, five Fort Georges superimposed upon each other have been documented. They are, in sequential order: the 1796 British Fort George, the 1812/1813 British modifications, the 1813 American Fort George, the 1814/1815 British Fort George, and, lastly, the 1937/1940 reconstruction. While modifications from 1812 on have made impacts upon previous works, elements of each are detectable in the archaeological record.

In 1796, Gother Mann initiated the construction of Fort George. Situated on the west bank of the Niagara River and only 0.7 mi. (1.1 km) from the relinquished American Fort Niagara, Fort George sat on a rise of land overlooking Navy Hall and the Provincial Marine. Begun simply as a supply depot, it was not until 1802 that Lieutenant Colonel Bruyres had the fort's six timber-faced bastions, then batteries, enclosed by a double-lined, loop-holed palisade. A shallow dry ditch formed the outer line of defense, as did two palisaded ravelins. One protected the north-gate entrance, while the other covered the exterior octagonal blockhouse to the south. Excavation revealed that Mann's design for a two-story, machicolated blockhouse was used not only at Fort George, but also at Fort St. Joseph and at Fort Malden. The joinery used in the palisade deadman anchoring

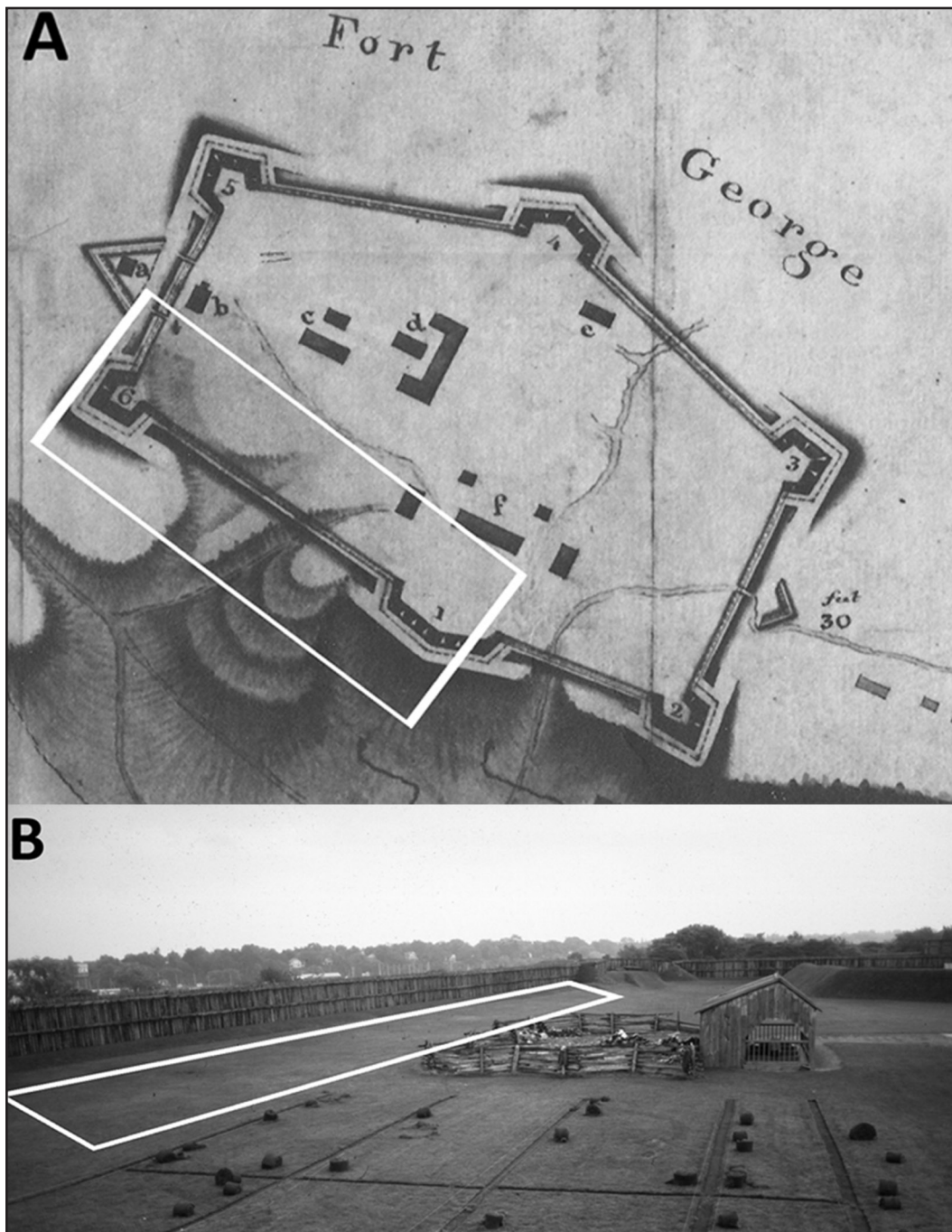


Figure 5. Reconstruction alterations to the Fort George landscape from the 1930s: A. Gullies truncating the south curtain of the fort, outlined with a rectangle, are evident in this 1799 plan of Fort George, *Plan of Fort George Upper Canada Shewing the Works of Defence Order'd to be Constructed 1799*. (Map courtesy of LAC, MNC, H1/440/Niagara/1799/Fort George.) B. Present view of the same area, showing the uniform elevations resulting from the 1930s infilling of the terrain. (Photo by author, 1984; courtesy of Parks Canada, Cornwall, 19H-1454T.)

system, as well as the revetment construction for the bastion flanks and faces, is also the same in the other forts.

The shape of the first Fort George was reminiscent of an earlier Fort George designed in 1747 by Colonel William Skinner, R.E., at Ardesier, near Inverness (Hogg 1981: 132; Hughes 1991: 138–139). Built after the Jacobite uprising of 1745, it was considered one of the most imposing works of its time and the last of the major fortifications constructed in Great Britain for almost a century (Hughes 1991: 139). Familiar to military engineers, it is quite possible that its shape influenced Gother Mann's design of Fort George. While both share a similar trace, the Scottish counterpart was constructed of stone, with permanence in mind. The Upper Canada fort was an earth and timber product built on a much-reduced scale.

Similar to Forts St. Joseph and Malden, Fort George lacked defensible curtain walls and, save for the immediate area around the bastions, was devoid of a protective glacis. In addition, its location was governed more by the presence of the Merchant Marine than by strategic defensive concerns. Sited above Navy Hall, the fort could neither command the mouth of the Niagara River nor provide protection to the town of Newark (Flemming 1982: 7).

In his 1811 "Report of the State of the Fortified Posts in Both Canadas," Lieutenant Colonel Bruyères denounced the fort as a work "very much out of repair, and its situation and construction very defective, and can not be considered capable of much defence." (Allen 1974: 72). Bruyères's views were shared by Lieutenant General Sir George Prevost, who also saw it as an untenable work (Hitsman 1999: 284).

Besides uncooperative terrain, which included three deep gullies along its eastern front, Fort George's greatest failing was its size—measuring 920 × 527 ft. (280.4 × 160.6 m) at its widest point. Too large to defend, Bruyères recommended reducing the southeast front of the fort (Desloges 1980: 36). The British retreated from Fort George before Bruyères could execute his plan in full. However, he was able to construct a cavalier battery to gain elevation over the American Fort Niagara and raise a defensive curtain along the fort's river side. Archaeological investigations revealed that Bruyères employed earth-filled

cribbing as a breastwork, rather than a palisade, to strengthen the defenses south of the central bastion (FIG. 6). Associated strata, in the form of ash and highly oxidized soils, were also present. Created during the bombardment of Fort George, they provide an evocative insight into the severity of the American artillery attack during the opening phases of the Battle of Fort George, which began at 6:10 AM on 25 May 1813 (Last 2006b: 101–109).

After the American capture of Fort George on 27 May 1812, Captain Joseph G. Totten of the Army Corps of Engineers began the task of renewing its defenses. Using the northern portion of the fort, he reduced the body of the work to almost half its original dimensions. This smaller plan excluded the undulating terrain and gullies that were once within the palisaded enclosure of the first fort. The two southernmost bastions, now outside the ramparts of the American Fort George, were left standing and not leveled. They acted as outlying batteries defending the southern approaches.

Totten threw up earthen ramparts to enclose the fort and further defended it with a ditch. Although not a permanent work, Totten's design could withstand cannon bombardment if it should come from British landward batteries. A graduate of West Point, Totten was trained under the French system of fortification, as was the custom of that academy. He relied heavily on the bastion defense to provide enfilade fire and remodelled Fort George into an effective five-bastioned work.

Excavations have uncovered the remains of his ditch truncating the earlier British Blockhouse No. 2 (Wilson and Southwood 1976: 46–52; Last 2009: 79–85) (FIG. 7). This provided archaeologists a means by which to delineate the physical relationship between the British and American forts (FIG. 8). The excavations also unearthed one of the largest American deposits, broadcast upon the newly formulated southern glacis.

Totten also extended the defenses of Fort George to the northwest with a trench line and associated batteries that enclosed the U.S. Army's camp, which had a population of up to 4,000 men (M. Coleman 1977: 40). Described on the 1816 plan of Fort George as "American Entrenchments thrown up in 1813" (FIG. 9), the defensive line ran north from the northwest bastion of the fort for a distance of approximately 656 yd. (600 m)

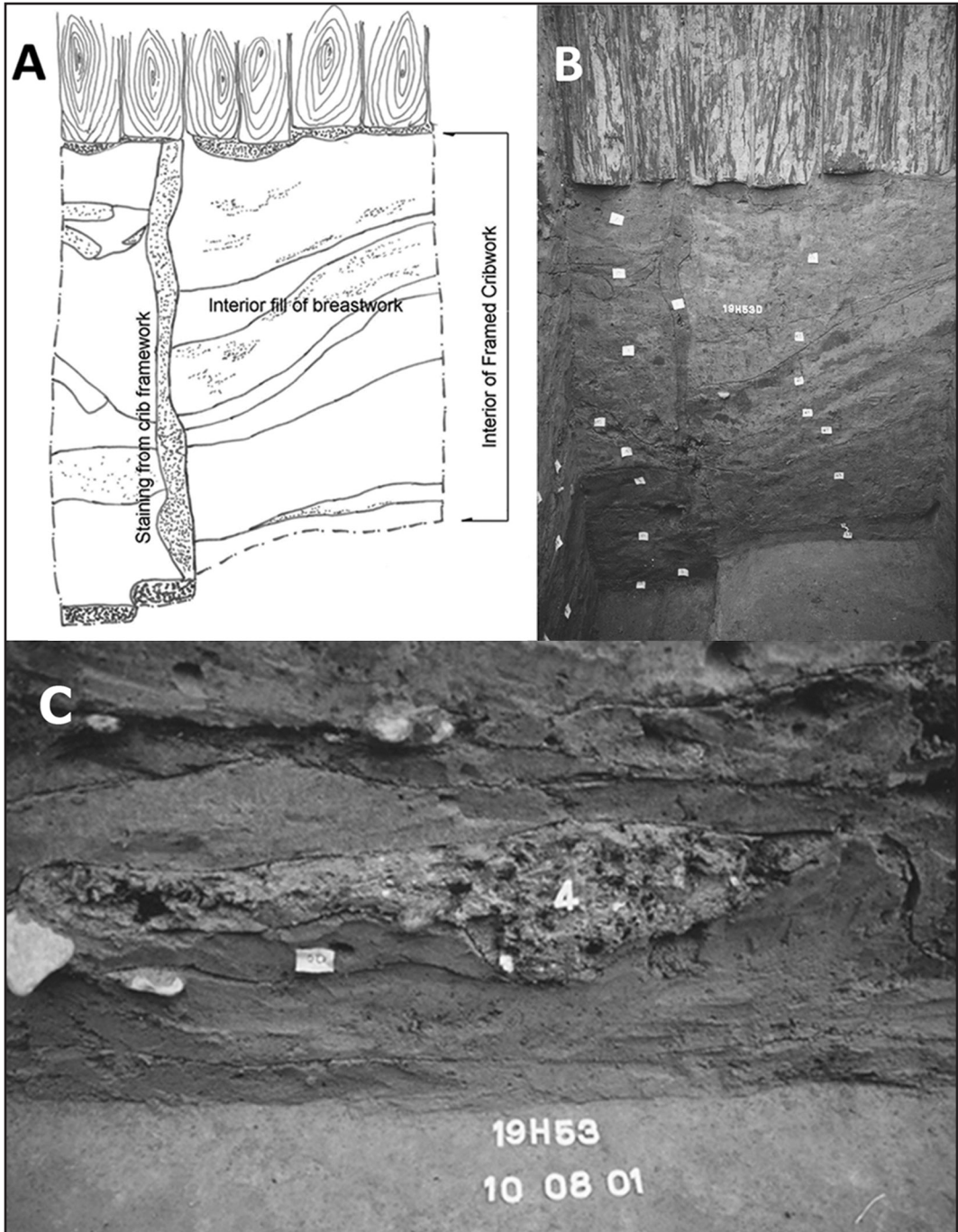


Figure 6. Archaeological evidence of Lieutenant Colonel Ralph Bruyères's cribbed breastworks at Fort George, with associated ash deposits: A. Line drawing of the east wall of Excavation Unit 19H53D showing the silhouette of the 1812/1813 breastworks along the east curtain wall. (Drawing by author, 2001; courtesy of Parks Canada, Cornwall, 19H-01-19H-D2.) B. Photograph of the same excavation unit, 19H53D. (Photo by author, 2001; courtesy of Parks Canada, Cornwall, 19H-223T.) C. Detail of ash deposit (Lot 19YH53D4) on the gully floor adjacent to breastwork. (Photo by Rachel Brooks, 2001; courtesy of Parks Canada, Cornwall, 19H-2216T.)

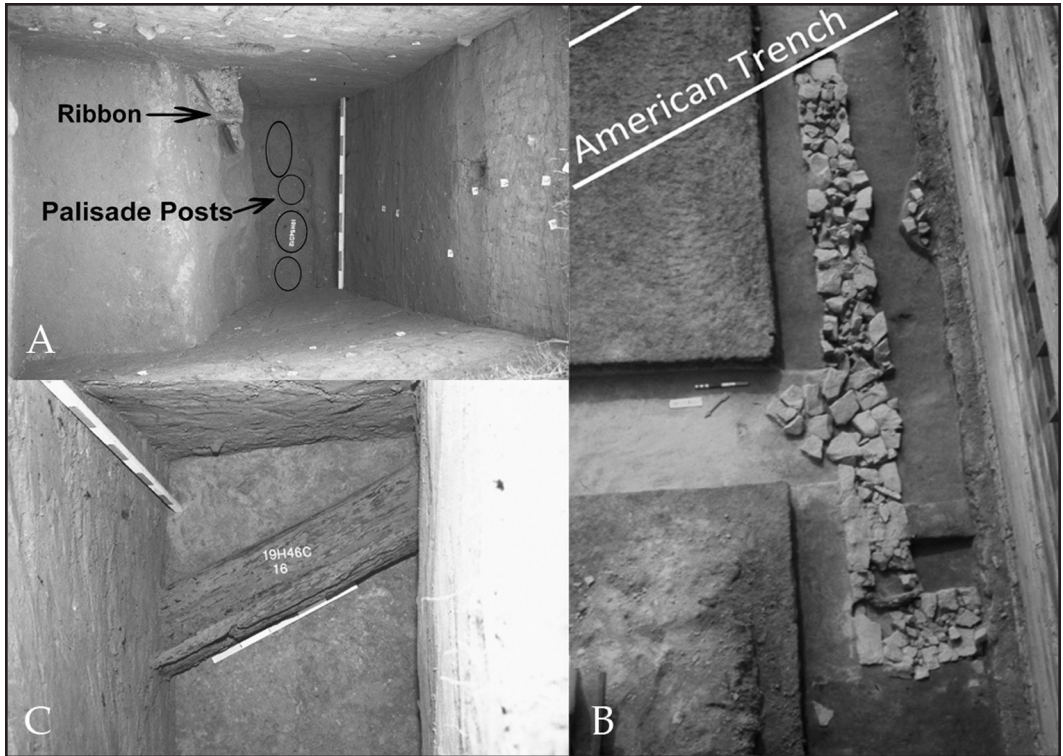


Figure 7. The 1813 American defensive ditch at Fort George: A. Palisade line (circled in black) with supporting ribbon found in Excavation Unit 19H54D. (Photo by author, 2002; courtesy of Parks Canada, Cornwall, 19H-2364T.) B. View of the east wall foundation of Blockhouse No. 2 in Excavation Unit 19H8X, showing its truncation by the 1813 American defensive ditch. (Photo by John P. Wilson, 1974; courtesy of Parks Canada, Cornwall, 19H-417T.) C. View of mortised log/sill plate lying on the 1813 ditch floor in Excavation Unit 19H46C. (Photo by Stephen Mills, 1996; courtesy of Parks Canada, Cornwall, 19H-650M.)

before turning east toward the Niagara River for an additional 131 yd. (120 m) (FIG. 9a). This was a most expedient method of landward defense and became a hallmark of the American reworking of both Fort George and Fort Erie.

At Fort George, mitigation for a proposed parking lot provided the opportunity to explore the nature of the American entrenchments (Last 1997: 98–101). Little of the protective parapet associated with the scarp face of the line is evident today. However, inspection of the depth of the ditch suggests that the parapets, constructed from the excavated spoil of the entrenchment, would have attained the height of common breastworks (FIG. 9b). Although documents state that the American entrenchments were palisaded, no indication of this was found within the limited area tested. Fortunately, portions of this defensive line, including a battery, remain untouched and await investigation.

British shrapnel and canister shot, recovered just meters from the American line, soberly document the constant and harassing danger confronting the American garrison occupying Fort George. Of this situation, Dr. Lovell, assigned to the American 9th Regiment of Infantry wrote:

The enemy's advance being within a short distance of the camp, the details for duty were large, the skirmishes taking place at the piquets every morning; the soldiers were, for a length of time, stationed at several works, for several hours before day-light. (Mann 1816: 67)

Hemmed in by enemy fire, their number was reduced by casualties and by sickness. As surgeon James Mann wrote:

After landing at Niagara, the men, in many instances, were attacked by typhous fever; which became more frequent after the capture of Fort George. ... During the month of August, an uncommon portion of the army were sick or unfit



Figure 8. Overlay of the larger 1796 Fort George with that of the 1813 American work based on recovered remains of the defensive ditch that truncates Blockhouse No. 2. (Composite image by author, 2014, using National Air Photo A30426-7.)

for duty. More than one third of the soldiers were on the sick reports. The officers shared with the privates, in the prevailing diseases. Half of the medical staff attached to the regiments, were also unable to perform their duty. Of seven surgeon's mates attached to the hospital department, one died, three had leave of absence, by reason of indisposition; the other three were, for a short period, sick. (Mann 1816: 63, 66)

How many were buried within the precinct of the camp entrenchments and how many were transported back to Fort Niagara is unknown, as is the layout and nature of their encampment.

In 1814, the British returned to Fort George and, just as at Fort Malden, worked within the design they had inherited from the Americans, "reforming the western and southern fronts" (Desloges 1980: 47). While the intent to retain Totten's design could be attributed to the

realization of its effectiveness, other factors may have been at play. As Lieutenant Colonel Gustavus Nicolls, commander the Corps of Royal Engineers in Canada (1815–1837), commented: "I am of the opinion that its site is much inferior to that of Mississauga Point, I would recommend that what should further be done, should be to level the old works to the southward and eastward and to secure it from assault without going to any great expense" (Desloges 1980: 47).

Rethinking Defense: New Designs During the War

Fort St. Joseph, Fort Malden, and Fort George were designed by Gother Mann 16 years before the War of 1812. Constructed primarily as supply depots and rendezvous points, their defensive

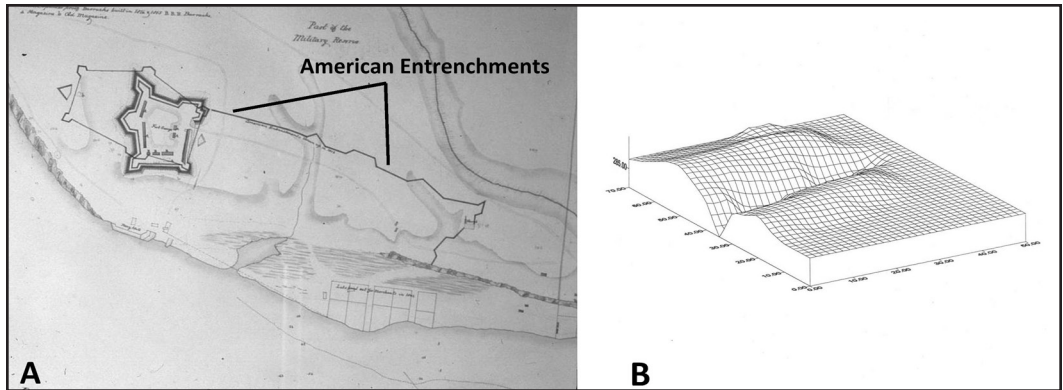


Figure 9. The American entrenchments at Fort George: A. Detail of *Fort George Part of the Military Reserve*, showing the extent of the American entrenchments thrown up in 1813. (Map courtesy of LAC, MNC, V3/440/Niagara/1816.) B. Model showing section through American entrenchments. (Drawing by author, 1995, courtesy of Parks Canada, Cornwall.)

strength evolved as war approached. As “inherited” works, Fort George and Fort Malden saw significant changes to their traces, as engineers reduced the bodies of the forts to a more manageable and defensible size. In response to the need for stronger defense along the Niagara and St. Lawrence rivers, three additional forts were constructed: Fort Mississauga, Fort Henry, and Fort Wellington.

The principle defensive objective of Fort Mississauga, at Mississauga Point, Newark, was to work in concert with Fort Niagara (now in British hands) to control the mouth of the Niagara River. Fort Henry replaced a wooden blockhouse on Point Henry, Kingston, with the purpose of guarding the Royal Navy Dockyard on Navy Bay, just 437 yd. (400 m) to the west. Built along the St. Lawrence River at Prescott, Fort Wellington’s primary function was to protect the shipping and transport line between Upper Canada and Montreal. These sites, designed and constructed during the pressures of war, provide a fascinating variety of contemporary fortification theory. While they can all be classified as fieldworks, they represent flexibility of design. Taken together, they present a blend of British tradition of the fortified keep with French principles of fortification.

Fort Mississauga

With the thought of denying another American beachhead on the Niagara, plans for the construction of Fort Mississauga began in late 1813. As envisioned by Sir George Prevost, the work would be “a Tower within a strong

redoubt” (Flemming 1982: 10). In its final design, it amalgamated a defensible brick tower with an earthen, irregular, star-shaped trace. While not completed until after the war, its design indicates a movement toward compact, self-supporting works (FIG. 10).

Both the use of a stellar trace and tower are curious. The star-shaped earthworks were a rarity in Canada with Fort Mississauga being the only one ever constructed in Upper Canada. An integral element of the star-shaped trace is the acute-angled bastion. Used both in Italian and Spanish works, opposition to them arose by the mid-16th century. The primary concern revolved around the restrictive nature of the bastion gorge, which hindered the movement of guns, carriages, and troops; the reduced size of the salient for mounting guns; and that acute-angled bastions were more susceptible to breaching by besieging batteries (Pasley 1817: 315–320). Francesco Laparelli was one of the first to suggest that the minimum angle for the salient should be 60° (Hughes 1991: 96); most other engineers and theorists followed suit.

The reason to employ this trace at Fort Mississauga may lie in the fact that the bastions provided additional flanking fire required to defend against another river assault similar to that which was launched during the 1813 Battle of Fort George. This suggests the royal engineers were willing to sacrifice some firepower from the salient of the bastions (which would be offset by the terreplein of the tower) to inhibit an amphibious assault.

Perhaps the use of star-shaped traces came from news from Portugal, where Lieutenant

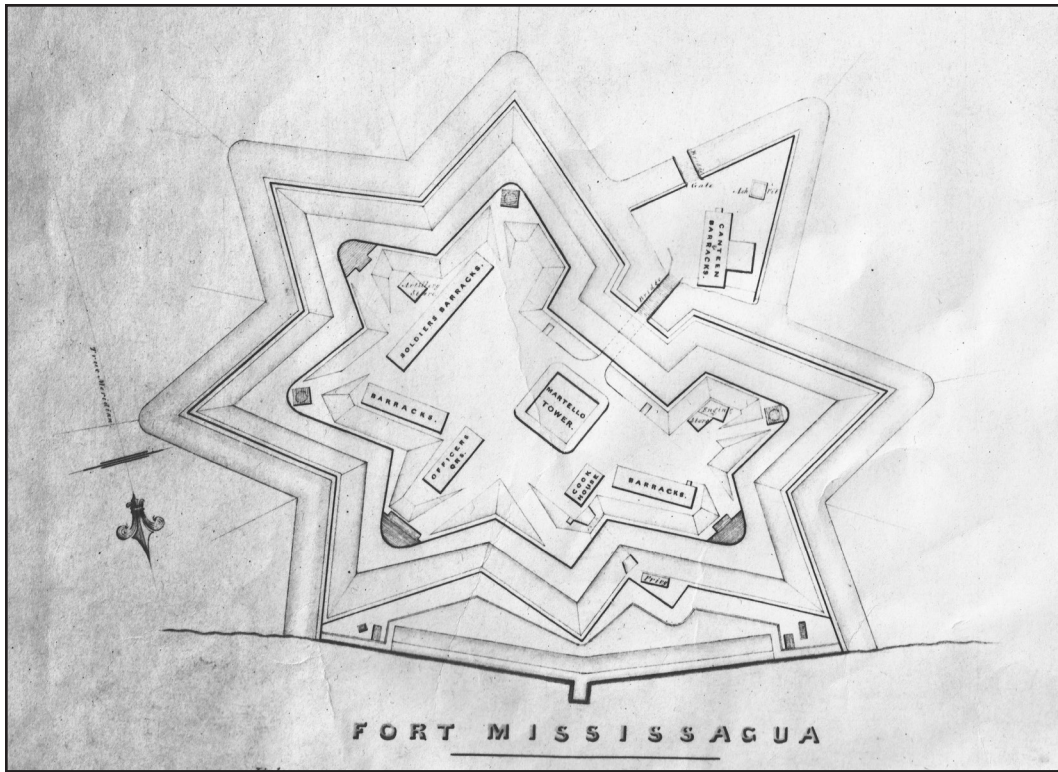


Figure 10. Fort Mississauga, from detail of *Canada Niagara Verification Plan Shewing the Boundaries as Marked on the Ground of the Military Reserves ... 1852*. Note: The ravelin guarding the fort entrance did not exist in 1814. It was added later, in 1838. (Map courtesy of LAC, MNC, B 440/Niagara/1853.)

Colonel Sir Richard Fletcher, Wellington's commanding engineer, had used a very similar trace for several of the redoubts forming the Lines of Terra Vedras (Jones 2010: plate 23). However, in Portugal their construction was eventually rejected: "Even when ... some flanking fire was gained, the angle formed by the faces [was] generally so obtuse, that it demanded more coolness in the defenders than ought reasonably to be expected, to aim along the ditch of the opposite face." (Jones 2010: 71).

While the star-shape trace had, perhaps, outlived its time, the plan for a tower had not. As early as 1778, British Royal Engineers pondered the use of towers for the defense of the Channel Islands. General Conway, governor of Jersey and former lieutenant general of ordnance, proposed the erection of 30 towers, pointing out their suitability in coastal locations (Sutcliffe 1972: 37; Grimsley 1988: 13, 17; Grundy 1991: 27). In 1803, the Committee of Royal Engineers, summoned to the Rochester

Conference by the privy council, supported the construction of 103 towers along the south and, later, the east coast of England (Grimsley 1988: 15). With this decision, Britain began an unprecedented tower-building campaign that would touch every corner of the British Empire—from the United Kingdom to Australia, and from India to Canada. (Clements 2011: 216–219)

In 1808, Sir James Craig, governor general of British North America, had Lieutenant Colonel Ralph Bruyères initiate improvements to the defenses of Quebec City previously proposed by Gother Mann (Clements 2011: 122–124). As part of his plan, he had four martello towers constructed on the Plains of Abraham (I. Saunders 1976: 27–34). In Upper Canada, Captain Marlowe, R.E. oversaw the construction of two stone towers at Fort Henry in 1813. Although no longer extant, documentation shows that they were very similar to the tower erected at Fort Mississauga one year later. Unlike the Quebec towers, they were not



Figure 11. Investigations at Fort Mississauga: A. Examining the entrance passageway and parade with Excavation Units 8H25A, 8H25B, 8H25E, and 8H25F. (Photo by author, 1997; courtesy of Parks Canada, Cornwall, 8H-40W.) B. Detail of the beach-cobble parade surface in Excavation Unit 8H25H within the enceinte of the fort. (Photo by author, 2013; courtesy of Parks Canada, Cornwall.)

martellos, since their footprints were square. It is difficult to discern where the design of Fort Mississauga Tower originated, although it might have been influenced by the early French square *tour réduit* or later Napoleonic *tour modèle* (Hughes 1991: 146). Regardless of its pedigree, the Fort Mississauga tower, like its associated earthworks, remains unique to Upper Canada fortification.

Although archaeological investigations at Fort Mississauga have been minimal, they, nonetheless, have provided insights into the present condition and method of construction of the powder magazines, the sallyport, passageway walls, tower, and parade (Last 1999: 124–130) (FIG. 11); of interest are the findings from the latter. Commonly, the soils used to construct the ramparts of a fort come from the spoils of the excavation of the outer defensive ditch. In accordance with the dictum, the height of the ramparts equals the depth of the ditch. At Fort Mississauga, the earthworks were initially thrown up without a perimeter ditch (McConnell 1977: 14). So, how were they constructed? The answer is simple: investigations revealed that much of the material employed in the formation of the ramparts came from the scraping of the fort interior. In each excavation unit of the fort parade, the original A and B horizons were absent. While fashioning the ramparts, Lieutenant Friederich de Gaugreben, R.E., who oversaw the construction, had all the sod and B horizon removed down to natural C-horizon

clay and incorporated the material into the protective earthworks. On this natural deposit, within the enceinte, he embedded a layer of water-worn beach cobbles (FIG. 11b). Smaller pea gravel filled the interstices of the larger cobble, creating a densely compacted surface that is believed to cover the entire fort parade.

Excavations of the brick powder magazines revealed that, following good practice, each was built as a chamber within a chamber. This created a narrow passageway between the two that acted as a ventilation corridor and helped suppress harmful effects of dampness. Similarly, investigations within the tower documented the remains of an expense magazine. Here, ventilation was enhanced through the use of brick piers that supported the raised floor, while creating air channels beneath the magazine. As is common practice, wall vents also were present to aid in reducing moisture.

Fort Henry

By 1813, Captain Marlowe, R.E., reported that work on Fort Henry, close to the Royal Navy Dockyard at Kingston, was well underway. Measuring 710 × 500 ft., it was the largest British fort constructed in Upper Canada during the war. More sophisticated than either Forts St. Joseph or Malden, its trace incorporated more elements of French design and, particularly, Vauban's "First Method" of defense (Hughes 1991: 121). The

north front was defended by two demi-bastions and a large ravelin that guarded both the main entrance and the entire north curtain wall. Located centrally along the west and east curtain walls were two redans providing flanking fire. A half-moon battery was positioned along the south water-facing front. A ditch encircling the work was proposed, but, according to documentation, never fully realized. The fort saw several building programs from 1815 to 1832, when Lieutenant Colonel J. Ross Wright was charged with executing a new overall design.

Royal engineers commonly modified extant works to rectify perceived defensive failings. As a cost- and time-saving measure, they often incorporated earlier elements into later designs, such as at Fort Malden and Fort Wellington during the 1837 Rebellion-period

alterations. Prior to archaeological investigations at Fort Henry, it was presumed that some features of the 1812 fort may have been refashioned into the second and, thus, potentially be preserved. Excavation proved that to be an incorrect assumption. The archaeological recovery of two postwar structures: the 1820 officers' barracks and the 1819 powder magazine (Bazely 1996: 50–52; Cary 2006: 7–8), in conjunction with an 1833 progress plan submitted by Wright, provided the necessary overlay to determine the relationship between the first fort and the second (FIG. 12). Unfortunately, it revealed that most of the northern half of the War of 1812 fort was lost during the construction of the present, 1832 redoubt. This included the original wooden blockhouse and its replacement—a two-story masonry tower—along with an

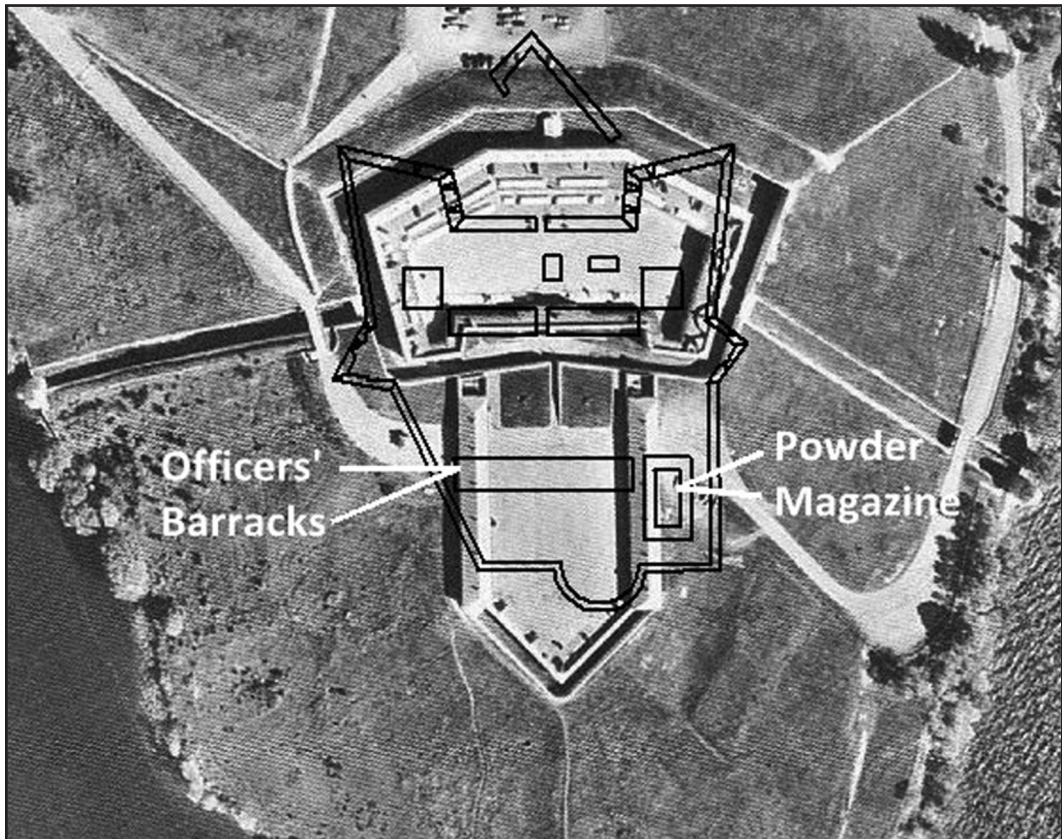


Figure 12. Overlay of the present (1832) Fort Henry with that of the 1812–1829 work, based on recovered remains of the officers' barracks and powder magazine. (Composite image by Henry Cary, 2003, using National Air Photo Library photo A28143-46; courtesy of Parks Canada, Cornwall, RDO-383E.)

additional stone tower constructed in 1815 (Cary et al. 2005: 1–12; Cary 2006: 7–9; Last 2006a). The overlay also demonstrates that most of the southern half of the 1812 Fort Henry remains entombed under the asphalted surface of the Advanced Battery. Besides the demi-lune battery, several structures and latrines dating to the 1820s potentially exist.

Fort Wellington

As the war progressed, the British began to employ different fortification designs. Without the need to breathe new life into an existing work, Lieutenant Friederich de Gaugreben had a free hand in establishing a redoubt on a knoll overlooking the St. Lawrence River and a small waterfront battery at Prescott. The siting of the fort was driven by strategic concerns. Only 1.1 mi. (1.8 km) across the river from the American settlement of Ogdensburg, it commanded the most vulnerable point above a series of rapids on the main supply route. Regarding the importance of the location, Sir George Prevost wrote to Robert Jenkinson, the 2nd Earl of Liverpool, on 18 May 1812:

The Americans have Posts in the vicinity of Kingston, not only opposite, but both above & below with good Harbours, which are open to the resources of a very populous Country:—in the event of hostilities it will be indispensably necessary for the preservation of a Communication between the Lower and the Upper Province, to establish some strong Post for the Regulars and Militia, to secure the Navigation of the St. Lawrence above the Rapids to Lake Ontario. (Hitsman 1999: 285)

Given the need to guarantee the defense of this crucial transportation link, the pressure was on Gaugreben to design a work suitable for the task at hand. What he devised was a fort like none other constructed during the war. Fort Wellington, with its bastion-less trace, broke with contemporary design, being more in line with early English Civil War sconces or Prussian redoubts (FIG. 13). The latter should not come as a surprise, since Gaugreben was attached to the king's German Legion. Fort Drummond and its associated redoubt at Queenston Heights, both built in 1814, were the only other works thrown up in Upper Canada with a bastion-less trace.

The genesis for these works may have come from the influence of Bernard de Gomme, staff

officer to Prince Rupert. He helped introduce the sconce to England when acting as chief engineer and quartermaster general for the Royalist Army during the English Civil War (A. Saunders 2004). As a simple earth-and-timber redoubt, it could resist siege, withstand artillery fire, and, importantly, maximize speed and economy of construction (Duffy 1996: 90; Swart 2013: 53).

Similar fieldworks were widespread on the Continent as small earthworks to complement the defense of larger works or to augment saps and batteries during siege (Saunders 2004: 44). While many were built with bastions, many were not, acting primarily as batteries and outworks. The sconce became the undisputable backbone of Royalist defense during the English Civil War of 1642–1651, when more than 184 known earthworks were thrown up (Harrington 1987: 49–60; 2003: 26–34). In 1810, Wellington would revive its design during the Peninsula War, when he instructed Lieutenant Colonel Sir Richard Fletcher to begin construction of the Lines of Torres Vedras. Integral to the plan was the construction of 152 irregularly shaped redoubts, designed primarily as artillery strongpoints, forming a series of three defensive lines running from the Atlantic coast to the shores of the River Tagus (Hughes 1987: 63–67; Fletcher 2003; Jones 2010).

When completed, Fort Wellington contained a single-story blockhouse centrally located within an enceinte defined by timber-faced ramparts. Archaeology found the revetment to consist of 16 in. (41 cm) squared pine timbers, set 4 ft. (1.2 m) below grade on a steep 80° angle. Although bastion-less, a redan defended its northern front, providing artillery cover to the northeast and northwest approaches. Fort Wellington had only a shallow, 3 ft. (1 m) deep ditch and no palisaded defense. While archaeological investigations have revealed that the glacis was modified, the reshaping of the original terrain was modest at best.

Besides the blockhouse, the casemates or “slinter proofs” were the predominant features of the fort (FIG. 14a). The presence of casemates at Fort Wellington is of some interest, for they were not a typical component of Ontario fortification. During the War of 1812, the British employed casemates sparingly, and then only in the gorge of a bastion, such as at Forts George and Erie. Archaeological investigations have examined the robust nature of the

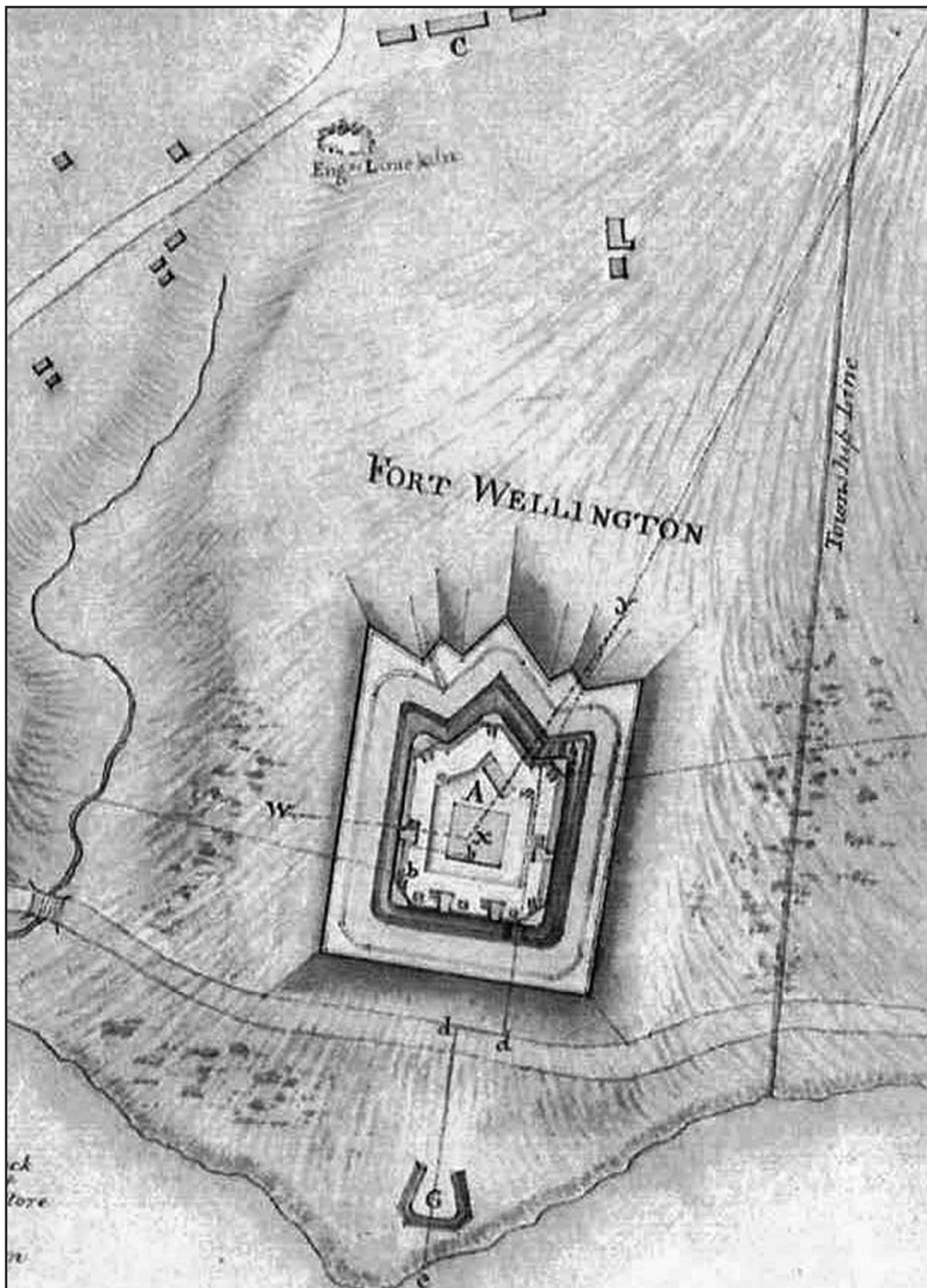


Figure 13. Detail of *Plan of Fort Wellington Upper Canada*, prepared by Lieutenant Joshua Jebb, R.E., 1816. (Map courtesy of LAC, NMC, VI/450/Prescott/1816.)

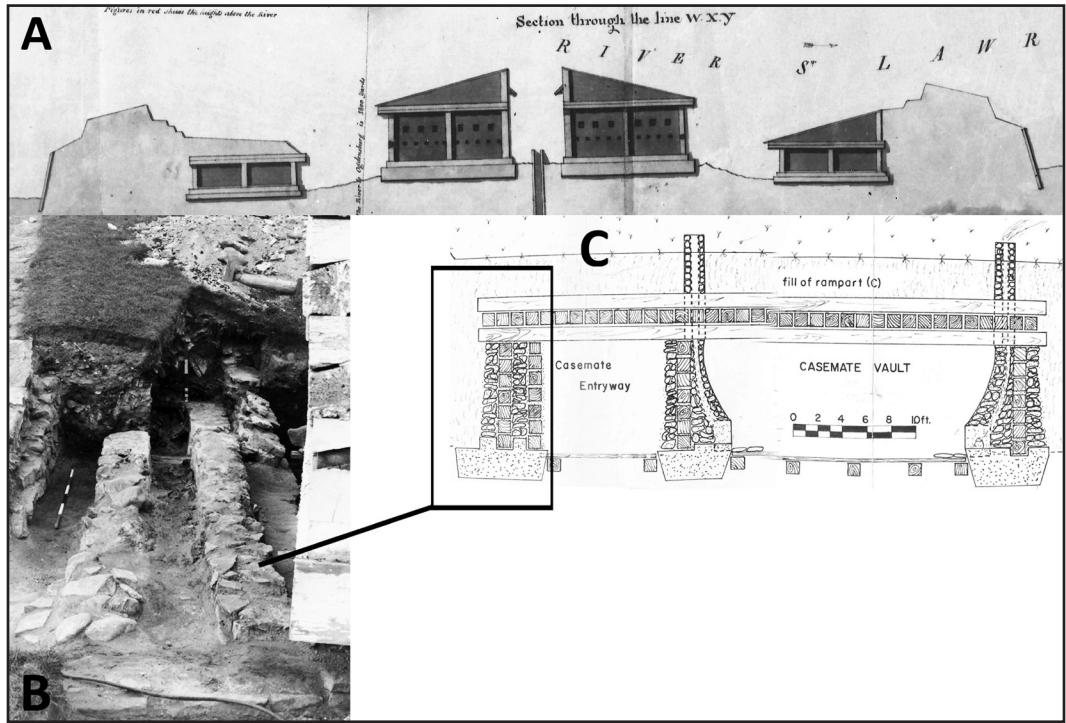


Figure 14. Casemate walls uncovered at Fort Wellington: A. Section through the casemates at Fort Wellington from *Plan of Fort Wellington Upper Canada*, prepared by Lieutenant Joshua Jebb, R.E., 1816. (Map courtesy of LAC, NMC, VI/450/Prescott/1816.) B. Remains of the casemate wall revealed in Excavation Units 2H28A, 2H28B, and 2H29A. (Photo by Steven Baker, 1968; courtesy of Parks Canada, Cornwall, 2H-2H243M.) C. Conceptual drawing of casemates derived from excavation, entitled: "Comparative Historical and Archaeological Section of Casemate near Entrance of Fort Wellington circa 1816." (Drawing by Steven Baker, 1968; courtesy of Parks Canada, Cornwall, 2H2H-68-104-7.)

casemate construction. The walls were a composite construction of stone and timber cribbing that supported a ceiling of interlaced timber and hard-packed clay. The roof of the casemates also functioned as the terreplein, or platform, for the guns. Prior to archaeological investigations, the only technical reference regarding their construction was an 1816 section plan. It depicted the casemates as log chambers safely embedded within the compacted soils of the ramparts. Although accounts detail problems of leakage and dampness, and described them as unfit, excavations reveal them to have been of sound construction and probably effective as bombproof shelters (Baker 1971; Last et al. 1985) (FIG. 14b).

The timber casemates ran along the east, south, and west curtains of the fort. An additional two chambers were encased under the two faces of the north redan. Of the three casemates along the south range, the two on

either end housed powder magazines, while the center casemate functioned as an armory and ordinance store. The latter was identified archaeologically by the discovery of an India Pattern butt plate, Brandon gunflints, .75 caliber musket balls, and Baker rifle shot.

Extensive excavation undertaken in 1968 examined the casemated guardhouse built beneath the west face of the north redan. The investigations recorded two corner fireplaces along the structure's southeast face, but could not distinguish any wall partitions or the interior floorplan of the chamber. Access to the room was from the fort parade by the northern passageway, which was found to be constructed of wing walls over 2.14 m wide. (Last 1999: 120–124). The thickness of the wing walls is understandable, since they once supported a passageway ceiling also used as a terreplein (FIG. 14).

Within the center of the fort stood a one-story blockhouse, since replaced by the extant

1838 blockhouse. Gaugreben's blockhouse measured 100 × 100 ft. (30.9 × 30.9 m) and was protected by a bombproof roof fashioned from interlaced timbers, rammed soil, and decking. To guard against fire, it was clad with sheet iron. Its design was unusual, as it had an interior, 18 × 18 ft. (5.5 × 5.5 m) courtyard. Excavations have been able to define its footprint, examine interior sleeper supports, and locate several of its fireplaces. Still present is the original well that was centrally located within the courtyard (FIG. 14a).

Construction commenced in the spring of 1813, but Fort Wellington was not declared completed until December of the following year—the same month as the signing of the Treaty of Ghent. It saw intensive alterations to its interior during the 1837 Rebellion, but, save for the addition of two flanking epaulments, or traverses, and a caponnière, its trace remained unchanged.

Occupation and Assemblages

While archaeological investigations have enhanced greatly the understanding of the landscape and how the fortifications were altered to meet defensive needs, some glimpses into the social life of the garrison also have been obtained. Presently this exists as small vignettes, since sealed contexts, caches, and middens that speak to garrison behavior, specific events, or persons are relatively rare. More common is the superpositioning of sheet scatter that provides a more general and cumulative view of life during the conflict.

At Fort George, excavations uncovered one context that provides an intimate view of celebratory dining. It predates both the American bombardment of Fort George and the U.S. Army occupation of the site. From a refuse pit, located between the officers' quarters and kitchen, and buried beneath the ramparts of the American 1813 earthworks, came the remains of a multicourse dinner party (Wilson and Southwood 1976: 67–68; Plousos 2006) (FIG. 15). Contained within the assemblage were six place settings with shell-edge decoration in green, and another in blue. A variety of elaborate serving dishes also were found within the pit. Glassware, consisting of three lead-glass decanters, six fluted tumblers, seven plain tumblers, and seven stemmed wares, again imply a party of seven. Since the officers' mess

was down at Navy Hall, outside Fort George, it is possible that the deposit represents an officers' private dinner party.

Under what circumstances the assemblage components were broken and discarded will never be known with certainty, however, the presence of 11 wine bottles, 4 gin bottles, 5 beer bottles, and 3 decanters (a consumption of >3 bottles per person) leads archaeologists to believe that it was the result of youthful exuberance—a party gone awry. Along with the liquid merriment was a table set with a variety of foods. Sheep, walleye, perch, drum fish, chicken, black or mallard duck, domestic goose, bobwhite quail, passenger pigeon, and a songbird were all on the menu that eventful evening. The fact that the assemblage, including the faunal remains, was swept away and buried in its entirety may indicate an attempt to hide the event; one that could potentially cost the diners, depending on regulation, upward of six times the items' value to the regimental mess (Plousos 2006: 20).

The meal's variety, along with the absence of pork and beef (although roast beef may have been consumed), is in stark contrast to the diet of the rank and file, as represented by the quantities of salted pork and beef, sheep/goat, and fish observed elsewhere on the site (Wilson and Southwood 1976: 122–140) and at other posts (Cumbaa 1979). Not included with the "dinner party" deposit was evidence of the complement of fruit available to the garrison. Archaeological recovery of peach and cherry stones and black raspberry seeds speaks to the ecological niche in which Fort George is located. At Butler's Barracks, adjacent to Fort George, investigations have found strawberry, elderberry, and grape seeds (Stewart 1982). Today, the Niagara region is renowned as a grape- and fruit-growing area. Apparently, the same can be said about its past.

Excavations at Fort George have also produced several caches of artifacts, which, by their quantity alone, make a poignant statement about the scale of war. One was a deposit of 71 calcined flints, discovered close to the southwest corner of Blockhouse No. 2 (Wilson and Southwood 1976: 47) (FIG. 16a). Presumed to be a barrel store of Brandon-blade musket flints, they burned along with the blockhouse when ignited by American hot shot and shell. That the flints were completely calcined speaks to the elevated temperature of the conflagration

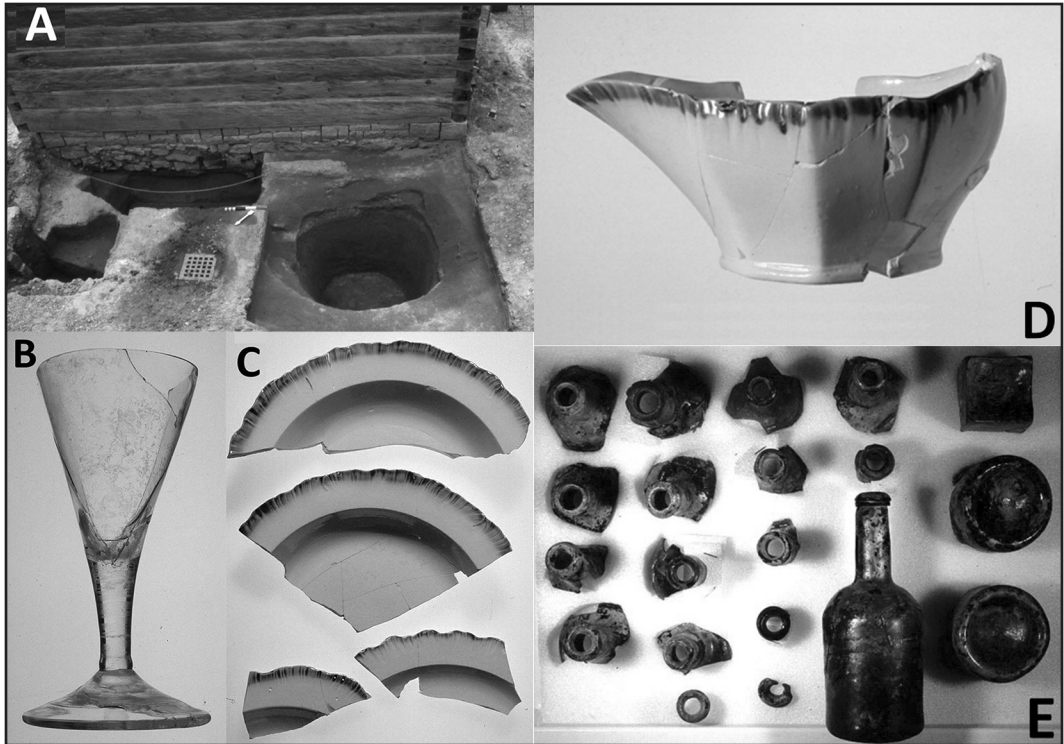


Figure 15. Excavation of the refuse pit containing the dinner party assemblage at Fort George: A. View of the refuse pit, Excavation Unit 19H7D, located between the officers' quarters and kitchen (*extreme left* of photo). (Photo by John P. Wilson, 1974; courtesy of Parks Canada, Cornwall, RAO-601T.) B. Plain, lead, stemmed wine glass, 19H7D6-2. (Photo by Rock Chan, 1998; courtesy of Parks Canada, Cornwall, RAO-2832T.) C. Assortment of green, shell-edged pearlware plate rims, 19H7D4-6. (Photo by Rock Chan, 1998; courtesy of Parks Canada, Cornwall, RAO-2841T.) D. Green, shell-edged pearlware sauceboat, 19H7D4-3. (Photo by Rock Chan, 1998; courtesy of Parks Canada, Cornwall, RAO-2822T.) E. An assortment of wine-bottle necks and bases, 19H7D4-3. (Photo by Suzanne Plousos, 1999; courtesy of Parks Canada, Cornwall, RAO-2851T.)

and the immense heat to which the Fort George garrison was subjected during their defense that fateful day in May.

Equally intriguing is another burn deposit found between the southern palisade and the exterior octagonal blockhouse. The feature contained a large cache of Royal Regiment of Artillery buttons, exceeding 700 in number (FIG. 16b). They represent primarily coatee (19 mm diameter) and gaiter (17.25 mm diameter) buttons. A mid-sized variant, some flat (14.7 mm diameter) and some domed (16.2 mm diameter), used perhaps for coveralls, was also present. How these were deposited remains unknown. They could represent the British destroying supplies upon their retreat or a cleaning activity: either by the Americans after occupying the fort or by the British as hospital discards or obsolete stores.

Although archaeologists have had some success in isolating discrete deposits and attributing them to either the British or American occupations at Fort Malden and at Fort George, for the most part general sheet scatter has been encountered that cannot be assigned confidently to one or the other. This is, in part, due to the nature of the deposition, the lack of temporal diagnostics, as well as the similarities of materials used by the two opposing parties. Analyses of a more general nature has provided a better understanding of garrison life, especially at the outlying post of Fort St. Joseph.

Located 62 mi. (100 km) south of present-day Sault Ste. Marie, Fort St. Joseph was Gother Mann's northernmost post in Upper Canada. Compared to the other forts defending the border, it was the most isolated. To those sent

to garrison the post, it was considered a form of exile or banishment (Vincent 1978: 150; Whate 1985: 40). By all accounts it was occupied by an unsavory collection of men, “with various and somewhat questionable motivations” (Emerson, Devereux, and Ashworth 1977: 168). Yet, artifacts recovered from the site suggest a level of gentility not normally associated with such a frontier post.

In addition to stonewares and earthenwares, the assemblage contained much finer wares. Tea wares were prevalent throughout the site and demonstrated a “stylistic shift away from chinoiserie, so closely associated with the 18th century, to the romantic and exotic landscapes of the early 19th century” (Whate 1985: 41). This preference for neoclassical patterns indicates that the occupants of Fort St. Joseph were not only aware of, but desired, the predominant fashions of the 1812 period.

While the military relied heavily on shipments of material items from the south, faunal analysis demonstrates a more balanced procurement using local natural resources, imported food, and resident domesticated animals. For the garrison, pork (76%) and beef (12.6%) were the mainstay, with a variety of birds (chicken, goose, and duck, along with another 52 species), and 23 species of fish (Cumbaa 1979; Nitchie 1985: 58–62).

Recommendations and Conclusions

Since the initiation of an archaeological program in the mid-1960s, Parks Canada has

undertaken archaeological investigations to define site parameters, establish cultural resource inventories, and maintain and ensure the health and wellbeing of the military sites under its care. Parks Canada archaeologists have attempted to understand the role and significance of these sites during the War of 1812 and have debated, at great length, how best to interpret them to the public. There has been much success, but there is much more to be done.

We have a relatively good handle on the makeup of the original terrain, and how it was defended, but have only pursued a casual analysis of the effects of landscape upon the siting of the major forts and upon decisions made to alter their design during the war. A more formalized approach, such as through KOCOA terrain analysis, a method developed by U.S. military strategists (based on examining **K**ey and decisive terrain; **O**bservation and field of fire; **C**oncealment and cover; and **O**bstacles and **A**venues of approach and withdrawal), might be of great benefit. Its application has the potential to enhancing the understanding of site placement; rationale for design—especially in regard to flank and raking fire; and the reasons for fort remodeling.

As archaeologists, our understanding of garrison life, especially under the pressures of war, is not as strong as our comprehension of the physical evolution of the sites during the war. This is, in part, due to the method by which we operate in the field. Working within a cultural resource management framework,

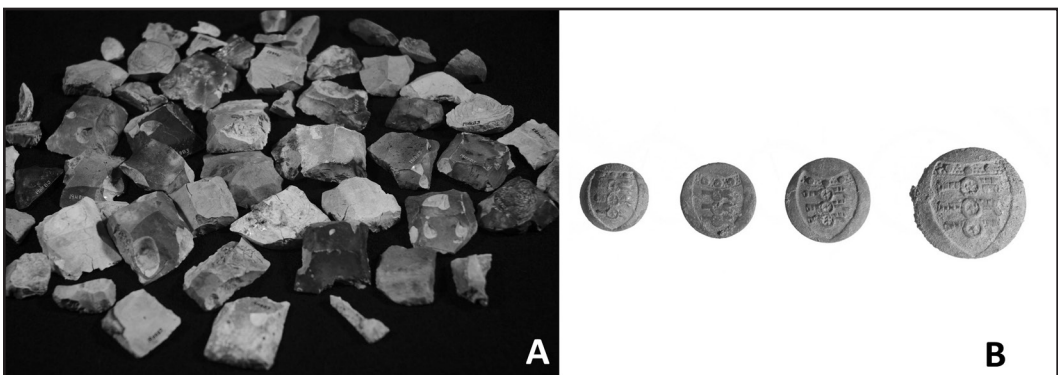


Figure 16. Evocative artifacts from Fort George: *A*. Cache of calcined Brandon-blade flints recovered in Excavation Unit 19H18B, by the west wall of Blockhouse No. 2. (Photo by author, 2010; courtesy of Parks Canada Cornwall.) *B*. A sample of the more than 700 Royal Regiment of Artillery buttons recovered in a burn deposit (19H60H42) between the south curtain palisade and the octahedral blockhouse. From left to right, they represent a gaiter button, two mid-size buttons for either *coatees* or coveralls, and a *coatee* button. (Photo by author, 2012; courtesy of Parks Canada, Cornwall.)

we assess projects for their resource impact and implement the required archaeological strategy to fulfil the mandate. Research is driven by development and stabilization programs and limited to the corridors of potential disturbance. Rarely is it possible to undertake an excavation purely for the sake of research. Even so, over the years, we have still been able to achieve long-term research goals, especially in regard to site formation and fortification design.

To answer questions regarding the life of a soldier, a more focused archaeological program would be required, one divorced from a purely mitigative focus. Considering costs in both time and money, this is an impractical supposition for Parks Canada, since it would require resources well beyond the agency's means. One realistic way of attaining this level of research is to develop partnerships with universities, institutions, and organizations.

It has been my experience that the excavation of the latrines is one of the most effective and efficient ways of acquiring such social data. This is especially true on military sites, where privies serviced specific ranks and, thus, provide excellent assemblages for intra- and intersite comparisons. Fortunately, there are documented 1812 latrines at each site that have great potential for expanding knowledge of garrison life. It is hoped that one day they will be investigated.

Another potential resource lay confined within the American entrenched camp at Fort George. Since there are only a few sites in Ontario where concentrated American forces occupied Canada for any length of time, the investigation of the American encampment could go a long way to assist in comparing similarities and differences within the British and American armies. Presently, the area is believed to be undisturbed and accessible for testing. The American defensive line is, in itself, worthy of study, for it offers the possibility for examining a relatively rare archaeological phenomenon in Canada. Only Fort Erie has entrenchments of a similar scale and, as a result, their excavation would greatly assist the understanding of how they were constructed and employed.

Given the importance of the First Nation allies in defending Upper Canada and their

subsequent loss of warriors and lands, it is incumbent upon archaeologists to help tell their story of sacrifice. While Parks Canada has undertaken excavation of the postwar Indian Council House at Fort George (Henderson 1973), the War of 1812 structure has never been investigated. Similarly, the 1798 Indian Department storehouse at Fort Malden has only been minimally tested. Both structures deserve future investigation and analysis to explore the relationship between the Indian Department and the First Nation allies.

As the War of 1812 bicentennial is experienced, there is cause to reflect upon Parks Canada's efforts in protecting and interpreting War of 1812 sites. Since the mid-1960s, Parks Canada Ontario Region has made substantive progress in expanding the understanding of the extent, nature, and evolution of these sites in Ontario. Parks Canada archaeologists have also been able, through controlled stratigraphic excavation and matrix analysis, to begin to construct fine-grained chronologies distinguishing between war and postwar occupations. This has not been an easy task, since every fort has been severely altered by wartime modifications and, in some instances, rebellion period improvements and reconstructions which have significantly altered both features and the landscape. Headway has been made, however.

The original 1796 traces of Fort St. Joseph, Fort Malden, and Fort George are now known, along with a better understanding of their transformation from defensible supply stations to works of greater strength. Even with modifications and strengthening, each of Gother Mann's 1796 forts was destroyed: Fort George by American bombardment, Fort Malden during Proctor's retreat, and Fort St. Joseph by the Americans after its abandonment by the British (M. Coleman 1977; Carter-Edwards 1980: 104–112; Young 1980). Of the three forts, the British found value in remodeling and garrisoning only Fort Malden during the 1837 Rebellion—and even that as a reclaimed American fort.

Work at Fort Mississauga, Fort Henry, and Fort Wellington has demonstrated how British Royal Engineers, as the war progressed, rethought defense by varying designs. Investigations of Fort Wellington illustrate British willingness to explore the utility of the

bastion-less trace. Interestingly, Fort Mississauga and Fort Wellington continued as defensive works, albeit with modifications, well beyond the 1837 Rebellion period. Fort Henry was completely redesigned to become the earliest example of the “modern polygonal system” in Ontario.

In addition to site construction and alterations, excavations have also revealed some insights about occupation and activities. Certainly, more is known about the diet and foodways of the soldiers who garrisoned the forts and the apparent differences between officer and the rank and file. We have also come to realize that frontier isolation, regardless of the distance, cannot inhibit the desire to obtain the trappings of fashionable life. Through the uncovering of caches and refuge pits we see a life, not unlike our own, where youthful exuberance can overwhelm propriety. Lastly, we see the results of war—from an abandoned barrel of calcined, heat-exposed gun flints to layers of dense white ash—testimony of a brutal conflict. When the archaeological program began in the 1960s, much of the work focused on obtaining site inventories for informed site management and posterity. Although the principles of site significance were present, the idea of commemorative integrity had not yet been fully hatched. Fifty years on, we are guided by a more focused mandate that asks: “Where does historic value lie?” Archaeological endeavors over time have helped to address this question, in part. The value lies on the parade, between the embrasures and in the ditches.

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Author Information

Joseph H. Last holds a Masters of Art Conservation degree from Queen's University and a M.A. in Anthropology from the College of William and Mary. His total professional career has been with Parks Canada, working as an artefact conservator (1977 to 1980) and Project Archaeologist (1980 to 1998). From 1998 until his retirement in 2011, he served as Senior Archaeologist for Military Sites for Parks Canada Ontario Region. His primary research focus has been on 19th century British fortifications in Canada and elsewhere. Major interests involve military engineering, architecture, relationships of fort and community (both past and present), cultural resource management, and site interpretation.

Joseph Last
P.O. Box 1961
Cornwall
Ontario K6H 6N7
joseph.last@sympatico.ca