

Northeast Historical Archaeology

Volume 19

Article 2

1990

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Recommended Citation

Starbuck, David R. (1990) "The General Hospital at Mount Independence: 18th-Century Health Care at a Revolutionary War Cantonment," *Northeast Historical Archaeology*: Vol. 19 19, Article 2.

<https://doi.org/10.22191/neha/vol19/iss1/2> Available at: <http://orb.binghamton.edu/neha/vol19/iss1/2>

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Cover Page Footnote

The research on Mount Independence has been made possible through the efforts of the Vermont Division for Historic Preservation, the University of Vermont, Castleton State College, the Fort Ticonderoga Association, and the Town of Orwell. Special thanks go to Dennis E. Howe, William C. Murphy, Gordon and Barbara DeAngelo, Bruce Hedin, Mary Cassedy, Sherry Mahady, John Dumville, Audrey Porsche, Giovanna Peebles, David Skinas, Eric Gilbertson, Howard Coffin, Mark Fitzsimmons, Ted Baumhauer, Nicholas Westbrook, James Gabler, Mike Audet, Jean Beck, and the many students and volunteers who participated in the field and laboratory. Thanks also go to the anonymous reviewers for their help in improving this article.

THE GENERAL HOSPITAL AT MOUNT INDEPENDENCE: 18TH-CENTURY HEALTH CARE AT A REVOLUTIONARY WAR CANTONMENT

David R. Starbuck

The General Hospital at Mount Independence in Orwell, Vermont, has been examined in order to learn more about the configuration of an 18th-century military hospital. Historical research combined with on-site excavation in 1990 exposed the foundation of a 250-foot-long building containing principally architectural and kitchen debris. While physical remains did not reveal the layout of individual rooms, archaeological and historical evidence have nevertheless provided insights into the appearance and function of this important structure.

L'Hôpital Général de Mount Independence a été examiné afin d'en apprendre davantage sur la configuration d'un hôpital du XVIII^e siècle. Des recherches historiques conjuguées avec une fouille archéologique réalisée en 1990 ont permis de mettre au jour la fondation d'un bâtiment de 250 pi de long renfermant principalement des témoins architecturaux et de cuisine. Même si les restes matériels n'ont pas révélé l'emplacement de chambres individuelles, les éléments archéologiques et historiques obtenus ont apporté des lumières sur l'aspect et le rôle de cet important bâtiment.

Introduction

The events of the 1770s were crucial in the formation of the United States, and innumerable historical sources have documented the leaders, the major military engagements, and the intellectual and social upheaval which contributed to the conflict between Great Britain and its colonies in America (see, for example, Shy 1976; Bailyn 1967; Higginbotham 1983). Many of the more prominent military sites of this period have been subjected to intensive archaeological work, including the Saratoga Battlefield (Snow 1977; Starbuck 1988), the New Windsor Cantonment (Fisher 1983, 1984–85, 1986a, 1986b), and Fort Niagara (Scott 1979, Scott and Scott 1990) in New York State; Morristown (Rutsch and Peters 1977) and—just to the south—Pluckemin (Seidel 1983, 1987) in New Jersey; and Valley Forge (Parrington 1979, 1979–80) in Pennsylvania (FIG. 1). However, until recently, professional archaeology had never been conducted at the Champlain Valley site of Mount Independence—a 300-acre fortress complex located one-half mile east of Fort Ticonderoga in the town of Orwell, Vermont (FIG. 2).

In 1989 and 1990, excavations were con-

ducted at Mount Independence under the sponsorship of the Vermont Division for Historic Preservation, the Fort Ticonderoga Association, the University of Vermont, and the Town of Orwell. Over this two-year period, a program of archaeological testing and mapping at Mount Independence examined the foundations of hut sites and barracks, small lookout posts, a blockhouse, a large General Hospital building, and several small structures which originally surrounded the star-shaped fort built on the highest part of the Mount (see FIG. 3). All together, approximately 49 separate foundations were sampled out of a population of perhaps 400 or 500 sites.

What has made this research especially significant is that Mount Independence was occupied so early in the Revolutionary War (July 1776–July 1777) that it represents a “starting point” for the Continental Army. Regrettably, the other early sites, e.g., those around Boston, are disturbed and typically “lost” to archaeology. Perhaps only at Mount Independence is it still possible to examine the daily lives of Revolutionary War officers and soldiers as they first experimented on a massive scale with camp layouts, hut and barracks construction, health care (and hospitals), and the pro-

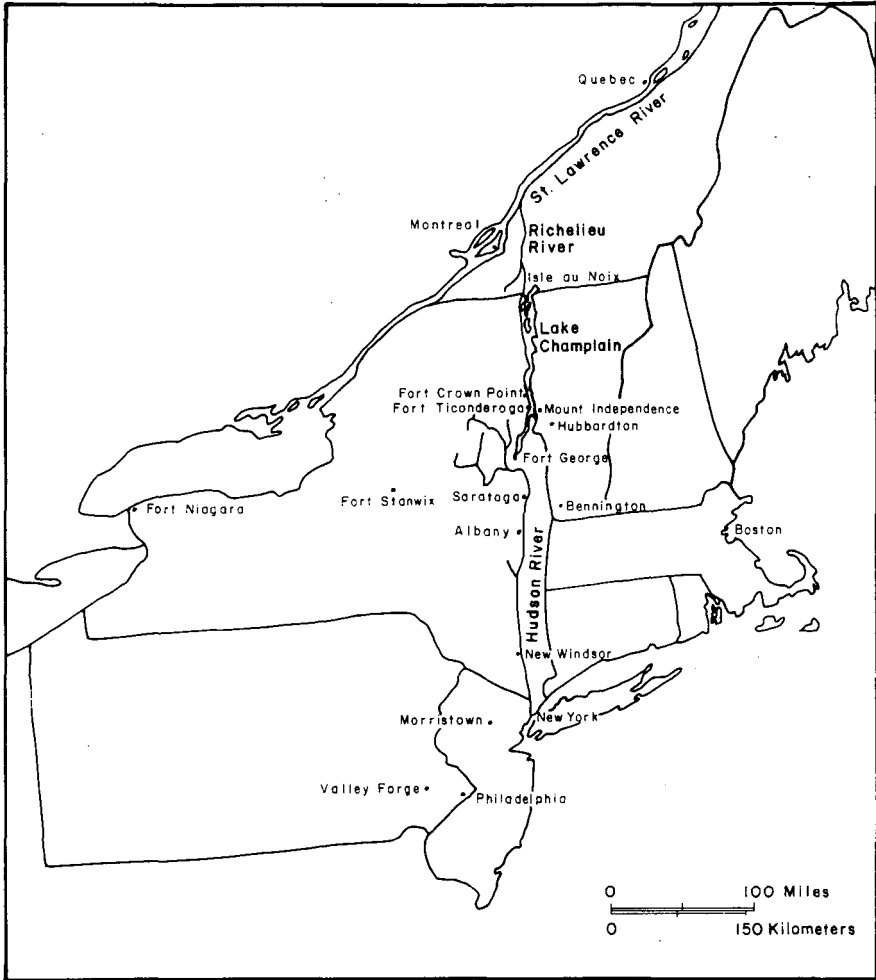


Figure 1. Revolutionary War sites in the north that are mentioned in the text.

curement of vast quantities of provisions in a frontier setting.

Historical Background

While Mount Independence is not as well known as its sister fort in New York State, Fort Ticonderoga, it nevertheless was the principal fortress in northern New England during the early years of the Revolutionary War. At the beginning of the American Revolution, there was much concern that British forces would attack the northern colonies by invading from

Canada, moving up Lake Champlain, Lake George, and the Hudson River, and ultimately separating New York from the New England colonies. This fear was well founded because at the end of 1775 an American army—under Generals Richard Montgomery and Benedict Arnold—had taken Montreal and then attacked Quebec City, and American leaders knew that very soon the British would mount a counterattack. In response, in mid-1776 the American leadership cleared a mountaintop due east of the earlier site of Fort Ticonderoga, at a point where Lake Champlain is only a quarter of a mile wide.

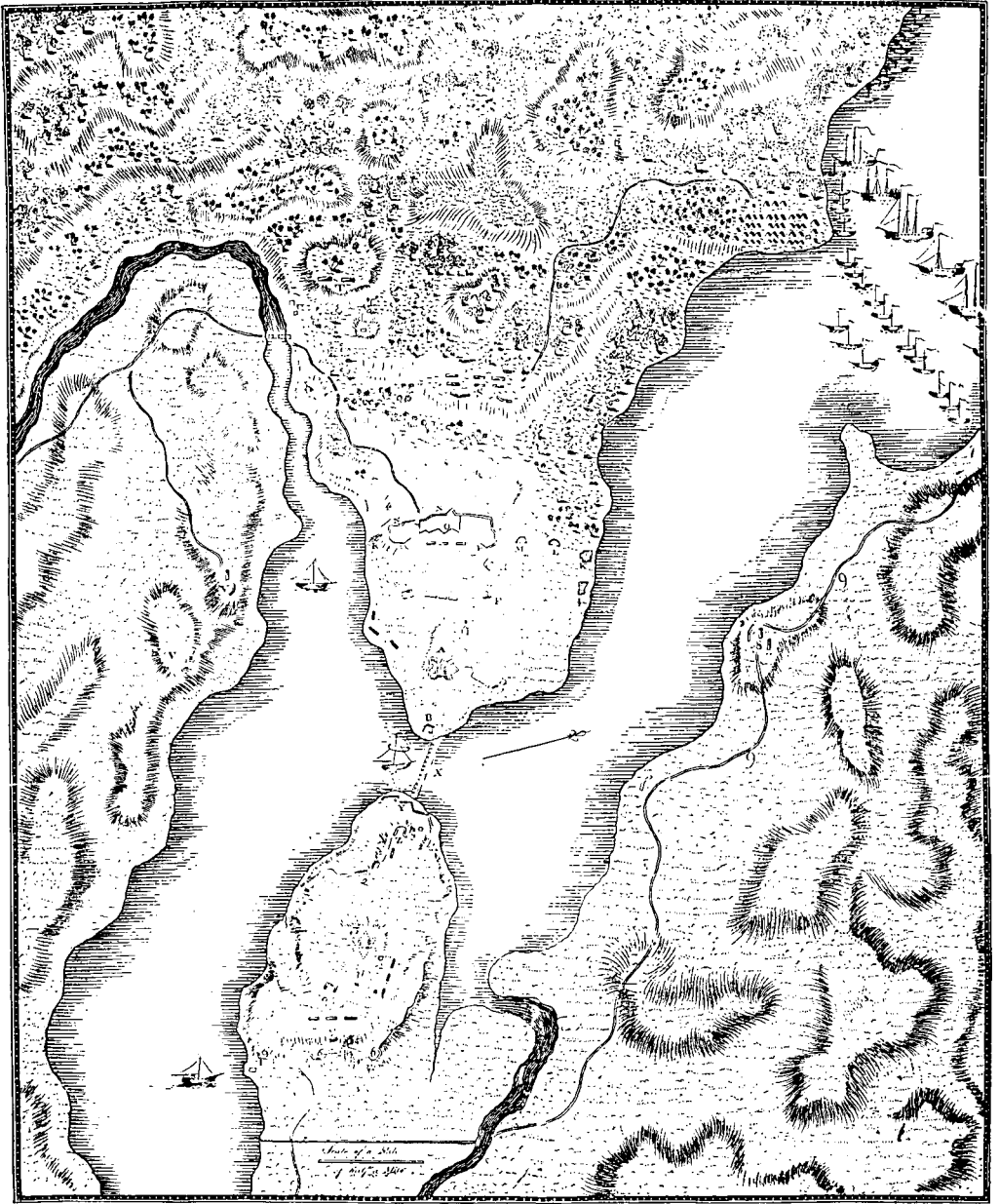


Figure 2. Map of Mount Independence and Fort Ticonderoga prepared for Major General St. Clair's court martial proceedings in 1778. "X" represents a floating bridge across Lake Champlain, "3" is the star-shaped fort on Mount Independence, "A" is Fort Ticonderoga, and "Y," "Z," and "6" all represent batteries on Mount Independence (*Collections of the New-York Historical Society for the Year 1880 1881*). Mount Defiance, while not identified here, is located in the left-center of the drawing.



Figure 3. Map of Mount Independence engraved on the John Calfe powderhorn in April 1777. This shows the star-shaped fort (bottom center) and an assortment of barracks buildings, huts, batteries, artificers' shops, and a blockhouse (bottom right). (Reproduced courtesy of the New Hampshire Historical Society/gift of Lizzie E. Crowther.)

Fort Ticonderoga was principally a fortress of the French and Indian War, with its cannons pointed *south* in order to keep the British from attacking Canada. Consequently, a majority of American soldiers during the Revolutionary War came to be positioned at Mount Independence in Vermont, rather than at Fort Ticonderoga. When American forces peaked on Lake Champlain in the summer of 1776, they consisted of about 12,000 militia from several northern colonies—three brigades encamped at Mount Independence and one brigade at Fort Ticonderoga. Massachusetts contributed more soldiers than did any other colony, but there also were regiments here from New Hampshire, Connecticut, New Jersey, Pennsylvania, and New York.

By fortifying both sides of Lake Champlain, at the narrowest point on the lake (FIG. 2), the Americans hoped to be able to block a British advance. In October of 1776, the Americans proved completely successful in

meeting this objective when Sir Guy Carleton—the Governor-General of Canada—and a British force of 8000 troops approached the forts by water. The sight of two forts, 12,000 men, and batteries on both shores bristling with cannons was enough to make the British return to Canada for the winter. No serious fighting had occurred, but in logistical terms this was a great American victory because it would be another year before the British could mount a second expeditionary force from Canada. The British strategy of separating New York from New England had failed, at least for the time being. Most of the American militia went home, and the army on Lake Champlain was reduced to just 2000–3000 men.

In the spring of 1777 a new British army left Canada, under the leadership of General John Burgoyne, and a few thousand sickly American militia were not enough to defend two forts against Burgoyne's army of 8,000 British, German, and Canadian troops, plus

Indians. British troops landed on the New York shore, Germans on the Vermont side, and they began to outflank the two forts. The Americans were in an untenable position, but the situation was resolved when the British dragged a few cannon atop what is now called "Mount Defiance" on the New York shore, creating an observation post from which they could see everything that went on in the two American forts. The American commander, Gen. Arthur St. Clair, ordered a retreat, Fort Ticonderoga was abandoned, and then Mount Independence. The American army fled down the Hubbardton Road with the British advance guard in pursuit.

What followed were the Battle of Hubbardton, the Battle of Bennington, and the Battle of Saratoga. Many of the militia from Mount Independence survived to fight in Saratoga, so clearly St. Clair's strategy—to save his army, rather than fight—was successful. Nevertheless, St. Clair's men had abandoned large quantities of supplies when they left Mount Independence, and this led to court martial proceedings against St. Clair in 1778 (*Collections of the New-York Historical Society for the Year 1880* 1881).

After the Americans were driven from Mount Independence, a force of several hundred Brunswickers was garrisoned at the Mount. When they received word in November of 1777 that Burgoyne had been defeated in Saratoga, they returned to Canada after "demolishing all the Fortifications, Bridges, Burning all the Houses, and destroying [sic] all Stores, Cannon etc. which they could not bring off" (Herrick 1777). The site subsequently grew over with forest.

Because Mount Independence was never built upon before or after the Revolution, it is now a very thin, single-component site representing just over one year of military occupation. Also, because this was a fortified mountaintop, with much exposed ledge, it has never been plowed. Very few Revolutionary War sites are as undisturbed as this, although, like most other military sites, Mount Independence has seen some disturbance by collectors.

While recent archaeological research at Mount Independence has focused upon the huts, barracks, and fortifications that are so typical of cantonment sites, it quickly became clear that the Mount has one survival which is almost unique: the remains of its large General

Hospital building which was constructed between March and June of 1777 (*The Revolutionary Journal of Col. Jeduthan Baldwin 1775–1778* 1906: 94–107; Weedon 1899: 113; *Collections of the New-York Historical Society for the Year 1880* 1881: 91). The investigation of this hospital's foundation became a major focus of excavations in 1990 because the only hospital previously dug by professional archaeologists in the United States was the insane asylum in Williamsburg, Virginia (Noël Hume 1973). Given the different function of the Williamsburg hospital—which has never been fully published—it was not possible to use any past excavation as a predictive model for what might be found at Mount Independence. Also, historical sources were not adequate to predict where bunks might have been, or operating areas, or doctors' quarters, or dining, or supply storage within a Revolutionary War hospital. Consequently this site has provided a nearly unique opportunity to examine the configuration of an 18th-century military hospital.

Revolutionary War Medicine

Among the best syntheses dealing with 18th-century medicine and surgery are *The Army Medical Department 1775–1818* by Mary C. Gillett (1981), *Medical Men in the American Revolution* by Louis C. Duncan (1931), and two books written by C. Keith Wilbur for "popular" audiences: *Revolutionary Medicine 1700–1800* (1980) and *Antique Medical Instruments* (1987). These sources note that prior to the Revolutionary War the only permanent hospitals in the United States were used by the urban poor, and no respectable person would consider going to a hospital—the sick were cared for in the home. The two urban hospitals which figured most prominently in the American colonies during the 18th century were the Pennsylvania Hospital in Philadelphia (chartered in 1751, and not completed until about 1805) and the New York Hospital (constructed between 1773 and 1775). In fact, the New York Hospital did not accept its first civilian patients until 1791 (see Thompson and Goldin 1975: 97–102 and Rosenberg 1987).

Much more common were the temporary military hospitals built during the French and Indian War (the Seven Years' War), and then the very large number of military hospitals

during the Revolutionary War. Medical procedures were probably much the same during both of these 18th-century wars, and it is well known that soldiers preferred staying with their comrades to being sent to a hospital (where there was considerable risk from disease and infection): One common estimate is that "during the Revolutionary War a soldier had ninety-eight chances out of 100 of escaping death on the battlefield, but only seventy-five chances out of 100 of escaping death in a military hospital" (cited in Krueger 1981: 122).

Given the scale of medical needs during the Revolutionary War, Congress established a "Hospital" plan on July 27, 1775, for dealing with all medical services (and not just hospital buildings). Dr. Benjamin Church was elected as the first "Chief Physician and Director General of the Army Hospital," soon followed by Dr. John Morgan and then Dr. William Shippen. Medical practitioners during the war had to cope with a variety of problems, most of which were related to disease or infection, rather than being the direct result of battle injuries. Smallpox was particularly severe, and inoculation was widely used, especially after March of 1777 at the General Hospital in Fort George (located in what is now the village of Lake George, New York). Inoculation was so effective that smallpox in the Northern Medical Department was largely eradicated by the end of 1776. Still, measles continued to be a problem at all camps and was the one significant ailment at Mount Independence at the time the soldiers evacuated in July of 1777 (*Collections of the New-York Historical Society for the Year 1880* 1881: 51).

Dysentery and diarrhea ("the camp disorder") were ubiquitous, and the soldiers believed that it was caused by "severe climatic conditions, stagnant water, tainted meat, or wet clothing" (Krueger 1981: 108). There also were various fevers, especially typhus, and these were given several names (including bilious, typhoid, putrid, remittent and yellow). And, of course, there was "the itch," which came from poor hygiene and sleeping on the bare ground—leaving the men covered with scabs and sores.

Medicines were difficult to obtain during the war, and military physicians spent significant amounts of time attempting to obtain medicines in the larger cities, such as New York and Philadelphia, and in New England. Many

wartime diseases became fatal because of the lack of medicines. As preventive measures, officers stressed personal cleanliness, bathing, washing clothes, and placing latrines on the edges of cliffs. For example, in an orderly book at Mount Independence it was noted that

Any non-commissioned Officer or Soldier who shall commit any Nastiness in or about the Camp, other than the Vaults or necessary Houses prepar'd for the Purpose, shall receive 20 Lashes on his bare Back for every such Offence. (Munsell 1859: 131)

Alcohol also played a role in dealing with the sick. As John Krueger has noted in his dissertation on *Troop Life at the Champlain Valley Forts . . .* (1981: 113),

It was widely believed that moderate quantities of alcohol promoted health, and doctors often prescribed wine (in some instances two or three bottles a day) to treat certain kinds of fevers. Liquor was also thought to relieve fatigue, and rum was often issued to the camp guards after they had been relieved of duty.

In 1776 the Northern Medical Department appointed Samuel Stringer as its Director-General, followed by Jonathan Potts. During their directorships (1776–1777), three large General Hospital complexes were established in the north, at Albany, Fort George, and Mount Independence. There were, of course, many lesser regimental hospitals and flying hospitals which were rather makeshift and mobile. While much medical care was being given at the regimental level (surgeons and mates were attached to each regiment), the General Hospitals were intended to be large and relatively permanent, able to deal with major injury or infectious disease, and housing very significant numbers of men (Torres-Reyes 1971).

The historical literature that deals with these military hospitals suggests extremely grim conditions, but the numbers of patients and their maladies varied greatly with the time of year, whether there had recently been a major military campaign, and whether there had recently been an outbreak of disease such as smallpox. These fluctuations are exemplified by the General Hospital in Fort George which often had extremely large numbers of smallpox patients who were deliberately isolated to

keep them away from the rest of the Northern Army. In late July of 1776, between two and three thousand soldiers were in the Fort George hospital, but by October 20 of 1776 it contained only 400 patients. On November 27, 1776, it was reported that in the Fort George hospital

the sick suffered much from Want of good female Nurses, and comfortable Bedding, many of those poor Creatures being obliged to lie upon the bare Boards. (Duncan 1931: 110)

This description is mild compared to the report from Isle aux Noix on June 22, 1776, where Capt. John Lacey of Pennsylvania reported:

Having nothing else to do curiosity led men to visit the New England camp. Here my feelings were indescribable, some men in, and some out of tents, sick on the bare ground—infected with Fluxes, Fevers, Smallpox, and overrun with legions of Lice, and none but sick to wate on one another. My eyes never beheld such a scene, nor do I desire to see such another—the Lice and Maggots seme to vie with each other, camping in Millions over the Victims; the Doctors themselves sick or out of medicine. The estimation in both camps was that 15 to 20 die daily. . . . The New England and New York camp was the worst infected with the smallpox, scarcely a one of the whome survived. (Duncan 1931: 110)

Hospitals on Mount Independence

When the Northern Army attacked Quebec City at the end of 1775, General Richard Montgomery was killed, Benedict Arnold was wounded, and smallpox took a fearsome toll of both soldiers and officers. Many of the soldiers had battle injuries, and poor provisioning left many soldiers destitute. The men who subsequently retreated to Crown Point and Fort Ticonderoga in early 1776 needed intensive hospitalization, and regimental hospitals were established on Mount Independence and at Fort Ticonderoga to deal with the sick and injured. Smallpox cases, however, were considered too contagious and were shipped off to the General Hospital at Fort George. It is not known how many hospitals existed on the Mount during that first year, although a set of plans for one of them has survived in the

Philip J. Schuyler papers (New York Public Library, Philip J. Schuyler Papers, Reel 20, Box 41) (FIG. 4). This early hospital was 120 feet long and 24 feet wide, but its exact location is not known, and so it has not been tested archaeologically. However, a letter has survived that was written by a sick soldier who was probably residing within this hospital. In it, Matthew Kennedy, of Goffstown, New Hampshire, wrote to his brother, Robert Kennedy.

Loving Brother, I inform you that I am and have been in a low state of health for some time past and don't imagine I shall get well very soon. Wherefore I earnestly intreat you not to delay coming for me or if you can't come yourself. Send a man that you can confide in and a horse for me; let whoever comes; bring some butter and Indian meal with him to serve me on the way home. I can get discharged as soon as one comes for me; but am as frail at present that I could not venture home alone. . . . P.S. There is hardly any sustenance to be had for man or horse between this place and [Fort] No. 4 so I advise you to bring some provender. Excuse the meanness of the paper. (Special Collections, University of Vermont, letter entitled "Camp at Mount Independence 11th Octr 1776")

Unfortunately, while Matthew Kennedy's family did travel to Mount Independence to get him, he had already died by the time they arrived.

In another reference to this early hospital, Colonel Anthony Wayne, a Pennsylvanian who commanded the winter garrison at Independence and Ticonderoga in 1776–1777, observed that

our hospital, or rather house of carnage, beggars all description, and shocks humanity to visit. . . . no medicine or regimen on the ground suitable for the sick; no beds or straw to lay on; no covering to keep them warm, other than their own thin wretched clothing. (Krueger 1981: 116)

In the late fall of 1776, the threat of attack from Canada lessened because the British could not mount a successful siege during the winter, and the American leadership allowed many regiments to go home. Unfortunately for the 2000–3000 troops who remained, warm

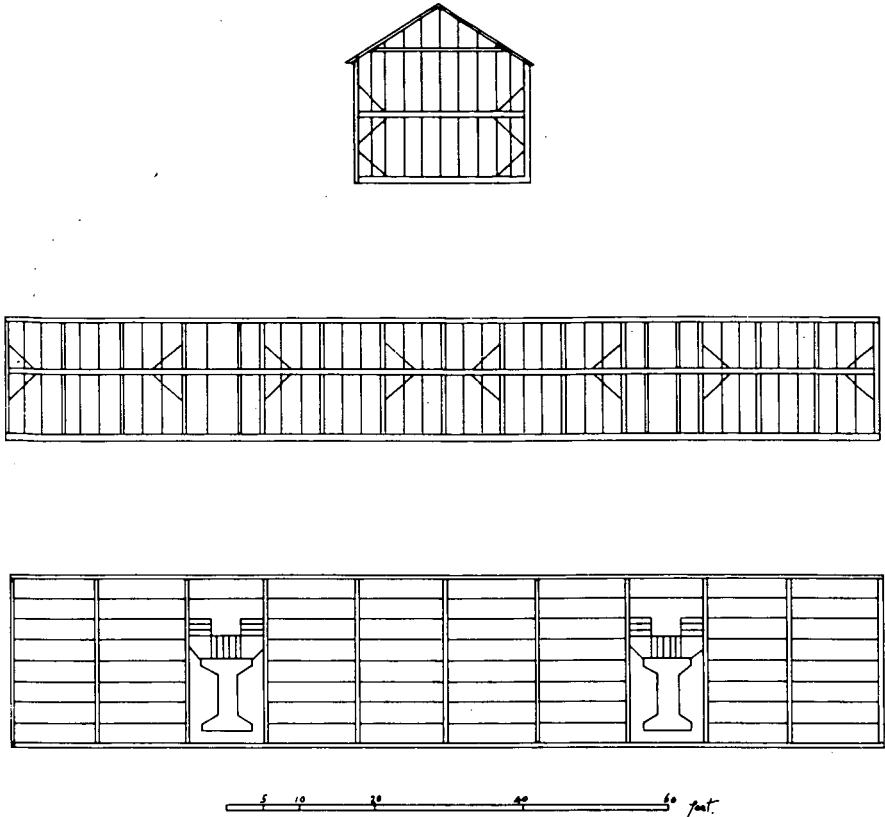


Figure 4. The end, front (or side), and floor plan "of one of the Hospitals on Mount Independence. 120 feet Long, 24 feet Wide." (Redrawn from a diagram in the Philip J. Schuyler papers (Reel 20, Box 41) and dated 1776.)

clothing was scarce, and many men froze to death in their tents during the winter of 1776–1777 (Krueger 1981: 116–117). Health conditions on Mount Independence were greatly improved in 1777. The army was smaller but better provisioned, and smallpox had almost ceased to be a problem. All the same, in early 1777 Congress authorized the establishment of a large General Hospital on the Mount (Munsell 1859: 163). This new hospital was a precautionary move, in anticipation of a British invasion from Canada during the summer of 1777.

It is not known whether any previously existing hospital served as the model for the hospital building that was about to be built on Mount Independence, although Dr. John Morgan, Director General of Hospitals for the Continental Army, prepared a set of specifica-

tions for a General Hospital on November 20, 1776. In response to a query about a proposed hospital at Peekskill, New York, he wrote that hospital buildings

ought to be floored above, so as to make two stories each, and to have a stack of chimneys carried up the middle. . . . It is further required that bed bunks be made, and straw be always in readiness, for the sick, and a carpenter or two to be employed solely in the business of the general hospital in making coffins, tables, and utensils of various kinds. (Duncan 1931: 165–166)

As plans were made for the Mount Independence hospital, Dr. Jonathan Potts, a 1768 graduate of the new Philadelphia Medical College, was placed in charge of the health care to be given there. Potts had re-

ceived the degree of M.D. in 1771 and was an extremely competent physician who had studied with Dr. Benjamin Rush (see Krueger 1974; Blanco 1979). Although it is unclear which of his staff were based at the Mount Independence hospital—and which were at the Albany or Fort George hospitals—it is known that in April of 1777 Potts had under his command a total of five general officers, six senior surgeons, six second surgeons, six surgeons' mates, four men in the commissary, and one steward (Neill 1864: 30).

Potts was ordered by Anthony Wayne to report to the Mount Independence hospital on April 14, 1777.

You will Proceed with all possible Dispatch, I believe we shall have some few patients Ready against your arrival it will not be amiss how ever for you to come with your sleeves Rolled up and your Amputating Instruments, etc., etc., placed in proper Order. (Saffron 1982: 104)

Beginning shortly before Potts' arrival, the chief engineer for Mount Independence, Colonel Jeduthan Baldwin, oversaw construction of the hospital building. Baldwin's *Revolutionary Journal* . . . (1906: 94–107) provides much useful information on the hospital's construction, and his daily records state that the plans were drawn on March 12; his men began to cut timber for the hospital on March 13; they finished getting timber on March 31; they "laid out the ground for the Hospital" on May 5; and they "Raisd the Hospital N. side" on May 27. On June 9 and June 20, Baldwin made references to dining with the doctors at the hospital (1906: 105–106). Although Baldwin's journal would suggest that the hospital was essentially complete by June 9, 1777, a letter sent from Maj. General Philip Schuyler to Congress on June 25, 1777 complained that "not one single room [in the hospital] . . . is yet finished, nor will it soon be in condition to receive a considerable number of sick" (*Collections of the New-York Historical Society for the Year 1879* 1880: 115 and cited in Gillett 1981: 92).

While Schuyler's letter raises the very real issue of whether the hospital ever held many soldiers, Baldwin's occasional references to dining suggest that the General Hospital at

least saw frequent use as a large dining hall during the weeks leading up to General John Burgoyne's attack in July of 1777. While no contemporary plans present a detailed view of the hospital, a very small outline of the hospital does appear on a map prepared in 1777 by Lt. Charles Wintersmith, Assistant Engineer to the British Army (Wintersmith 1777). Wintersmith's drawing convincingly places the hospital in the exact position where excavations were conducted in 1990.

Several historical references have survived which describe the provisioning of the General Hospital. Perhaps the best of these is a letter from "Jonn Potts, Director Genl Hospital," dated June 19th, 1777, and addressed to "John Brown, Steward to the Genl Hospital."

You will delay no time in procuring for the General Hospital 200 Sheep & 20 good Milk Cows with as many fat Cattle as you can procure, the 500wt. Butter. find Men to assist you in driving them to this place—if you cannot get that Number purchase as many as you can.

and

If you have not Money sufficient I will pay the moment the Cattle arrive for them. (*The Potts Papers, 1766–1777*, Microfilm, Vol. 1, p. 210)

Later, during St. Clair's court martial proceedings, a Mr. Yancey, who superintended the Issuing Commissary's Department at Ticonderoga and Mount Independence, testified under oath that "The general hospital was sometimes supplied by my magazine, but not steadily." And, when asked where else the General Hospital might have received provisions, he responded,

I do not know from any place with respect to fresh provision, unless they sent out and purchased it. The salt provision and flour could be got from me only. (*Collections of the New-York Historical Society for the Year 1880* 1881: 35, 36)

When British and German troops stormed Mount Independence on July 5–6, the General Hospital was unquestionably the largest building on the Mount, but it had few patients

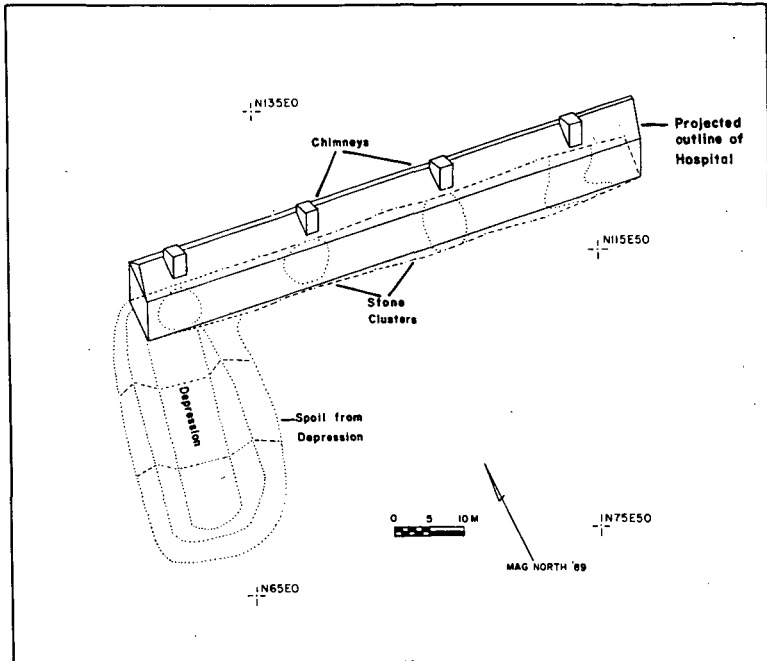


Figure 5. Schematic reconstruction of the General Hospital on Mount Independence, including the clusters of surface stone thought to represent fireplace bases. The "Depression" on the left is the cellar hole for the new wing that was never completed. (Drawing by Gordon DeAngelo.)

relative to its size. A year later it was reported that

There were very few [patients] in the hospital, not above 100; a great proportion of them wounded. There were a number in the regiments not fit for duty, on account of the measles [but these cases were not considered to be severe enough to warrant sending them to the General Hospital] . . . (*Collections of the New-York Historical Society for the Year 1880 1881*: 51)

All medical supplies and all but four of the sick were removed from the hospital just before Burgoyne's attack (*Collections of the New-York Historical Society for the Year 1880 1881*: 50-51). One of the surgeons' mates, James Thacher, later reported that

It was enjoined on me immediately to collect the sick and wounded, and as much of the hospital stores as possible, and assist in embarking them on board the batteaux and

boats at the shore. (Thacher 1862: 83)

As the army retreated to Skeensborough (Whitehall), New York, Thacher further noted,

among the hospital stores we found many dozen bottles of choice wine, and breaking off their necks, we cheered our hearts with the nectareous contents. (Thacher 1862: 83)

The Excavation of the Mount Independence General Hospital

The foundation of the Mount Independence General Hospital appears today as a rectangular outline of dry-laid field stones, extending for 250 feet east-west and 25 feet north-south. Now covered with cedar trees, the foundation walls are well defined in some spots and invisible in others. The building stood on what is now the western edge of the "Red Trail," one of the



Figure 6. Artifacts excavated from within the Mount Independence General Hospital in 1958–1959. These consist of medicine cups of white salt-glazed stoneware (upper left), a saucer with “scratch blue” decoration (lower left), a “worm” used to clean the bore of a musket (upper right), and small glass medicine bottles or vials (lower right).

modern-day walking trails that is maintained for visitors by the Vermont Division for Historic Preservation. Given its size, the hospital foundation is the most visible survival within that part of the site which was occupied by the “Second Brigade,” a cantonment composed of regiments from New Hampshire, New York, and Massachusetts and commanded by Colonel James Reed of the 2nd Continental New Hampshire (*Wayne Orderly Book* 1963: 99, 101). (The locations of the First, Second and Third Brigades are all depicted in sketches drawn by John Trumbull in July and August of 1776—see Frese 1971.) However, the hospital foundation is also surrounded by dozens of low earth and stone “mounds,” all that remains from the fireplaces and chimneys of huts and houses. Many of these were archaeologically tested in 1989 and 1990 (see Howe 1991), revealing scatters of wine bottles, pottery, animal bones, musket balls and gunflints. Some of these artifact clusters also contain rose head nails

and fragments of window glass, suggesting more substantial houses that were built as officers’ quarters.

A review of historical sources indicates that the General Hospital building was originally two stories high, of wood frame construction, and large enough to hold 600 men at a time (*Collections of the New-York Historical Society for the Year 1879 1880*: 79; Weeden 1899: 113). A sizeable wing was still being added onto the western end of the building at the time the British arrived, and this would have turned the hospital into an L-shaped structure (with the original building as the long leg of the “L”). However, there had not been sufficient time to complete the new wing, and the short leg of the “L” now appears as a large cellar hole (FIG. 5).

Early military hospitals in the American colonies are sometimes researched by archaeologists and historians (Seidel 1987: 247–252; Torres-Reyes 1971; Starbuck 1988: 29), yet many



Figure 7. 1990 excavation within the approximate center of the Mount Independence General Hospital.

encampments did not have general hospitals, and many were located in urban settings where hospital sites have not survived to the present day. On the other hand, the isolation of the General Hospital at Mount Independence resulted in the excellent preservation of its foundation walls, as witnessed by visiting scholars over the years (e.g., Lossing 1851: 148). Some collecting has occurred here, and a Vermont game warden, Thomas Daniels, excavated within the foundation in 1958–1959. His collection was subsequently donated to the State of Vermont, and his finds included five medicine cups of white salt-glazed stoneware, one white salt-glazed bowl, one white salt-glazed saucer with “scratch blue” decoration, several knife blades, and numerous fragments of glass medicine bottles and stoppers (FIG. 6; also see plates 33–37 in Starbuck, Howe, Murphy, and DeAngelo 1991). Given the rarity of professional excavations of other 18th-century hospitals, this small artifact assemblage is perhaps the most distinctive and important collection yet recovered from Mount Independence.

Because of its very brief occupation (only 1–

2 months), the removal of medical supplies by Potts and Thacher, and the frequent disturbance by collectors, it was anticipated that artifacts would be scattered very thinly within the hospital, with architectural remains predominating. Still, it was hoped that excavations in 1990 would establish the locations of fireplaces, doorways, and midden scatters, and that enough might have survived to determine the locations of different functional units or rooms within the building. Of special interest was the question of whether British troops had made use of the hospital after capturing it from American forces. It was unknown whether the British advance guard, under Brig. General Simon Fraser, had brought its casualties to this hospital after the nearby Battle of Hubbardton on July 7, but that seemed quite likely. However, this raised the additional question of whether artifacts found within the hospital might be British rather than American.

During the summer of 1990, a total of 67 one-

Table 1. General Hospital: Artifact Classes and Groups Excavated in 1990.

<i>Kitchen Artifact Group</i>	
creamware sherds	26
tin-glazed earthenware (delft) sherds	23
soft-paste porcelain sherds	1
white salt-glazed stoneware sherds	11
gray salt-glazed stoneware sherds	1
unrefined stoneware sherds	4
unidentifiable pottery sherds (burned)	35
wine bottle fragments	139
burned wine bottle fragments	279
glass tableware/vial fragments	50
burned/melted glass fragments	195
knife blade (10.48 cm long)	1
<i>Bone Group</i>	
cow bones (chiefly foot bones)	23
pig tooth (left P ₃)	1
sheep bones (right radius & left tarsal)	2
deer tooth (3 fragments of 1 molar)	1
bird bone (tarsometatarsus)	1
Total animal bone fragments:	513
(111 burned & 402 unburned)	
<i>Architectural Group</i>	
rose head nails/spikes	984
hand wrought nails (unident. heads)	190
T-head nails	16
L-head nails	17
<i>Arms Group</i>	
gunflints (gray, English)	3
musket balls (.64 cal. & .69 cal.)	2
lead sprue fragments	4
cast iron shot (1.17" dia.)	1
cleaning jag for a musket	1
hammer fragment from a pistol	1
<i>Clothing Group</i>	
iron buckle	1
British 20th Regiment button	1
metal buttons	3
bone button	1
cuff link (blue stone in center)	1
<i>Tobacco Pipe Group</i>	
tobacco pipestem fragments (4/64" bore)	1
tobacco pipestem fragments (5/64" bore)	2
tobacco pipe bowl fragments	5

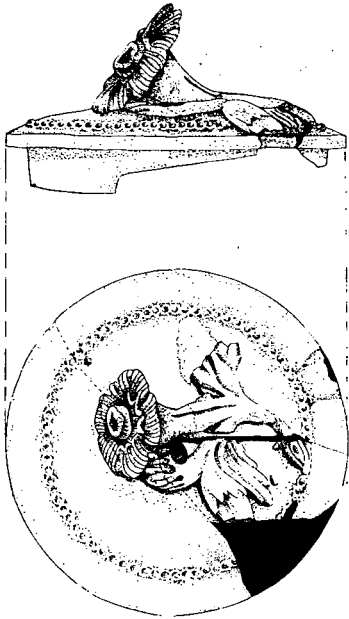


Figure 8. Lid from a creamware bowl, 2" (5.08 cm) in diameter; English, Leeds. Found in a trash pit on the northern edge of the General Hospital. (Drawing by Ellen Bollert.)

meter-square test pits were placed within the Mount Independence General Hospital. Excavation was by troweling, and all features, stones, and most artifacts were mapped in situ (FIG. 7). In confirmation of historical sources, few recognizable medical supplies were discovered within the hospital, although a small trash pit was found just outside the northern wall of the hospital foundation. This pit contained butchered cow bones, as well as a delft ointment pot, an extremely ornate lid from a creamware bowl (FIG. 8), tobacco pipe fragments, a knife blade, numerous nails, a few buttons, and one cuff link. (All artifacts from the hospital are summarized in Table 1.)

Throughout the foundation of the hospital, nearly 1000 nails were recovered, and these ranged in size from small 1-inch (2.5 cm) shingle nails to spikes over 3 inches (7.6 cm) long. Types included rose head, L-head, and T-head nails (TAB. 1), and preliminary observations suggested that all of the nails longer than 2 inches were located near the foundation stones, while nails 2 inches or shorter in length were

fairly evenly distributed throughout the excavations (Dennis Howe, personal communication, 1991). More nails per pit were found in units near the foundation than in those placed near the center of the structure, and analysis of the nail collection suggests that the structure had been completed beyond framing to include board walls, possibly floors, and a shingled roof. Still, the building may have had a rather unfinished appearance because virtually no fragments of window glass were found, and probably no window sashes had been installed.

The hospital clearly contained several fireplaces because there were four large concentrations of stone evenly spaced along the length of the foundation (FIG. 5). Excavation in the westernmost concentration of stone rubble revealed only a few brick fragments, suggesting that the chimneys may still have been under construction when the building was destroyed (although large quantities of brick also may have been carried off by collectors). Alternatively, fireplaces and chimneys may have been constructed solely of stone.

Over 400 fragments of wine bottles (oftentimes melted or burned) were discovered in the hospital (TAB. 1), scattered throughout the entire foundation, and this widespread distribution provides corroboration for James Thacher's comment about sampling the stores of choice wine from the hospital's "ample stores" while he was sailing south to Skeensborough (Thacher 1862: 83). The wine bottles may have been melted during the burning of the General Hospital by British forces in November of 1777.

Other artifacts recovered within the hospital include a cleaning jag for a musket, 2 musket balls, 1 piece of cast iron shot, 1 buckle, several tobacco pipestems, 3 gunflints, a few buttons, and numerous animal bones (food remains). Artifacts such as these are identical to the classes of artifacts found in all of the Second Brigade hut sites and certainly suggest that the principal use of the hospital space was as living quarters. One of the buttons is especially interesting because it was left by the British 20th Regiment of Foot. The 20th was one of the units led by Brig. General Simon Fraser as he pursued the retreating Americans on July 6, and it is extremely tempting to speculate that this button came from the uniform of an injured British soldier who had been taken to the American hospital for treatment.



Figure 9. Butchered cow bones exposed on the northern edge of Site 65 (facing south).

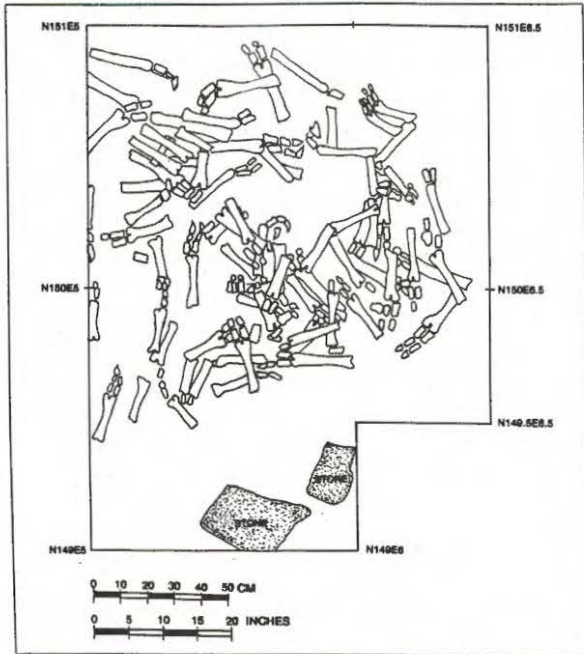


Figure 10. Plan of cow bones found on the northern edge of Site 65. (Drawing by Dennis E. Howe.)

Large numbers of butchered cow bones were found in a disposal pit about 46 m north of the hospital foundation, on the northern edge of an isolated cabin site which has been termed "Site 65" (FIGS. 9, 10). This evidence—coupled with the large numbers of wine bottles and Jeduthan Baldwin's references to dining in the hospital—suggests that feeding the sick was a primary activity within the General Hospital during its brief period of use. The 513 bone fragments found *within* the hospital foundation (TAB. 1) reflect a minimum of just one cow, one pig, one deer, one sheep, and one bird (species unidentified), whereas the cow bone disposal pit (Site 65) contained a total of 726 bones, reflecting a minimum of 17 cows (based on 17 left metatarsals and 17 left metacarpals.) The bone pit also contained one fish bone (species unidentified), but otherwise the bones consisted of cow metapodials, phalanges, carpals, and tarsals—a total of 64 articulated lower legs. The deposit represented body parts with little food value, and these were probably the first parts to be discarded during large-scale butchering, prior to the consumption of fresh beef by men in the hospital or in the Second Brigade cabins which were south of the hospital. Within the bone disposal pit, a single cow tibia was present, and this exhibited saw marks, under magnification, on the distal end above the malleolus. This is the only case where the use of a saw in butchering was observed out of the many thousands of bones and fragments recovered from Mount Independence (Bruce Hedin, personal communication, 1991).

During the 1990 excavations, the eastern end of the hospital foundation was completely exposed, but elsewhere the scale of the digging was kept modest so as to maintain the integrity of the structure. Numerous soil disturbances were found, indicative of the years of digging by collectors, and "medical" artifacts were extremely rare. The only possible "medical" artifacts recovered in 1990 were the knife blade and delft ointment pot found in the trash pit outside the hospital, and some thin-walled sherds of white salt-glazed stoneware that probably came from medicine cups.

Pottery and porcelain were poorly represented within the collection (TAB. 1). There were no sherds of redware or slipware, only a single sherd of soft-paste porcelain, and very small quantities of creamware, delft, white and gray salt-glazed stoneware, and unrefined

stoneware. A small quantity of pottery (n=35) was unidentifiable because it had been burned beyond recognition. Given the extremely fragmentary nature of the collection, it was impossible to determine the minimum number of vessels represented, and the only recognizable vessel was the creamware bowl-lid (FIG. 8) found just outside the hospital foundation.

Conclusions

In studying the General Hospital on Mount Independence, it was impossible to find enough activity-specific artifacts to be able to define the functions and outlines of individual rooms; the scarcity of medical supplies in the hospital was disappointing, although expected. Still, enough architectural evidence was recovered in 1990 to reveal the nail distribution, the locations of four fireplaces, the absence of glass in the windows, the presence of a shingled roof, and evidence for an unfinished wing that would have given the hospital an "L-shaped" configuration.

It should be noted that the Mount Independence hospital is, to date, the only 18th-century military hospital to have been professionally excavated within the United States. Given the importance of medicine and surgery at all military sites of the 18th century, this may appear surprising, but most other hospitals appear not to have survived and so could not be tested archaeologically. Archaeologists and historians would do well to seek out any surviving examples of these structures and to study the evidence they contain for early health care. While the Mount Independence hospital was occupied only briefly and was stripped of supplies by doctors as they left in July of 1777, it is hoped that other hospital sites will be found that will provide a more complete archaeological record.

Acknowledgments

The research on Mount Independence has been made possible through the efforts of the Vermont Division for Historic Preservation, the University of Vermont, Castleton State College, the Fort Ticonderoga Association, and the Town of Orwell. Special thanks go to Dennis E. Howe, William C. Murphy, Gordon and Barbara DeAngelo, Bruce Hedin, Mary

Cassedy, Sherry Mahady, John Dumville, Audrey Porsche, Giovanna Peebles, David Skinas, Eric Gilbertson, Howard Coffin, Mark Fitzsimmons, Ted Baumhauer, Nicholas Westbrook, James Gabler, Mike Audet, Jean Beck, and the many students and volunteers who participated in the field and laboratory. Thanks also go to the anonymous reviewers for their help in improving this article.

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