PERSONAL POSSESSIONS FROM THE H.M.S. BOSCAWEN: 
LIFE ON BOARD A MID EIGHTEENTH-CENTURY WARSHIP 
DURING THE FRENCH AND INDIAN WAR

A Thesis 
by 
GAIL ERWIN

Submitted to the Office of Graduate Studies of 
Texas A&M University 
in partial fulfillment of the requirements for the degree of

MASTER OF ARTS

December 1994

Major Subject: Anthropology
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Approved as to style and content by:

Kevin J. Crisman
(Chair of Committee)

John Canup
(Member)

Donny L. Hamilton
(Member)

Vaughn Bryant
(Head of Department)

December 1994

Major Subject: Anthropology
ABSTRACT

Personal Possessions from the H.M.S Boscawen: Life on Board a Mid Eighteenth-Century Warship During the French and Indian War. (December 1994)

Gail Erwin, B.A., University of New Orleans
Chair of Advisory Committee: Dr. Kevin J. Crisman

From 1759 to 1760, during the later stages of the French and Indian War, the H.M.S Boscawen sailed with General Jeffrey Amherst's flotilla against French rivals on Lake Champlain. In addition to serving as a warship, the Boscawen was used to transport soldiers and supplies to British fortifications along the lake. With the formal conclusion of the war in 1763, the Boscawen was taken out of military service and moored at the King's Shipyards below Fort Ticonderoga. Stripped of armament and rigging, she rotted and sank into the mud.

Between 1983 and 1985 the discovery and excavation of the sloop Boscawen were carried out as a multidisciplinary study of naval architecture, maritime history, shipboard life, and artifact conservation. The excavation produced over 5,000 artifacts; the assemblage reported here consists of 1,345 items relating to the crew's clothing, diet, and recreation. The study of these artifacts has contributed to our knowledge of shipboard life on British Army warships during the French and Indian War, indicating the terms of interaction between British and Provincial forces, and reflecting the relationship between the armies and navy.
To Mom
and in memory of
Dad
ACKNOWLEDGEMENTS

This thesis would not have been possible without the efforts of several people who worked on the excavation and study of the collection. The Vermont Division for Historic Preservation, Lake Champlain Maritime Museum, and Fort Ticonderoga Museum provided the funding, logistical support, and enthusiasm throughout the course of the excavation and analysis of the artifact collection. A special thank you is extended to Nick Westbrook and Bruce Moseley of the Fort Ticonderoga Museum and to Arthur Cohn of the Lake Champlain Maritime Museum who provided me with funding, laboratory facilities at the Museum to research the collection, and encouragement throughout the long process.

I owe an enormous debt of gratitude to Dr. Kevin Crisman for his guidance in all aspects of the research and writing of this thesis, and for allowing me to be a small part of this project.

Finally, I would like to thank my family for the continued moral support. I am grateful to my sister Michelle for her assistance in preparing the graphics and for her sense of humor during the many hours of editing. And a special thank you is reserved for my mother who never gave up on me.
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CHAPTER I
INTRODUCTION

In 1759 the British and Provincial forces in North America launched an attack to drive the French from their fortifications along the Lake Champlain corridor. This attack signalled the final stage of Britain's conquest of Canada. After three violent wars with the French in the late seventeenth and early eighteenth centuries, the British were finally poised to end the French imperial presence in North America.

Lake Champlain separated the two colonial empires for over 150 years, but by 1758, at the height of the French and Indian War, the French had gained control of the waterway through the construction of fortifications at Ticonderoga and Crown Point, and with a small fleet of ships that patrolled the lake. In order for the British to invade Canada, they first had to gain naval superiority of Lake Champlain and remove the French from Ticonderoga and Crown Point.

After the successful campaign against the French fortifications in 1759, British commander General Jeffrey Amherst began to build a naval flotilla for an invasion of Canada. Amherst ordered the construction of the 155-ton brig *Duke of Cumberland* and the 115-ton sloop *Boscawen* at King's Shipyard at Ticonderoga and the radeau *Ligonier* at Crown Point. In October of 1759 the vessels were ready and the British quickly proved their naval superiority on Lake Champlain, capturing the French fleet. By 1760 Canada had fallen to the British.

With the signing of the Treaty of Paris in 1763 and the removal of the French threat in Canada, the strategic importance of Lake Champlain declined and the vessels in the fleet were taken out of service and moored at Ticonderoga. Sometime after 1767, the vessels were stripped of armament and rigging and left to rot at their moorings. They eventually sank into the mud.

In 1983 the Vermont Division for Historic Preservation sponsored a survey of the waters around Mount Independence and Fort Ticonderoga to

The journal used as a model for style and format is *Historical Archaeology*. 
locate the remains of the “Great Bridge” which connected these two points during the Revolutionary War. During the survey, the remains of three hulls were discovered in the mud and weeds on the New York side of the Great Bridge. The hulls were identified as a French sloop, a bateau or gunboat, and the British sloop **Boscawen**. The remains proved to be the oldest vessels found in Lake Champlain.

The **Boscawen** rested under six to eight feet of water and was buried in the mud with only six to 12 inches of her frames protruding. Approximately 40 percent of the hull remained of the 70-foot-long vessel and included 65 feet of the keel, 11 feet of the stem, and seven feet of the stern post, which had one gudgeon still attached. Twenty-six square and half frames were present and consisted of the floors fastened over the keel and a series of overlapping futtocks fastened to the exterior planking, rather than to each other. Fifty-three feet of the keelson, 10 external planking strakes, ceiling planking, three orlop deck beams, and a mast cap were also noted (Crisman 1985:358-363).

In addition to the hull, over 5,000 artifacts, including tools, rigging equipment, weapons and ordnance stores, and personal possessions from the crew were located. The personal possessions, which included the remains of the crew’s clothing, diet, and recreation, tell the story of shipboard life on an eighteenth-century army warship in the American colonies, just prior to the American Revolution.

The French and Indian War was a war experienced by common men. In order to understand the role that the **Boscawen** played in the French and Indian War, it is first necessary to examine the events in Europe and North America which led up to the fourth colonial war between the British and French. Once the political aspect of the war has been established, the war must then be examined from the perspective of the men who experienced it, through the cooperation between the British Royal Army and Navy, and through the interaction of the British and Provincial armed forces.

Much of the research on shipboard life in the eighteenth century has focused on life in the Royal Navy or aboard merchant ships, as in N.A.M. Rodger’s **The Wooden World** (1986) and Marcus Rediker’s **Between the Devil and the Deep Blue Sea** (1990). While these examinations of seagoing
shipboard life are informative, *Boscawen* was somewhat unusual for her time, being a combination warship and transport built by the British Army and crewed by regular and provincial soldiers and sailors. The most valuable comparative source, then, is Fred Anderson’s *A People’s Army* (1984), which examines life in the provincial and regular armies during the North American campaigns, using the personal journals, diaries, and letters of the men who lived through the war. Contemporary North American military sites, such as Forts Michilimackinac (1715-1781) and Ligonier (1758-1766), as well as vessels transporting military personnel, such as the *Invincible* (1758), the Revolutionary War American privateer *Defense* (1779), and the British transport ship *Betsy* (1781) are worthy of study for comparative information on shipboard life.

By combining an analysis of the artifacts found on the wreck with an examination of documents concerning life in the British and Provincial military, the story of life aboard the small, cramped sloop *Boscawen* may be revealed.
CHAPTER II
COLONIZATION AND COLONIAL WARS

Separated by forests and mountain ranges, the French and British colonies in North America peacefully coexisted for the greater part of the seventeenth century, until England declared war on France in 1689. British foreign policy was designed to promote and protect her trading power in Europe and North America, but by the end of the seventeenth century, she found herself competing for resources on two continents. Through three wars between 1689 and 1748 the balance of power had remained virtually unchanged. The fourth and final conflict, the French and Indian War, would decide the cultural and political future of the North American continent.

The colonial settlements of France and England in North America differed greatly. The colonization of New France began in 1608 with the founding of Quebec on the St. Lawrence River. New towns gradually developed, including Montreal in 1642, but the colony remained centered in the St. Lawrence Valley; the river provided the colony with direct access to the Great Lakes and the continent’s interior (Crisman 1988:129). French colonists engaged in fishing, farming, and lumbering, but even more lucrative was the fur trade with the Indians as trappers found a ready market in Europe for beaver, rabbit, and fox hides.

Although Quebec’s location was ideal for the fur trade, New France was not able to independently sustain itself, and supplies necessary for its survival had to be shipped across the Atlantic Ocean. Compounding this problem, the St. Lawrence River froze solid every winter, isolating the colony for several months each year. In wartime, the survival of the colony was in even greater jeopardy when the British concentrated their vessels in the Gulf of St. Lawrence, creating a blockade and intercepting any ships attempting to enter the river and reach the colony.

The English had been colonizing the eastern shore of the continent since 1607. Although some settlers participated in the fur trade with the Iroquois, their primary goal was to clear the land and establish new towns and farmsteads. Their colonies rapidly expanded along the eastern seaboard in the
seventeenth and early eighteenth centuries, capturing territory settled by the Dutch on the Hudson and Delaware Rivers. However, the westward expansion of the English colonies was halted due to the lack of a good waterway into the continent’s interior, a route that would have to be gained through negotiation or war.

Separating the rival French and British colonies were vast forests and mountain ranges, a barrier broached by only two navigable waterways (Figure 1). Between the two countries’ territories lay the Mohawk and Oswego Rivers connecting the Hudson River to Lake Ontario. Although the route involved several difficult portages, it gave the British their only path into the Great Lakes. This water route would be instrumental in the 1760 campaign against New France and the fall of Montreal (Anderson 1984: 20).

The second and more direct water route between the colonies was the Champlain waterway, which was comprised of Lakes Champlain and George, extending between Quebec and the Upper Hudson River in New York. To the south, Lake George is only a short distance from the Hudson River, while Lake Champlain’s northern extremity empties down the Richelieu River into the St. Lawrence River. The Champlain waterway became the contested frontier in the colonial era and the corridor for raiding parties during the four colonial wars.

During the early period of colonization, Europe was embroiled in the Thirty Years War (1618 - 1648) and several international conflicts: France opposed Spain and Holland, Sweden fought with Poland, Germany and Venice battled the Turks, and England, following a civil war, clashed with Holland and Spain (Peckham 1964:1). France and England and their colonies remained on relatively peaceful terms until late in the seventeenth century.

The first three colonial wars began in Europe then spread, on a much smaller scale, to North America. In the War of the League of Augsberg (King William’s War in the New World, 1689-1697) and the War of the Spanish Succession (Queen Anne’s War, 1702-1713), no more than 5,000 men per side were under arms at any one time in North America (Peckham 1964:2). The
FIGURE 1. Navigable Waterways from the Great Lakes to the Atlantic Ocean.
two wars were, in actuality, one long conflict interrupted by five years of peace.

The face of war in the colonies was also different from that in Europe. Wars were fought in the forests and mountains in North America, not on proven battlefields as in Europe. Having fought with the Indians over land rights, the colonists recognized the importance of tactical intelligence that could be gained from the natives, and each side began to ally itself with the various Indian nations.

**King William's War (1689 - 1697)**

When the colonists learned in 1689 that they were at war, New York and Massachusetts had already had several skirmishes with Canada. King Louis XIV and his French ministers in Paris ordered the Comte de Frontenac in Canada to strike back and seize New York. Sixteen-hundred troops and militia were to be mustered and sent down Lake Champlain to the Hudson River to rendezvous with two warships and lay siege to New York and New Hampshire. Recognizing the king's failure to comprehend the difficulties of warfare in the wilderness, Frontenac overruled the plan in favor of several surprise attacks on military outposts, villages, and farms along the English frontier.

The English responded to the attacks by raising a militia and impressing all available ships to repel the French and launch their own futile invasion of New France on two fronts. The invasion via Lake Champlain, however, had to be halted when they realized they had forgotten to bring the necessary boats to make the trip down the lake (Crisman 1988:139).

Sir William Phips of Massachusetts led the second raid on Quebec in 1689 with a fleet of 34 vessels and 2,200 provincial militiamen. Phips bombarded Quebec for over a month, but the French held their position, refused to surrender, and forced him to return to Boston. Both sides recognized their inadequacies and avoided any further large-scale attacks, although raiding parties continued to harass each other until 1697 when peace was declared through the Peace of Ryswick.
Queen Anne’s War (1702 - 1713)

After five short years of peace, England and France took up arms in Europe in the War of the Spanish Succession. Louis XIV had nearly succeeded in acquiring the “natural borders” of the Pyrenees, Alps, and Rhine River in the previous war, and he was determined to try again. With the death of King Charles II of Spain, the Sun King attempted to ally France to Spain, but England refused to allow Louis’ personal ambition to upset the fragile power balance and the war resumed.

The colonists were again dragged into the conflict, known in North America as Queen Anne’s War. Once again Paris sent orders for a grand invasion and conquest of New York City and Boston. Realizing he lacked the funds and men for a full-scale attack, the Canadian governor resorted to small raids along the frontier.

The British replied by sending their navy to attack French Acadia and Quebec in 1709 and 1711. Both times they were repelled by the French and their own incompetence. In 1711, 10 ships ships were lost in the Gulf of St. Lawrence though poor navigation, forcing the commander to abort the invasion. The only British success during the war came with the surrender of Port Royal, Acadia in 1710. While the acquisition of the town did not change the war’s outcome, the British had gained entrance into the Gulf of St. Lawrence and the French colonies (Crisman 1988:139).

Queen Anne’s War ended in 1713 with the Peace of Utrecht, but the war had been a complete failure for France; the treaty prevented the sought-after alliance with Spain, drained the state’s treasury, interrupted trade, and lost part of Canada. Upon Louis XIV’s death, he was succeeded by his five-year old grandson and France was ruled by regency, further depressing the economy. When Cardinal Fleury succeeded the regent, he attempted to restore the economy, renew the alliance with Spain, and confine England’s growing power in Europe and America.

Although peace had been declared in Europe, the intercolonial raids continued. During this era of “peace”, the French began to strengthen their control over the two interior water routes. Fort Chambly on the Richelieu River and Fort Frontenac on Lake Ontario were bolstered by building Fort
Niagara in 1726 at the western end of Lake Ontario and Fort St. Frederick in 1734 on upper Lake Champlain (Figure 2).

While the new fortifications in the Champlain Valley and on Lake Ontario caused uneasiness in the British colonies, the establishment of Fort Louisbourg on Cape Breton Island, Acadia in 1720 posed the greatest danger. This massive fort was called the "Gibraltar of the New World" (Peckham 1964:99). Part citadel and part harbor, the fort became the base from which the French could launch attacks on British merchant and fishing vessels (Crisman 1988:139). Thirty-foot high stone walls supported 250 cannons to guard the entrance to the harbor with a fortified town to the west and two batteries to the east: one on an island at the entrance and the other, the Great Battery, just inside the harbor on the centershore. Fort Louisbourg became the catalyst for the British challenge to French expansion.

Following the Treaty of Utrecht, Europe maintained an uneasy peace for 30 years due, in part, to the deaths of the monarchs involved and their successors' interests in other areas. After Louis XIV's death in 1715, France's regent opted for personal wealth over international intrigue. England's George I, a Hanoverian who succeeded Queen Anne in 1714, was so disinterested in governing England that the new two-party government was able to push through reforms in Britain and regulate commerce in the colonies.

Spain continued to decline. The monarchy's support of tradition, church, and an incompetent ministry resulted in a sagging economy and loss in trade. She managed to maintain her hold on her colonies, but the territorial expansion of the sixteenth and early seventeenth centuries was over (Peckham 1964:79).

The state of Europe was mirrored in the North American colonies. As in England, the British colonies had grown more powerful, doubling in population and expanding over the eastern seaboard. France's disinterest in its Canadian colony resulted in relatively small population growth as the colonists hoped to make their fortune and then return to France. Spain's powerlessness in Europe was more pronounced in her colonies. Florida's
population remained around 2,000 and provided no enticements for new settlers to emigrate (Peckham 1964:79-80).

King George's War (1744 - 1748)

The three European powers eyed one another suspiciously but preferred to challenge each other only in America. Several minor conflicts over Florida, Georgia, and Cuba continued the enmity without causing full-scale war in Europe, until 1743. England had loaned money to Austria's Queen Maria Theresa and subsidized her troops to assist her in gaining control of her country. France, fearing England's potential influence over the Austrian monarch whom the French did not recognize, declared war on England, and the War of Austrian Succession was under way.

The War of Austrian Succession was called King George's War in America and officially began in the colonies in late May, 1744, although the French at Fort Louisbourg had received the news earlier and launched the first attack. Captain Francois Duvivier sailed with 600 men and surprised the British at the fishing town of Canseau. The 80 men at Canseau surrendered on the condition that they be returned to Boston. Duvivier agreed, but made a crucial mistake and transported his prisoners to Fort Louisbourg first.

Canseau's surrender inspired Duvivier to attack Annapolis Royal, Acadia, the former French town of Port Royal. He sailed from Louisbourg to the garrison in Acadia, demanding its surrender. Major Paul Mascarene refused, and Duvivier, expecting assistance from Louisbourg, held off on the attack, unaware that his reinforcements had refused to sail without direct orders from Paris. Instead of meeting two French ships, Duvivier found himself facing a warship from Boston entering the harbor. He gave up his attempt to seize Annapolis Royal and returned to Fort Louisbourg, finally releasing the Canseau prisoners (Peckham 1964:98).

Realizing how vulnerable their fishing communities were to raids from Fort Louisbourg, the New Englanders proposed to seize the French fort. The return of the Canseau prisoners, who had seen the fort's poor condition, convinced Massachusetts Governor William Shirley of the plan's merit. They reported on the poor morale at the French garrison, that only 100 of the 250 cannons were mounted, and that the wall of the Great Battery had two

The expedition, which took on the fervor of a crusade, departed from Boston on 24 March 1745. One week later, Governor Shirley received word that Commodore Peter Warren of the Royal Navy was en route with three large warships to lend his assistance. By the end of April, the fleet had anchored west of Louisbourg. For six weeks the British bombarded the fort’s walls while Warren’s blockade prevented supplies from reaching the French inside. Louisbourg endured heavy damage, but the French refused to surrender. William Pepperell, commander of the British forces, commented that he “gave them about nine thousand cannon balls and six hundred bombs” so that only one building had not been hit (Peckham 1964:105). By 15 June 1745 the French realized there was no hope of withstanding further bombardment and surrendered.

England immediately set about repairing the fortress and Warren was appointed as its governor. While they had successfully taken the fort, the victors had no idea how costly it would be to maintain; eight times as many men died from disease during the rebuilding than in battle (Peckham 1964:195). Their efforts were rewarded, however, when two French attempts to recapture it were successfully repelled.

France’s ministers were undaunted and ordered raids on New York, but it was clear that the war was winding down. The Treaty of Aix-la-Chapelle was signed 18 October 1748. In Europe, Maria Theresa was recognized as the monarch of Austria, French troops pulled out of Holland, Prussia retained Silesia, and Spain’s borders remained unchanged. But the terms for peace regarding America infuriated the British colonials. Fort Louisbourg was returned to Canada. The provincials were insulted and knew that if hostilities resumed, Louisbourg would have to be retaken. Having rebuilt the fort, essentially for their enemy, they knew that more men and ships would be needed to take the strengthened garrison a second time. The next time
they would not be so ready to enlist. Many colonials concluded that in the next war, the British could do the job alone.
CHAPTER III
THE FINAL CONFLICT: THE FRENCH AND INDIAN WAR

The Treaty of Aix-la-Chapelle brought peace to Europe and North America but settled nothing. Because no territorial agreement had been reached, Austria, Prussia, France, and England remained insecure about their place in the European hierarchy. The French army had proved its superiority over the British army, but the British navy demonstrated that it could destroy France's navy. And regarding the concerns of Britain's colonists, the treaty proved that they did not matter. All sides felt cheated and looked for an excuse to continue the war.

Maria Theresa of Austria, angered over the loss of Silesia, saw peace as a temporary truce and began to rebuild her army and form stronger alliances. England, her former ally, had made a separate peace with Prussia in 1745 and was flirting with Russia for a treaty to maintain English troops in Livonia and obtain timber for the Royal Navy. In Prussia, King Frederick I had his agreement with England, but he worried over the increasing cordiality between France, Austria, and Russia. If these countries united, Prussia would be surrounded and helpless, and would have to call on England for assistance. Frederick signed the Treaty of Westminster with England hoping that the British would keep Russia in check and dissuade Austria from entering Germany. Maria Theresa felt betrayed by England since there had been no formal termination of their alliance from the previous war. Unable to maintain diplomatic relations with England, who was now allied to her mortal enemy, Maria Theresa began to court another former enemy, France. On 1 May, 1756, the Treaty of Versailles was signed uniting Austria, France, Poland, and Spain. Russia signed in December, completing the reversal of former alliances (Durant 1967:42).

Still smarting over the loss of Fort Louisbourg, British colonials continued their expansion. Halifax, a new Nova Scotia fishing town, was founded in 1749, renewing the disputes over land and fishing rights. The French, in turn, began settling in the Ohio River Valley in territory that Virginia settlers and land speculators had been eying. To strengthen their North American holdings, the French were intent on linking Canada to
Louisiana by building a series of forts along the Ohio River. Both sides claimed ownership of the territory and were determined to retain possession. The English asserted not only that their colonial charters ran from ocean to ocean, but more importantly, that the Iroquois, recognized as British subjects since 1713, had conquered the Ohio River Valley, thereby making it British land. The French reminded the British that La Salle had reached the Ohio River in 1679 and had laid claim to the area for France. Both sides recognized the urgency to settle in the valley and take possession.

The French began surveying the region in 1747, establishing claims, setting up squatter settlements, and attempting to incite Indian resistance to the English. The Six Indian Nations were not willing to be put in the middle of a land grab. The New York Iroquois, who also claimed ownership of the valley, remained neutral, saying “we do not know what you Christians, English and French together, intend; we are so hemmed in by both that we have hardly a hunting place left” (Peckham 1964:129). However, they would not resist the French advance.

Virginia’s colonists, growing more uncomfortable with French encroachment, were determined to expel all foreign intruders within what they considered to be their borders. In 1754 a Virginia militia unit under the command of Major George Washington was sent to protect the men building a new fort at the confluence of the Monongahela and Allegheny Rivers. Before Washington arrived, the 41 men at the fort were challenged by 1,000 French soldiers and surrendered. The French destroyed the small fort and began construction of a larger structure, called Fort Duquesne.

Washington continued his march to the upper Ohio River, determined to expel the enemy. A small skirmish ensued and the French alerted the men at Fort Duquesne to send a large detachment to intercept Washington. When the two units met at Washington’s makeshift Fort Necessity, the French surrounded the stockade and demanded that the British return to Virginia. Realizing he was unprepared to face such a large French force, Washington relented and signed the capitulation.

Virginia abandoned its efforts to independently remove the French threat and asked London to intercede. The cabinet advised Virginia’s Lieutenant
Governor Robert Dinwiddie to follow France’s lead in the Ohio River Valley and build and maintain their own forts along the river. England was unofficially sanctioning an act of war, although she hoped to delay formal declarations in Europe until Spain’s neutrality could be established. Both sides saw that war in the colonies was inevitable, and that this time, France and Britain were going to be pulled into it.

Although Europe managed to delay the war for over a year, the final rift came on 8 June 1755 off the Newfoundland coast. A naval squadron commanded by Admiral Edward Boscawen had been disrupting French shipping in the Atlantic for months (Figure 3). On 8 June, Admiral Boscawen encountered two French troopships, the *Alcide* and the *Lis*. Following a brief fight, Boscawen captured the vessels. This battle represents the unofficial beginning of the French and Indian War, although formal declarations did not occur in Europe until 1756 (Crisman 1988:141).

In London, Parliament was hesitant to break the eight-year peace over Admiral Boscawen’s skirmish with the Canadians. William Pitt the Elder felt the time was at hand to settle the disputes the Treaty of Aix-la-Chapelle had left unresolved (Figure 4). Pitt argued that England had subdued nearly all of Europe through war or negotiations, but France was still openly challenging her. His daily pressure on Parliament convinced them that defeating France would give Britain the French colonies in America and India, as well as destroy the French navy. Pitt’s plan involved the treaty with Frederick of Prussia, who had a large army but no navy. He proposed to win the colonies by financing Prussia’s army in Europe; Frederick’s army would fight the land battles for England, defeat France, and Britain would win the war and half the world by annexing the French colonies. France would become part of Prussia as payment for Prussia’s role in the war. Parliament consented and war was declared on 17 May 1756. William Pitt assumed personal control of all British military operations, but his plan failed to recognized that the fighting had already begun on a full-scale in America (Anderson 1984:6; Durant 1967:40).

The early years of the war were disastrous for the British. In 1754 Major General Edward Braddock, commander in chief of British forces in North America, arrived at Williamsburg. Braddock believed he could quickly end
Figure 3. Admiral Edward Boscawen.
After an Eighteenth-Century Engraving, Artist Unknown.

Figure 4. William Pitt the Elder.
After an Engraving of a Portrait by William Hoare, 1753.
(John Carter Brown Library, Brown University.)
the war by simultaneously taking the French forts on the Ohio River, Lake Ontario, and Lake Champlain. His strategy called for his army to drive the French from Fort Duquesne and then assist Governor-Major General William Shirley’s attack on Fort Niagara. The third attack, on Fort St. Frederick at Crown Point in the Champlain Valley, would be led by William Johnson, commissioner of Indian Affairs and commander of the New York militia.

Braddock learned that the colonists resented the loss of Fort Louisbourg and were not willing to provide his army with a common defense fund or supply the necessary men and equipment. After months of stalling, Virginia, North Carolina, and Maryland finally relented and sent 2,500 men to assist two regiments of the regular army. The expedition to Fort Duquesne got underway in June 1755.

Progress was excruciatingly slow, and on the advice of George Washington, the detachment was broken up into three columns. The first was led by Lieutenant Thomas Gage with 450 troops and a few scouts. A second unit of provincials cleared a road for the gun carriages, and the main body of the army, with the supply wagons and a herd of cattle, followed. The French at Fort Duquesne had known of the British advance for days and sent out Indian raiding parties to harass Braddock. Then, on 9 July, 290 French regulars and militia with 600 Indians attacked the first column. Gage retreated, colliding with the second unit. While confusion reigned, Braddock tried to move his troops into firing lines, but after three hours, the British were in retreat and nearly 1,000 men lay dead or wounded, including the General (Peckham 1964:148). Washington led the survivors to Colonel Thomas Dunbar’s camp. Dunbar was offered an additional 500 provincials if he would lead another attack on Fort Duquesne, but he refused, preferring to return to winter quarters in Albany. This was in July.

With Braddock’s death, Governor Shirley assumed command of the North American forces. He began his advance to Lake Ontario with 2,400 militiamen but met with disaster every step of the way and was finally forced to return to Albany in October (Anderson 1984:10-12).
William Johnson's push toward Lake Champlain began more favorably. He managed to ally the Iroquois to the British and laid the groundwork for two forts, including Fort Edward on the upper Hudson River. Leaving some men at Fort Edward, Johnson marched north to Lake George, where the tracks of a French unit were spotted. Johnson ordered 1,000 men under the command of Colonel Ephraim Williams and Chief Hendrick of the Iroquois to attack the French. Hendrick remarked of the detachment, "if they are to be killed, too many; if they are to fight, too few" (Peckham 1964:149). Hendrick's comment proved to be accurate. The French slaughtered the men as they retreated back to Johnson's camp, where Johnson greeted the French with 1,700 soldiers behind breastworks and cannon. Many of the French officers were killed as they began their retreat. By dusk the French force encountered another militia unit from Fort Edward and were driven out of the area.

Following Hendrick's defeat and his own victory, Johnson canceled his march on Crown Point. In spite of his retreat and loss of half of his army, Johnson still managed to find himself on the victorious side and received a knighthood. He continued the construction of Fort William Henry at Lake George, but resigned his military commission.

The French remained entrenched in Fort St. Frederick and began building another fort on Lake Champlain ten miles south at the outlet of Lake George, a place the Indians called Ticonderoga. This new stronghold, named Fort Carillon by the French, would be the main obstacle to a British invasion of Canada for the following three years.

In 1756, Governor Shirley was removed from military duty and his command was turned over to John Campbell, Earl of Loudoun. Loudoun was an experienced Scottish officer, but was wholly unprepared for the military and political conditions in North America. He tried to bring the colonial governments under his control and appointed two aristocrats, James Abercromby and Daniel Webb, as his aides. He proposed to do the fighting with the regular regiments, while the provincials to paid for the war. He abandoned Governor Shirley's policies of reimbursing the colonial assemblies for money invested into the war effort and was skeptical of the Rangers, Shirley's elite scouting unit. His personality and polices alienated the
FIGURE 5. Louis Joseph, the Marquis de Montcalm.
After a Nineteenth-Century Engraving, Artist Unknown.

provincial assemblies, who eventually came to distrust and detest their new military commander (Peckham 1964:152).

In Paris, the king was unhappy with the state of affairs in Canada and selected Louis Joseph, the Marquis de Montcalm to oversee the Canadian forces (Figure 5). Although the Marquis de Vaudreuil was the official commander-in-chief, Montcalm was to be the true leader in the field. Unlike Loudoun, Montcalm selected two highly capable officers for his second and third incommand, the Chevaliers Francois Gaston de Levis and Francois Charles deBourlamaque. He arrived in North America on 3 April 1756 with 1,200 men and immediately went to Ticonderoga to inspect Fort Carillon. Satisfied with the progress on the fort, he turned his attention to Lake Ontario where disease and desertion had left the British Fort Oswego severely undermanned. He launched an attack and captured both the fort and the small fleet of warships and bateaux assembled there. With Fort Niagara on one end, Fort Frontenac on the other, and Fort Oswego rendered harmless, Lake Ontario became a French possession, with scarcely a shot fired by the British (Anderson 1984:13).
Loudoun was faced with more setbacks in 1756. Not only was Lake Ontario firmly controlled by Canada, but the colonies refused to lend any assistance to his army. The Virginia militia was more loyal to George Washington than to Loudoun, Pennsylvania's militia was forced to defend the frontier on its own, and the Mohawk Indians had to be enlisted to protect the troops against raids from the Huron, who were allied to the French. The provincials were under the control of the crown, but they were summer soldiers, serving for a year or less, and paid by their colonial assemblies. Loudoun believed this made them expensive, indifferent, and uncooperative, and he increasingly avoided using them.

Recognizing the futility of attempting to unite all the factions for an offensive campaign in 1756, Loudoun conceded that the year belonged to the French. He began planning an assault on Quebec for 1757 with 5,500 regulars and a fleet from England. Webb, with 6,750 regulars and provincials, would remain in New York as a defensive force (Anderson 1984:13). Although the colonies procrastinated, they eventually supplied the men.

Loudoun finally had the cooperation and men he needed for an invasion when he received orders from William Pitt to change his objective from Quebec to Fort Louisbourg. Ignoring the protests from the colonial assemblies, he proceeded to Cape Breton Island. The campaign was first halted by weather and then by the arrival of a French naval squadron. Loudoun aborted the offensive and returned to New York.

Meanwhile, Montcalm, with a force of 8,000 troops and Indians, laid siege to Fort William Henry on Lake George. The 1,300 men inside held out for six days. Major Webb had learned of Montcalm's plans, but sent only 800 men as reinforcements. On the seventh day of the siege, the colonial militia surrendered. Montcalm paroled his captives, allowing the men to keep their bags, arms, and horses provided they not serve again for 18 months. When the garrison of William Henry marched south to Fort Edward, Montcalm's Indians attacked the column, killing between 100 and 200 people before Montcalm was able to restore order. He returned the survivors to Fort Edward, but refused to press his own attack farther south (Steele 1990:144).
News of the failed attack upon Fort Louisbourg and the surrender at Fort William Henry was demoralizing for the British. As 1757 came to a close, the British had lost another stronghold and the French were in firm control of their territory in North America.

William Pitt, disgusted by two years of failure, recalled Loudoun to London and placed Abercromby in command, although his authority was severely limited. Pitt assumed direct control of the situation and abandoned Loudoun’s heavy-handed policies. Reimbursement, in specie or credit, was restored, the Rangers were reactivated, the commander-in-chief was demoted from viceroy to military leader, and the governors and assemblies regained control over their own finances. From 1758 onward, the American colonial assemblies enthusiastically supplied men, provisions, and money whenever Pitt requested assistance. He equipped and fed the provincials and declared that colonial rank was equal to English rank.

With the new spirit of cooperation, Pitt began to plan his strategy for 1758. His plan called for simultaneous offensives against Forts Carillon, Louisbourg, Frontenac, and Duquesne. Convinced that only a large army could defeat the French, he ordered the colonies to muster all available men to assist the regular forces. The assault on Fort Carillon was led by General Abercromby and Lord Howe, while the land and sea invasions of Fort Louisbourg, deemed the most important campaign, were entrusted to three capable military men: General Jeffery Amherst, Brigadier James Wolfe, and Admiral Edward Boscawen (Figure 6). Colonel John Bradstreet, former commander of the interior transportation service, or bateau service, was given orders to attack Fort Frontenac, and the ailing Brigadier General John Forbes, with George Washington as his second in command, marched on Fort Duquesne (Eggleston 1905:96-102). With Pitt as the commander-in-chief exercising direct control of the operation, the British were poised to launch their first major offensive in two years.

Twelve thousand troops were mustered and assembled in New York for the raid on Ticonderoga. Abercromby, provided with detailed instructions on how to deploy his troops, set sail for Fort Carillon in 900 bateaux and 135 whaleboats on 8 July, 1758. For reasons known only to him, he attacked the
French earthenworks at Carillon from the front, Montcalm's strongest position, and watched as nearly ten percent of his forces were cut down by barely 3,000 French defenders (Anderson 1984:14-15). Abercromby abandoned his attack and ordered a hasty retreat to Fort Edward; despite his miraculous victory, Montcalm understood how tenuous his position on Lake Champlain was.

The rout at Ticonderoga was the last success Montcalm would see. Just 18 days after his victory at Fort Carillon, Louisbourg surrendered to Amherst. Eleven thousand men under General Amherst and 157 warships and transports commanded by Admiral Boscawen simultaneously demolished the fort's walls and destroyed a French naval fleet, ending French sea power in North American waters. Although Louisbourg's Governor de Drucour held out for 44 days, on 26 July 1758 he raised the white flag and the St. Lawrence was open (Eggleston 1905:104).

In the continent's interior, Colonel Bradstreet organized a group of provincial soldiers familiar with Lake Ontario to mount an amphibious
assault on Fort Frontenac. The fort, the principle fur-trading post and supply base on the Great Lakes for the French, was presumed secure from British attack and manned by only a small garrison. Bradstreet led his small army in the bateaux from the Hudson River to Lake Ontario via the Mohawk and Onondaga Rivers, surprising the French and capturing the fort. The next day he sailed off in a captured brigantine and schooner laden with confiscated supplies, leaving the fort demolished, seven French ships in flames, and French domination of Lake Ontario in doubt (Anderson 1984:17; Eggleston 1905:103).

With the loss of Fort Frontenac, supplies were no longer getting through to the western forts, Duquesne and Niagara. As General Forbes and Colonel Washington slowly marched towards Fort Duquesne, the French inside were starving. When it became apparent that they would not be able to fight, the French withdrew, burning and abandoning the fort.

At the end of 1758, Montcalm could claim one victory, at Ticonderoga. But his forces had lost control of the Ohio Valley, the Great Lakes, and the sea route into Quebec. Most of France’s naval fleet was destroyed, captured, or blockaded, and the colony of New France was beginning to feel the effects of supply shortages.
CHAPTER IV
THE NAVAL CONTEST FOR LAKE CHAMPLAIN

By 1759 William Pitt’s strategy was yielding results. In Europe, France’s army was fully engaged and the English naval blockade was tightening its stranglehold on French shipping. The only blot on the previous year’s record was the fiasco at Ticonderoga, a situation Pitt was determined to rectify. He recalled Abercromby from duty and turned over command of the North American forces to General Jeffrey Amherst.

The strategy for 1759 called for the capture of three strongposts: Quebec, Ticonderoga, and Fort Niagara on Lake Ontario. Outlining his plans for the campaign, Pitt ordered that the invasion of Canada be led by General Amherst and achieved through Crown Point and Ticonderoga. Amherst would engage the French at Forts St. Frederick and Carillon, weakening the French resistance by distracting and dividing their forces, and opening the lake for an invasion to Quebec. And if Amherst deemed it to be feasible, they were to attack Fort Niagara (Dodsley 1792:29).

In late June, Admiral Charles Saunders sailed up the St. Lawrence River with 22 warships and 119 transport vessels. Anchoring near Quebec, General Wolfe and an army of 9,000 troops disembarked. For 10 weeks Wolfe advanced his siege and fired his cannons on the city’s civilian districts (Amherst in Knox 1968: 2:8-9; 2:60-61; Jennings 1988:420). He ordered scouting parties to burn the city in retaliation for Montcalm’s unsuccessful attempts to burn Saunders’ fleet. The battle remained a stalemate until 13 September, 1759, when Montcalm made a fatal error. Wolfe made a surprise landing upriver of Quebec City and led a small detachment up the bluff to the Plains of Abraham. While Montcalm readied his troops, the British moved the rest of their army onto the plains. When Montcalm realized he had miscalculated where the British had landed, he rushed to the Plains of Abraham and led a charge. The British fired and then countercharged. In 15 minutes the siege was over, both Wolfe and Montcalm lay dead, and Quebec had fallen (Anderson 1984:18; Jennings 1988:423; Amherst in Knox 1968:133-135).
At the same time that Montcalm was unsuccessfully defending Quebec, two interior defenses were also under attack. On Lake Ontario, Brigadier General John Prideaux and 3,000 regulars joined forces with Sir William Johnson and 1,000 Iroquois to lay siege to Fort Niagara. The garrison at Niagara had been left severely undermanned when the French commandant led a raid on the British at Fort Duquesne. After a three-week bombardment of Niagara's walls, the small French contingent was exhausted and surrendered. The loss of Niagara effectively cut off all French communication to the west and isolated Quebec (War Office Records [W.O.R.] 1826, 5:014).

In the Champlain Valley Amherst marched against Fort Carillon. After a siege of only four days, the French withdrew, blowing up the powder magazine and setting fire to the buildings before fleeing to Fort St. Frederic at Crown Point. Amherst decided to repair the structure and rename it Fort Ticonderoga, and, meanwhile, he sent scouts to track the French. Learning the French had also abandoned and burned Fort St. Frederic, he prepared to give chase down the lake to Isle-aux-Noix, first taking the small naval flotilla the French had built on the lake.

In planning the 1759 campaign, Amherst had seen the need for a navy of his own. Montcalm had begun building a naval squadron the previous year to defend the Lake Champlain-Richelieu River corridor, and by 1759 the fleet of a schooner and four sloops was nearing completion. Amherst, through his victories at Ticonderoga and Crown Point, now had a direct water route into the heart of French Canada, but first he had to create a navy. The building of the Lake Champlain fleet was entrusted to Royal Navy Captain Joshua Loring. Loring had served in the 1745 siege at Louisbourg and in the present war under Loudoun and Abercromby. He was commissioned by Amherst to build a brig and several gunboats at the landing below Fort Ticonderoga.

Upon his arrival at Ticonderoga in a 1759, Loring discovered there were no dockyard facilities, that the captured French sawmill was not functional, and that the waters around the landing were so shallow that a wharf was needed. Throughout the summer Loring and Amherst's subordinates battled each other. Rivalries between the army and navy interfered with Loring's
progress, much to Amherst’s annoyance. Colonel Miller, in charge of the
mill, commandeered it to saw plank for rafts to carry cannons to Crown Point.
Loring was accused of stealing supplies earmarked for the Royal Engineers.
But despite the quarreling, he had the dockyard built, the sawmill operating,
and the wharf nearing completion by 10 August, when he began cutting
timber for the brig (Amherst in Knox 1968:213).

On 16 August, the British received word the French had four vessels
completed and on the lake, including the schooner Vigilante, and sloops
Musquelongy, La Brochette, and L’Eturgeon, mounting a total of 28 guns
between them (Amherst in Knox 1968:51-52). After conferring with Loring,
Amherst decided that his brig and small gunboats were not sufficient to
challenge the French flotilla. They agreed to build a radeau, a barge-like gun
platform capable of carrying six 24-pound guns. Major Thomas Ord of the
Royal Artillery was given the responsibility of constructing the vessel at
Crown Point and having it ready in 10 days (Amherst in Knox 1968:52). On 29
September 1759, Ord’s 84-foot-long radeau Ligonier was launched.

As the 20-gun, 155-ton brig Duke of Cumberland was being launched on
the 31st of August, the French were launching their fourth sloop at Isle-aux-
Noix. Amherst was determined to improve his odds in this naval arms race
and burn the new French vessel. Major Ord and 12 men departed from
Ticonderoga on 4 September 1759 with direct orders to wait until 2 a.m. to
attack the ship. At 10 p.m. the Major dispatched one swimmer who attached
a fire dart to the French sloop and was promptly discovered. The French
guard sounded the alarm and fired into the water. The swimmers escaped
unharmed but lost the bombs (Lewis 1983:207). Amherst was infuriated by
Ord’s bungling and sent for Loring to discuss the growing French naval
threat. They decided another vessel would be necessary, and Loring set about
cutting timber to build a 16-gun, 115-ton sloop, which Amherst called
Boscawen (Amherst in Knox 1968:57).

Loring worked frantically to prepare Duke of Cumberland and Boscawen
for service in 1759. As cannons and powder were delivered from Forts
George and Edward, Amherst, meanwhile, began acquiring the provisions
from other outposts he would need for his army’s attack on the lake. He
ordered 30 bateaux from Fort Edward to bring 450 barrels of flour and 240 barrels of pork to Ticonderoga to load on the vessels and a herd of cattle was delivered to supply the fort with fresh beef (Munsell 1857:155). Additional provisions acquired by Amherst included 3,700 loaves of bread and “a constant supply of spruce beer [which] keeps the army in good health” (Munsell 1857:126; Amherst in Knox 1968:58).

By September’s end, Amherst learned he had barely enough men to crew the Duke of Cumberland and he still needed men for the Boscawen (Lewis 1983:208). Loring believed the brig should carry 70 seamen and 60 marines, and the sloop required 60 sailors and 50 soldiers. Orders were sent to the Royal, Forbes, Inniskilling, Royal Highlanders, and Prideaux regiments to detach 60 soldiers for the brig. Montgomery’s and Prideaux’s regiments were to supply 50 men for service on the Boscawen. If those regiments had any former sailors in their ranks, they were to be sent as well. One subaltern would command the detachment of troops on board each vessel, and Mr. Ball, an army surgeon’s mate, was dispatched to serve as surgeon on the Boscawen (Munsell 1857:178).

On 9 October 1759 Duke of Cumberland sailed from Ticonderoga to Crown Point with Loring in command. The Boscawen joined the brig and radeau Ligonier in Crown point on 11 October 1759. Lieutenant Alexander Grant had been given command of the sloop. Grant, a Scot, arrived in America in 1757 after serving for three years in the Royal Navy, distinguished himself during the 1758 campaign against Fort Duquesne, and was appointed to the rank of Lieutenant of Montgomery’s 77th Regiment in 1759 (National Archives of Canada [NAC] 1839, Clarence M. Burton Papers).

Amherst’s journal notes that both vessels arrived with a full contingent of marines, but as late as 10 October they were still struggling to find sailors. He began to tap the provincial troops for anyone with experience at sea. The orders for 10 October 1759 state:

The 52 seamen according to the following list [are] to assemble... and to be sent on board the Brigg (sic) and sloop as Captain Loring will direct:
Ruggles - 10 [Massachusetts Regiment]
Schuyler - 18 [Jersey Blues]
Fitch - 7 [Fourth Connecticut Regiment]
Babcock - 10 [Rhode Island Regiment] (Munsell 1857:179).
Although the orders state 52 seamen were to be expected, only 45 are specified. Nevertheless, on 11 October 1759 Amherst was prepared to launch his attack with or without the seven additional sailors.

At 4 p.m., Duke of Cumberland and Boscawen departed Crown Point to seek out the French flotilla. At the same time the army, in bateaux and whaleboats, formed four columns and rowed north following Amherst on board the Ligonier. All through the night the army rowed and sailed down the lake, following a light on the Ligonier. One bateau carrying Royal Highlanders mistakenly followed the light on the Duke of Cumberland and became separated from the convoy. At daybreak the bateaux approached a vessel they believed was from their convoy, but was actually part of a French flotilla. The French attacked and captured the bateaux and 22 men aboard (Amherst in Knox 1968:65). Upon hearing the guns, Amherst attempted to engage the French ships, but the weather changed and he was forced to take cover.

Loring and Grant continued to cruise past the French patrol fleet and by morning they had sailed 45 miles down the lake toward Grand Isle, where they spotted the French schooner Vigilante and gave chase. As the schooner ran for Missisquoi Bay, the British followed and ran both Duke of Cumberland and Boscawen aground. Grant got the Boscawen off easily but the Duke of Cumberland was hard aground. As Loring worked to refloat his vessel, the Vigilante escaped.

By late afternoon, both British vessels were back in the channel when they spotted three French ships which Loring recognized as the sloops Musquelongy, Brochette, and L’Eturgeon. Loring gave chase and drove the French sloops into Cumberland Bay; as night was falling he anchored the Duke of Cumberland and Boscawen to block their escape. At dawn, Loring and Grant discovered the Musquelongy had run aground, the Brochette and L’Eturgeon were scuttled in shallow water, and the crews had escaped overland during the night. Loring ordered Grant and Boscawen to salvage the guns, stores, and rigging from the French sloops, and Duke of
Cumberland went in search of the Vigilante (Amherst in Knox 1968:65).

The weather continued to deteriorate, upsetting Amherst’s plans. The storm that began on the 12th of October stranded Amherst and the Ligoner until the 18th when he was finally able to rejoin Loring and Grant. Amherst then received word that Wolfe had taken Quebec in September. With winter approaching, he had to abandon any hope of taking Isle-aux-Noix in 1759. Since the French were hemmed in by Wolfe’s army in Quebec and his troops in Ticonderoga, Amherst ordered his fleet to return to Crown Point for winter quarters (Amherst in Knox 1968:66).

As the fleet proceeded up the lake, Amherst ordered Boscawen to return to Cumberland Bay to weigh up the captured French vessels. With 200 men, Lieutenant Grant spent the next three weeks raising and repairing the vessels. By 17 November 1759 he had sailed the three French vessels into Crown Point with 36 English muskets, three blunderbusses, one wall piece, and two tons of musket balls (Amherst in Knox 1968:69). With the 1759 campaign, Amherst, Loring, and Grant had gained naval superiority over the French on Lake Champlain and opened a pathway into Canada for the following year’s campaign.

The French were facing defeat. Their Lake Champlain flotilla was left with only two vessels, the 70-ton schooner Vigilante and 65-ton sloop Waggon. Quebec had fallen and Montcalm was dead. The Chevalier de Levis assumed command, but he knew that France’s colonial possession of Canada was about to end.

1760 and the Conclusion of the French and Indian War

The British plan for 1760 focused on the conquest of Montreal and the remaining territory and forts held by the French. General John Murray sailed up the St. Lawrence River from Quebec City to Montreal while Amherst proceeded to join him by ascending the Mohawk River to Lake Ontario and then navigating down the St. Lawrence. Brigadier General William Haviland sailed down Lake Champlain and attacked the forts still held along the Richelieu River. All three armies then converged on Montreal on 6 September, 1760.
Inside Montreal the Canadian militia deserted the Chevalier de Levis, leaving the French regular army to defend the city. Governor Vaudreuil considered surrendering and sent his envoy to Amherst to discuss a truce. Amherst refused; he wanted Canada, control of the interior waterways, and Lake Champlain. Governor Vaudreuil agreed and on 8 September 1760 the treaty was signed, surrendering all of Canada to Amherst (Anderson 1984:21).

Although the major objective for the British was the capture of Montreal, in June 1760 Amherst learned of a French assault on Quebec and raised a small contingent of men under the direction of Major Robert Rogers. Rogers was instructed to engage the French and prolong the siege on Quebec until Colonel Haviland’s army arrived (Rogers in Stark 1831:99). Rogers rowed down the lake in bateaux under convoy with the Duke of Cumberland and Boscawen. He landed 12 miles south of Isle-aux-Noix and continued his advance overland. Grant sailed his vessels near the fort, drawing French attention away from Rogers’ advance on Isle-aux-Noix’s Forts St. Jean and St. Theresa.

Finding Fort St. Jean well guarded, Rogers marched toward Fort St. Theresa and ordered Grant to take the Duke of Cumberland and Boscawen to Isle la Moit (Rogers in Stark 1831:104). On 15 June, Rogers stormed the fort, burned it and the village, and freed 78 British prisoners before fleeing the island in stolen bateaux to rejoin Grant and make their escape (Lepine 1981:43).

Two months later on 16 August 1760, the Boscawen was once again sailing for Fort St. Jean on Isle-aux-Noix with Colonel Haviland and a fleet of 329 vessels including the Duke of Cumberland, the three captured French sloops, floating gun batteries, bomb-vessels, bateaux, whaleboats, and canoes (Lepine 1981:43). The French and British had exchanged fire for four days when Major Rogers attacked and captured the French flotilla anchored on the east shore. The French army under Chevalier de Bougainville, sensing defeat, evacuated the fort, leaving one officer and some soldiers to care for the wounded and face Colonel Haviland’s army. Bougainville escaped to Montreal just in time to join Governor Vaudreuil’s surrender to Amherst (Lepine 1981:43).
Over the final years of the war, the defeated French army was shipped out of Canada and the strategic importance of Lake Champlain declined. The Duke of Cumberland and Boscawen continued their service on the lake, but in a limited capacity as the British forces were increasingly redirected to campaigns in the Caribbean.

The American colonies and Europe were exhausted. In September 1762, England and France began negotiations for peace and by 10 February 1763 the terms were finalized and the Treaty of Paris was signed. The British received the French colonies in Canada and India but returned the Caribbean islands she had captured to France and Spain. Spain ceded Florida to the British, but received Louisiana from the French.

In Europe, France was nearly bankrupt and agreed to remain neutral toward Prussia and Austria and withdraw her army from Germany. Frederick of Prussia emerged as a world leader and established a truce with Austria, but he was not able to annex France as the British had promised. Russia had lost over 100,000 men, but survived both economically and politically (Durant 1967:63).

England's future looked brighter than anyone had expected, except perhaps for Robert Rogers who wrote in 1760:

> When we consider the great extent of country acquired by this conquest, the opportunities for extensive commerce, the security thereby afforded to the Province... and the irretrievable loss suffered by France, the reduction of Canada may be justly considered as one of the most important events in English history (Rogers in Stark 1831:111).

When the Treaty of Paris was ratified, the British began dismantling their army in America. The provincials were released from service and many soldiers in the regular army returned to England. British arms were placed in stores in America and Great Britain and most of the vessels on Lake Champlain were stripped of their armament and rigging and returned to the dockyard in Ticonderoga (Figure 7).

However as late as 1767 at least six large vessels were still in active service. Francis Grant, on a tour of New York and Canada, remarked that the Duke of Cumberland, Boscawen, two French sloops, two schooners, and
some bateaux were still used to defend shipping and that one of the sloops was employed during the summer between Ticonderoga and St. John's (Grant 1932:319-320).

Sometime after 1767, the vessels were no longer needed and were left to rot at the wharf, where they finally sank at their moorings up to the decks and upperworks. The exposed portions eventually decayed and washed away, leaving the lower hulls in the mud where they remained, forgotten for the next 200 years.
Figure 7. The Boscawen and Duke of Cumberland at Ticonderoga.
Illustration by Kevin Crisman.
CHAPTER V
THE ARCHAEOLOGY OF THE BOSCAWEN

Before the end of the 1760s, the warships at Ticonderoga had been left to decay at their moorings; stripped of their armament and rigging, the lower hulls slowly sank into the mud bottom. After two hundred years, very little remained above the mud to reveal their existence.

In August, 1983, an archaeological survey sponsored by the Lake Champlain Maritime Society for the Vermont Division of Historic Preservation and under the direction of Arthur B. Cohn and Kevin Crisman was undertaken of the waters below Fort Ticonderoga to locate the remains of the Revolutionary War-era “Great Bridge.” The bridge connected the fortifications at Mount Independence, Vermont and Fort Ticonderoga, New York (Cohn 1985, 14:337). Between 1775 and 1783 a new war was fought on the North American continent, this time between the British and rebelling provincials. During the years 1775 - 1777 British and Continental armies passed over the sunken hulls on the floating bridge which was built right over the wrecks of the French and Indian War vessels. It is likely that at least some of the equipment from Boscawen, Duke of Cumberland, and the other wrecks was recycled and used on Benedict Arnold’s 1776 fleet.

Historical information gathered before the survey helped the survey team define the area to be searched at the “old dockyard” below Fort Ticonderoga. The water in this part of the lake is shallow and muddy, and filled with aquatic weeds that made a side-scan sonar survey difficult. Therefore, the lake bottom was surveyed by a team of divers swimming in a tight search pattern. The five divers quickly located several of the bridge’s caissons in the water, and also discovered the remains of three submerged ships’ hulls.

The hulls were buried in the mud bottom with only their frame ends, stems, and stern posts protruding. The first hull was 65 feet (19.9 m) in length and the second hull was over 70 feet (21.3 m) long. The dimensions of the third hull could not be determined, but the vessel appeared to have a flat bottom.

Small test pits were dug in each of the hulls, revealing construction features that aided the survey team in identifying the hulls’ origins. The
timbers of the first hull were fastened with iron bolts of an unusual design that were believed to be French in origin. The second hull exhibited a framing size and pattern that suggested it may have been built for military service, which would suggest that the vessels were from the Revolutionary War period or earlier, and the third hull was flat-bottomed, resembling a large bateau or gunboat. It was fastened with the same bolts seen on the first hull, and was assumed to also be a French vessel (Crisman 1988:142-143).

The test pits also yielded a variety of artifacts, including iron hooks and spikes, a stone axe-head, and a spoon handle. Their locations were recorded and they were then removed, drawn, photographed, and reburied on the wrecks. The artifacts, in conjunction with the construction features and historical data, enabled the survey team to identify and date the buried hulls as vessels which had been part of the first military squadron built on Lake Champlain for General Amherst during the French and Indian War. The first hull appeared to be one of the French sloops built in 1758 and captured by the British in the 1759 campaign on Lake Champlain. The second hull was identified as the British sloop Boscawen, and the third hull was tentatively identified as a French bateau or gunboat (Cohn 1985:340; Crisman 1988:143).

The discovery was significant, for the hulls were among the earliest large vessels employed on Lake Champlain, yet very little was known from the historical record about their design or construction and even less about early shipboard life on the lake. The Duke of Cumberland had been salvaged and pulled from the lake in 1909 and placed on display in Ticonderoga, but after years of neglect and a fallen roof, very little of the original hull and no associated artifacts remained. The wrecks in the lake promised to answer many of the questions about the construction and outfitting of the ships, and about the living conditions of the sailors and soldiers who manned these warships.

The measurements, illustrations, and photographs collected in 1983 were used to formulate a plan to proceed with the following phases of the archaeological investigation.
1984 and 1985 Fort Ticonderoga King’s Shipyards Excavation

The investigation of the hulls in 1983 focused on the identification of the vessels and documenting their dimensions. The goals for the 1984 and 1985 field-seasons were to completely excavate one of the vessels, document the existing hull structure and associated artifacts, and recover and conserve the artifacts for future display in the Fort Ticonderoga Museum.

The first consideration was selection of one of the three hulls to be excavated; after considerable discussion the second hull was agreed upon as the best choice. The vessel was the largest of the three hulls, and based upon its size, position in the dockyard, and historical data, it was identified as the 115-ton sloop Boscawen, built in 1759 at Ticonderoga. Since this was the only vessel to which a name could be affixed, research would be easier and could possibly lead the excavators to the identities of the other two hulls (Cohn 1985:342).

Once the decision to excavate the Boscawen was made, specific facilities and equipment were required to meet the project’s objectives and goals. The project was scheduled for six weeks in 1984 and four weeks in 1985 and, therefore, on-site housing, conservation facilities, a dark-room, and diving headquarters for gear, pumps, and the compressor were needed. The housing for the crew was divided between two locations; the "Archy House" was on the New York shore approximately one mile from the work-site and the "Carriage House" was located only 300 yards from the site. The Carriage House also served as a conservation lab, drafting headquarters, and photographic laboratory.

A diving headquarters and a dock were necessary for the water-work and were supplied by the Fort Ticonderoga Museum. The Museum's boathouse was located on the shoreline at the old landing and was less than 100 ft from the bow of the Boscawen. (Figure 8). The project team adapted the building for their use with the addition of a set of outside stairs leading from the boathouse to a work-deck and dock they constructed at the water’s edge. Once power was installed for the air compressor, the excavation could begin.

The remains of the Boscawen were 70 feet by 23 feet and rested in only eight feet of water, but the visibility was often zero and the majority of the
FIGURE 8. The Location of the Boscawenon on the Fort Ticonderoga Shoreline. Illustration by Kevin Crisman.
hull was buried in three feet of soft mud and dense weeds. To keep the
divers off the muddy bottom, two 25-foot square grids, subdivided into five-
foot-square units, were suspended over the bow and stern sections of the hull
in 1984 and one grid was suspended over the midships section in 1985. The
grid also provided a definable system of organization and archaeological
control in the murky water (Figure 9).
The excavation required the use of two water dredges, which removed the
mud within the hull and redeposited it 50 feet away. Quarter-inch mesh bags
were attached to the exhaust pipes and insured that any small artifacts were
not lost (Cohn 1985:349). The bags were removed after each dive, and the
contents were carefully sifted for small finds such as buttons, nuts, and seeds.

Excavation Results

Once the dock, grid, and dredges were in place, the excavation began.
Three excavators were assigned to either the bow or stern sections in 1984 or
the midships section of the hull in 1985. The grid units were numbered and
each diver was assigned a specific unit to work in. Working in 90-minute
shifts, the excavators removed the mud in four inch levels. The positions of
large artifacts were recorded relative to the grid and depths within the unit
were recorded with a plumb bob. Each unit was excavated down the interior
of the wreck and then the hull timbers were measured and recorded relative
to the grid.

Ten minutes prior to the conclusion of each dive, the pump was shut off
and divers in the water finished their work, retrieved a fresh dredge bag, and
replaced their used bag with a new one for the next divers. The used bag was
turned over to the conservation staff, who checked the contents for small
artifacts. Following the dive, the excavators were responsible for preparing
notes on "excavation records" and cataloging any artifacts recovered. Each
artifact was illustrated, photographed, and placed into conservation treatment
(Cohn 1985:352).

A total of 10 weeks during the summers of 1984 and 1985 were spent
excavating the interior of the hull, documenting both timbers and artifacts.
Research had shown that the Boscauen had been stripped and abandoned, so
the excavators presumed that there would be relatively few artifacts associated
Figure 9. Wreck Plan of the Boscawen. Illustration by Kevin J. Crisman.
with the hull other than some buttons, musket shot, and glass fragments. By the end of the 1985 field-season, over 5,000 artifacts had been located, many of which were well preserved. The assemblage was varied and included tools (a pick-axe, brush knife, fascine knife, hammer head, and an axe), weapons and ordnance stores (musket barrels and stocks, bayonets, a powder flask, and shot), and rigging items (blocks, sheaves, deadeyes, a mast-cap, rope, and parrel trucks).

Among the 5,000 artifacts recovered from the Boscawen was a sizable number of the crew's personal possessions, an assemblage that reflects early shipboard life. The crew-related finds can be divided into several broad categories for analysis, such as dress (buttons, buckles, shoes, pins, and cufflinks), foodways (organic remains including bone and seeds and shells from edible plant species, mess tags, spoons, pewter plate fragments, glass and ceramics, and staved container fragments), personal possessions (razors, coins, a brush and comb, key, and a pair of navigational dividers), and amusements (gaming pieces and a jew's harp).

In describing the crew related artifacts in this thesis, a general format has been used to describe the physical properties of each artifact class. An introductory statement includes the number of artifacts, method of manufacture, and definition of their classificatory features. Following the introduction is the catalog for each class of artifacts. The catalog contains type descriptions, number of examples, illustration references, measurements in both English and metric units, distributional patterns and interpretations, and comparative examples from other military and civilian sites. Conclusions or summary observations may be presented within the text or, if necessary, will be included in the catalog.

The French and Indian War has traditionally been discussed on a political level, often ignoring the soldiers and sailors who experienced the conflict. The Boscawen material, when studied in conjunction with other British military and civilian sites, has provided a new perspective on shipboard organization and routine, lifestyle, and the interaction between the colonial and British forces. Since the Boscawen was crewed by both soldiers and sailors from the regular and provincial armies, the collection presented a unique
opportunity to investigate the military relationship between the Royal Army and Navy and the Provincial Army during the French and Indian War.

The crew-related artifacts can answer many questions about the men who served aboard the *Boscawen*. The Royal Army experienced frequent shortages in supplies, including shoes and uniforms, forcing many provincial units to supply their own uniforms or wear civilian clothing. The material from the *Boscawen* could reflect these shortages.

The army faced additional shortages in food supplies. In the early stages of the war, Loudoun suspected Governor Shirley and his provincial officers were embezzling stores and provisions (Anderson 1984:180). To put a stop to the stealing, he attempted to control the supplies going to the provincial troops, giving his commissioners the authority to control the rations. General Amherst continued this practice. The organic remains from the *Boscawen* could indicate if the supplies provided to them were sufficient or if the crew was supplementing their diet. The organic remains could also reflect the measures taken to prevent disease and malnutrition.

Living conditions aboard ships during the eighteenth century were notoriously bad, even by the more relaxed standards of those days: sanitation was inadequate, ventilation below deck was poor, and disease was rampant. But perhaps worse than the lack of sanitation and physical maladies aboard ship was the boredom that soldiers and sailors on warships often complained about. Between their routine duties and battle were long stretches of inactivity. Many turned to drink to pass the time, but alcohol could ease boredom for just so long. Did the men find other ways to occupy their time?

Naval service was often deemed a punishment that “incorrigible Army soldiers were often drafted into” (Copeland 1977:5). Whether *Boscawen* was manned by "incorrigible soldiers" or ordinary troops selected from the ranks of Amherst's army, objects they left behind, if properly interpreted, are a valuable contribution to knowledge of shipboard life in the colonial period.
CHAPTER VI
DRESS

"The Americans suffered by comparison with our Army in... appearance... for most of these unfortunates have only white cloth jackets, dirty and ragged, and many are barefooted"

The men who served and lived aboard the Boscawen were military men assembled from various nations and colonies who came to Ticonderoga with relatively few possessions other than their clothes, weapons, and a few mementos from home. Colonial soldiers were required to furnish their own uniforms consisting of a coat, jacket, breeches, shirt, stockings, shoes, and hat, although, as Baron von Clossen remarked, many men did not even have all of these basic necessities.

In the mid eighteenth century the British armed forces began to emphasize uniformity in military dress through a series of executive orders. The Royal Army soldiers were issued uniforms distinguishing individual units by the color of the lapel facings; once the army had used all of the available colors, the regiments varied the color of the buttons between yellow and white metal (Todd 1980, 9:163). In 1751, George II ordered the regimental numbers were to be displayed on the button faces of uniforms, but the army did not begin to follow the order until 1767 (Bingeman 1985:206).

The colonial army was expected to furnish its soldiers' uniforms at its own expense. For the first few years of the war, some provincial regiments had no standard of dress and many lacked coats. The colonial governors' frequently received requests from the front to furnish the troops with appropriate clothing. Most colonials were given the freedom to adopt uniform styles best suited to their assignments. Some units, such as the Rangers and members of the 60th Regiment of Foot (Royal American), adopted Indian dress with gray, brown, or green leggings and hunting shirts, while others preferred seaman–styled wool jackets, loose pantaloons, and shoes with heavy silver buckles (Copeland 1977:125–126). But most men, below the rank of an officer, simply wore their own clothing.
British uniforms were supposedly designed to keep the men warm during the cold New England winters but still allow them to move about comfortably. Although not officially part of the uniform, cloaks or great coats were cut from heavy English wool, natural or dyed blue and trimmed with lace or embroidery work to denote rank. They were large and loose, double or single-breasted, and hung below the knees. Under the surcoat was a buttoned-back, double-breasted wool frock coat. This collarless jacket was dyed indigo blue or red and faced with colored kerseymere to denote the unit. Lace, embroidered stripes, and metal buttons, indicated rank. The cuffs were slashed to display the sleeve buttons (Barker 1979b:247). A sleeveless kerseymere waistcoat was unlined, single-breasted, with embroidered pockets or pocket flaps (Copeland 1977:8). An unremarkable linen shirt, flannel breeches buttoned in front and buckled at the knee, roll-top stockings, and tied or buckled leather shoes completed the outfit (W.O.R. 1762:034).

Hats were varied according to unit and included the tall "Grenadier's cap" embroidered with silver and gold thread or lace, knitted wool tunque caps worn by many provincials, or Scottish bonnets popularized by the Rangers. However, most regiments wore black felt tricorns (Katcher 1975:22-46).

Flannel, wool, or skin mittens were issued to troops along with their arms, ammunition in cartridge boxes, water bottle, and a provision bag, each with its accompanying straps, slings, and buckles. This "comfortable" uniform, all totaled, weighed over 63 pounds (Katcher 1975:38).

The marines on the Boscawen were assembled from Montgomery's 77th and Prideaux's Regular Army Regiments whose uniforms were similar to the British style. The Boscawen also employed provincial soldiers whose dress probably differed from the standard cut. Seven men from the 4th Connecticut Regiment served aboard the sloop (Munsell 1857:178). Shortened surcoats and double-breasted, buttoned back red frock coats faced in white were popular among the Connecticut troops. They were often mistaken for the British Redcoat foot soldiers (Figure 10) (Copeland 1977:143).

Troops from the Jersey Blues also served aboard the Boscawen. This regiment had a superior reputation for discipline, character, reliability, and dress. Their uniforms were "a striking combination of blue coats faced with
Figure 10. Soldiers in Uniform Dress from the Jersey Blues (foreground) and 4th Connecticut Regiments (background).

After an illustration in John R. Elting's Military Uniforms in America.
red, buckskin or blue breeches, and gray stockings" (New York Mercury 1758). The coat was designed in the Highlander style: short, double-breasted with folded back lapels, slashed red cuffs to reveal buttoned sleeves, and buttoned pocket flaps. The red waistcoat buttoned over a checked shirt. Blue felt hats bordered in yellow were styled to denote rank. Their shoes and breeches were covered by white spatterdashes, or spats, buttoned up to mid thigh and buckled below the knee (Figure 10).

The Massachusetts militia who came to Ticonderoga in 1759 were dressed in knee-length blue coats faced in red. Their breeches were red or blue and they wore the "soldiers hat" or tricorn (Katcher 1975:42).

The excavation of the Boscawen produced no textiles which could be attributed to the crew's various uniforms. Mid eighteenth-century uniforms were typically fastened together with a multitude of buttons, buckles, laces, and pins, and not surprisingly, a great number of these accessories were encountered. A total of 93 buttons and sleeve links, seven buckles, and 19 pins, as well as 44 remnants from a dozen shoes were recovered.

**Buttons**

The most abundant single artifact type associated with the crew was the button; 93 buttons and sleeve links were recovered representing 24 classes and subclasses of clothing fasteners. Metal buttons predominated but wood and leather buttons were also discovered.

The eighteenth century was the heyday for the button as it increased in size, number, variety, and importance. Buttons were used on cloaks, surcoats, frock coats, waistcoats, shirts, pants, handkerchiefs, neck cloths, spatterdashes, and hats. If a garment needed fastenings or decoration, buttons were used and chosen with as much care as a piece of jewelry (Noel Hume 1961:380). During the 1750 to 1760 period, the typical British or Provincial full-dress uniform displayed anywhere from 75 to 100 buttons (Copeland 1977:143).

There are few hard and fast rules that can be applied to the identification and dating of buttons. Size is one feature that may be used to identify the garment a button was worn on. In general, surcoat buttons were larger than frock coat buttons, frock coat buttons were larger than waistcoat buttons, and
so on (Willet and Cunnington 1957:49). Most buttons were imported from England and expensive even though several pewter button-makers, called triflers, were operating in the colonies (Parkyn 1934:161). One suit ordered by General Amherst sported six dozen white-metal buttons. The suit cost just over 28 pounds, but the buttons amounted to 20 shillings (W.O.R. 1763:1882–A/C–13). In times of war, or when supplies were limited, soldiers would often recycle old fasteners or use home-made buttons. With button reuse, dating can be difficult and stylistic dates only apply to manufacture and not to use.

An ongoing debate concerning early button use is the practice of regimental numbering. 1767 was the recognized date when the Royal Army and Navy began numbering officers’ buttons (Parkyn 1934:159; Olsen 1963:552). Previously, the faces were either plain or ornamented with geometric or floral designs of a non–military nature. The Royal Navy 74–gun warship Invincible (1747–1758) has produced buttons bearing 12 different regimental numbers indicating that some British Army units began the practice closer to the time of George II’s 1751 decree. Neither Forts Michilimackinac and Ligonier, nor the Boscawen have produced numbered buttons, which tends to support a later date for regimental numbering.

One explanation for the anomaly on the Invincible was that at the time of her sinking the vessel was leaving England and carrying General Amherst’s army staff from General Cornwallis’s Regular Regiment. These men probably had access to uniforms made in England, where the original buttons could be engraved (Bingeman 1985:206). Soldiers in the colonies would not have had the same access to numbered buttons or the funds to afford them. Therefore, 1767 may be considered the period when regimental numbering was enforced in the colonies and by the Revolutionary War became a standard practice, as was seen by the collection of buttons from the American privateer ship Defense and the British collier brig Betsy.

The button is composed of several elements: the crown (face), back (reverse face), eye (attachment loop), boss (area the eye ends rest in), and filler (material resting between the crown and back) (Stone 1974:45). The design on decorated buttons is set off by the background. The eyes consisted of wires
with feet which were bent and affixed to the backing.

Type 1; 17 Examples; Figure C-1 a–q.

Type 1 buttons are the most common style found on the Boscawen. The crown and back are two pieces, each piece is hollow–cast in pewter or trifle (83% tin, 17% antimony), with the edges brazed together and flattened (Luscomb 1974:3). Standard sizes appear to be 5/8 – 7/8 inch (1.5 – 2.2 cm) overall diameter and 3/8 inch (.9 cm) thick. Two vent holes, 1/8 inch (.3 cm) in diameter and spaced 1/16 inch (.15 cm) apart, drilled in the back allow gases to escape during brazing. The eye was added later. Eye loops are iron or brass alpha shanks also known as "Sanders type," although most loops have since disintegrated (Luscomb 1974:19). The crowns are convex but the backs vary from flat or slightly convex to distinctly convex. Two buttons (03–314a, 03–318) have raised letters on the back. Type 1 buttons were the most common eighteenth-century buttons found on French and English Pre-Revolutionary War military sites including Forts Michilimackinac (Class 2, Series D, Type 1 button) and Ligonier (Type 1), on the French flagship Machault (1758), and on the ship Auguste (1761) (Stone 1974:53; Grimm 1970:62; Sullivan 1986:79).

**03–101c BUTTON**

**UNIT:** 404 level F  
**MATERIAL:** Pewter

**FIGURE:** C-1 a  
**DIMENSIONS:** Overall diameter – 7/8 in (2.2 cm)

The plain convex crown has deep central indentation and the back is slightly convex and flat on one side. The boss is 3/16 in (.4 cm) high but is missing its eye loop.

**03–103 BUTTON**

**UNIT:** 303 level D  
**MATERIAL:** Pewter

**FIGURE:** C-1 b  
**DIMENSIONS:** Overall diameter – 5/8 in (1.5 cm)

Hollow cast button has a slight mold line on the back face and the edges between the two faces are filed smooth after brazing. The plain, convex crown is dented near the edges and the back is slightly convex. The loop shank has broken off.

**03–105 BUTTON**

**UNIT:** 404 level F  
**MATERIAL:** Pewter

**FIGURE:** C-1 c  
**DIMENSIONS:** Overall diameter – 5/8 in (1.5 cm)

The plain crown is convex and the back is flat to slightly convex with a slight mold line still visible. The eye loop is missing.
03–116a BUTTON
FIGURE: C-1 d
UNIT: 404 level F
MATERIAL: Pewter
DIMENSIONS: Overall diameter – 7/8 in (2.2 cm)
Hollow cast button with a mold seam line that is visible on the back. Reverse
face is flat but may have been slightly concave. The eye loop is broken
although the brass feet remain. The convex face is slightly misshapen near
the edges. Examination under intense light indicates the presence of copper.
This button may have been brass plated or covered with a decorated brass cap.

03–199 BUTTON
FIGURE: C-1 e
UNIT: 405 level D
MATERIAL: Pewter
DIMENSIONS: Overall diameter – 5/8 in (1.5 cm)
This button is very distorted, with severe depressions on the crown and back.
The left vent hole is split open and the 1/8 in (.3 cm) boss is twisted. No mold
line is visible and the edges are filed smoothly.

03–242 BUTTON
FIGURE: C-1 f
UNIT: 411 level I
MATERIAL: Pewter
DIMENSIONS: Overall diameter – 5/8 inch (1.5 cm)
The flat crown has central indentation and the back is slightly convex but has
been flattened. The eye loop is broken.

03–272a BUTTON
FIGURE: C-1 g
UNIT: 412 on keelson
MATERIAL: Pewter
DIMENSIONS: Overall diameter – 7/8 in (2.2 cm)
The convex crown is somewhat flattened in center and the back is slightly
convex and cast around the feet.

03–272b BUTTON
FIGURE: C-1 h
UNIT: 412 on keelson
MATERIAL: Pewter
DIMENSIONS: Overall diameter – 7/8 in (2.2 cm)
The convex crown is depressed slightly around the edges. The back is
originally convex but has been flattened on one side.

03–314a BUTTON
FIGURE: C-1 i
UNIT: 412
MATERIAL: Pewter
DIMENSIONS: Overall diameter – 5/8 in (1.5 cm)
The convex crown appears to have concentric circles near the center. The
back is slightly convex and exhibits a raised "P" on left side and raised "H"or
"I" on right side.
03–314b BUTTON
FIGURE: C-1 j
DIMENSIONS: Overall diameter – 7/8 in (2.2 cm)
The crown is very convex but the back is only slightly convex and has one partially perforated vent hole. The seam line is prominently raised, 3/16 in (4 cm), on the back and is not filed. The eye is missing.

03–318 BUTTON
FIGURE: C-1 k
DIMENSIONS: Overall diameter – 5/8 in (1.5 cm)
The button has a convex crown and slightly convex back. The back face has raised "L" to the right of the seam line. Six buttons from Fort Ligonier has a raised "TL" on their backs. "TL" is an unknown American trifler in the eighteenth century, believed to have been working in Rhode Island (Noel Hume 1980:90).

03–353 BUTTON
FIGURE: C-1 l
DIMENSIONS: Overall diameter – 5/8 in (1.5 cm)
Both faces are convex with a prominent mold seam line across the back face. One vent hole remains closed. The eye loop is missing.

03–407 BUTTON
FIGURE: C-1 m
DIMENSIONS: Overall diameter – 5/8 inch (1.5 cm)
This button has a slightly convex crown and flat back. The eye and shank are not present. Copper traces indicate the button may have been brass plated or at one time was fitted with a decorative cap.

03–419 BUTTON
FIGURE: C-1 n
DIMENSIONS: Overall diameter – 5/8 in (1.5 cm)
This button has a flat face and a convex back giving it a cymbal–like shape. The iron eye loop is broken but the feet remain and are folded over. A slight seam line is visible between the boss and left vent hole.

03–487 BUTTON
FIGURE: C-1 o
DIMENSIONS: Overall diameter – 5/8 in (1.5 cm)
The crown and back are convex and the back exhibits a seam line. The eye shank is broken.
03–498 BUTTON
FIGURE: C-1 p
UNIT: 309 level F
MATERIAL: Pewter
DIMENSIONS: Overall diameter – 5/8 in (1.5 cm)
The crown is convex in cross section but has a severe indentation in the center. The back is slightly convex and damaged. The eye loop is missing.

03–560 BUTTON
FIGURE: C-1 q
UNIT: 608 level C
MATERIAL: Pewter
DIMENSIONS: Overall diameter – 5/8 in (1.5 cm)
The crown is convex and scratched. The slightly convex back exhibits an indentation in the center near the boss. No eye loop remains.

Type 1–A; 1 Example; Figure C-2 a.

Type 1–A is a hollow cast button with a decorated button cover. It is identical to Type 1 buttons in all other aspects.

03–397 BUTTON AND COVER
FIGURE: C-2 a
UNIT:403–503 level C
MATERIAL: Pewter
DIMENSIONS: Base: Overall diameter – 7/8 in (2.2 cm)
Cover: Overall diameter – 7/8 in (2.2 cm)
The base is convex and indented and the back is slightly convex with a prominent mold line. The button cover is separate from the base but has been clamped on with folded over edges. The cover's background has engraved parallel lines setting off a raised central checkerboard surrounded by a hexagonal, ropelike border. The interior of the checkerboard contains five pyramids. Surrounding the hexagon is a stylized scroll separated by small lengths of rope.

The Type 1–A button suggested that many Type 1 buttons may have had decorated covers, but no other cap could be positively identified as belonging to a Type 1 base. Button 03–397 may represent a British officer's regimental button. Type 1 and Type 1–A buttons were very common and used by civilians and the military from the 1750s–1780s. They cannot be identified as belonging exclusively to either officers or soldiers, but were sewn on both classes of uniforms. Type 1 and Type 1–A buttons are similar in size and were probably frock coat and breeches buttons.

One factor continued to show up in the analysis: the eye loop was invariably either missing or broken and appeared to be the cause for the loss of these buttons. Most of the eyes were made of thin iron wire, susceptible to
rust, thus weakening the wire. This, along with the physical nature of the work the crew performed, was likely to explain the large number of buttons on the wreck.

Type 2; 3 Examples; Figure C-2 b-d.

Type 2 buttons are pewter with no copper content. The neck, crown, and back were cast as one solid piece and the eye was then mounted on the thick neck. The eye hole was drilled after casting. A mold line is visible on the flat back. The crown is slightly convex. All three buttons measure 5/8 inch (1.5 cm) in overall diameter and are 1/8 inch (.3 cm) thick. Type 2 buttons were popular with the military from the 1720s–1770s (South 1964:118; Olsen 1963:552). They have been found at Forts Michilimackinac (Class 1, Series A, Type 5, Variety a) and Ligonier (Type 7), and on the American privateer Defense (Type 7) (Stone 1974:45; Grimm 1970:66; Smith 1986:111).

03–199b BUTTON
FIGURE: C-2 b
DIMENSIONS: Overall diameter – 5/8 in (1.5 cm)
   Eye: height – 3/8 in (.9 cm)
The plain crown is flat to slightly convex. The flat back exhibits a thick mold seam line which extends along the eye loop and is sharp and rough to the touch. The edge of the eye hole is not filed and is the likely explanation for the button's loss. During analysis, it abraded the threads used to attach it to a sample fabric.

03–220 BUTTON
FIGURE: C-2 c
DIMENSIONS: Overall diameter – 5/8 in (1.5 cm)
   Eye: height – 3/8 in (.9 cm)
The crown is plain and slightly convex with what appears to be solder affixed to the surface area. This suggests that a decorated cover was once attached to the button. The back is flat with one edge bent over. A faint seam line that has been filed smooth is visible.

03–413 BUTTON
FIGURE: C-2 d
DIMENSIONS: Overall diameter – 3/4 in (1.8 cm)
   Eye: height – 3/8 in (.9 cm)
The crown is slightly convex and the back is flat. The edge is beveled giving the button a wedge-shaped profile. The seam line on the back face is thick and rough on both sides of the eye hole.
Type 2–A; 1 Example; Figure C-2 e.

The Type 2–A button exhibit all of Type 2 features and have a decorated crown.

03–101c BUTTON
FIGURE: C-2 e
DIMENSIONS: Overall diameter – 7/8 in (2.2 cm)
Eye: height (incomplete) – 1/32 in (.2 cm)
UNIT: 404 level F
MATERIAL: Pewter

The crown is flat and has a raised floral motif consisting of an eight–point flower with "V"s between the petals. The background is plain. A seam line on the flat back has been smoothed and is only visible on one side of the broken eye shank.

Type 2 and 2–A buttons are all heavy, solid cast, one piece buttons with sturdy eyes. They were favored by the military as well as by civilians, resembling examples found at Brunswick Town (1726-1776) (South 1964:118). Their size and eyes indicate they were worn on an outer garment made from a heavy weight fabric, such as a wool surcoat or frock coat. The buttons are all found in the –05 units, before the mast, in areas where the ordinary seamen and soldiers resided.

Type 3; 3 Examples; Figure C-3 a-c.

Type 3 buttons are solid cast, one piece buttons with plain, flat crowns and convex, cymbal shaped backs. The heavy eye was cast onto the back without a neck, and the eye hole was drilled after casting. The buttons measure 5/8 inch (1.5 cm) in overall diameter and are 3/8 inch (.9 cm) thick. Boscawen Type 3 buttons resemble Fort Ligonier Type 10 and Fort Michilimackinac Class 2, Series C, Type 1, Variety–a buttons (Grimm 1970:66; Stone 1974:51).

03–093 BUTTON
FIGURE: C-3 a
DIMENSIONS: Overall diameter – 5/8 in (1.5 cm)
Eye: height – 1/4 in (.5 cm)
UNIT: 413 level G
MATERIAL: Pewter

The crown is flat and undecorated and the back is cymbal–shaped. Both surfaces are rough to the touch, the seam line is raised, and there appears to be solder on the crown, indicating a cover may once have been attached.

03–121 BUTTON
FIGURE: C-3 b
DIMENSIONS: Overall diameter – 5/8 in (1.5 cm)
Eye: height – 1/8 in (.3 cm)
UNIT: 413 level G
MATERIAL: Pewter

The face is smooth and flat with no decoration. The cymbal–shaped back has
a seam line that has been filed smooth. This button is more carefully finished than the other Type 3 examples.

03–433 BUTTON  UNIT: 410 level F
FIGURE: C-3 c  MATERIAL: Pewter
DIMENSIONS: Overall diameter – 5/8 in (1.5 cm)
            Eye: height – 1/4 in (.5 cm)
This button has a plain, flat crown and cymbal–shaped back with a heavy seam line. The edge around the eye hole is rough and may have contributed to its loss.

The solder on button 03–093 suggests that some Type 3 buttons may have once held decorative brass covers, but no covers could be positively matched. The style was popular with civilians in the 1760s–1780s and with the French military in the 1750s (Stone 1974:54). The Type 3 buttons are located in both the bow and stern and could not be conclusively attributed to either the officers or soldiers; similar buttons found in Fort Michilimackinac were encountered exclusively in civilian areas. The size and construction of the eye indicate they were sewn onto lighter weight fabrics. The button is designed to lay flat and not protrude from the surface of the garment. This feature would be desirable on waist coats, breeches, or spatterdashes.

Type 4; 3 Examples; Figure C-4 a-c.

Type 4 buttons are cast in two pieces then brazed together at the edges. The rounded eye is cast with the back and then drilled. Both faces are convex. They are pewter or brass, 5/8 inch (1.5 cm) in overall diameter and 3/8 inch (.9 cm) thick. Mold lines are no longer visible.

03–040 BUTTON  UNIT: 415 level E
FIGURE: C-4 a  MATERIAL: Pewter
DIMENSIONS: Overall diameter – 5/8 in (1.5 cm)
            Eye: height – 3/16 in (.4 cm)
Both faces are convex. The center of the crown has been flattened giving the button a wedge–shaped profile. The eye is drilled slightly off center, which would have caused the button to protrude slightly on one side when attached to a garment.

03–137 BUTTON  UNIT: 413 level H
FIGURE: C-4 b  MATERIAL: Brass
DIMENSIONS: Overall diameter – 1/2 in (1.4 cm)
            Eye: height – 3/16 in (.4 cm)
Two piece button cast in brass with a very convex crown and back. The crown is flattened in the center. The edges are smoothed, and no mold line is visible. This button is comparable in size and shape with other Type 4 buttons and Type 9 sleeve links.

03–262 BUTTON
PLATE: 4 c
DIMENSIONS: Overall diameter – 5/8 in (1.5 cm)
Eye: height – 3/16 in (.4 cm)

Both faces are convex although the crown appeared more rounded. The eye hole is centered and the edge is smooth.

Type 4–A; 1 Example; Figure C-4d.

The Type 4–A button exhibits all of Type 4 characteristics and has a decorated crown.

03–404 BUTTON
FIGURE: C-4 d
DIMENSIONS: Overall diameter – 5/8 in (1.5 cm)
Eye: height – 1/4 in (.5 cm)

The button is a solid cast Type 4 button with a slightly convex crown. The crown is decorated with a raised, five point star or floral motif. The points or petals are formed by parallel rows of dots which surround a stylized pinwheel center.

Type 4-B; 1 Example; Figure C-4 e.

This button is a one piece button with a flat crown and back. The eye is identical to Type 4 buttons. This type has been recovered at Fort Michilimackinac (Class 1, Series B, Type 5, Variety a), Kingsmill Plantation (1619-1800), and on the Defense (Type 6) (Stone 1974:49; Kelso 1984:128; Smith 1986:111). They enjoyed a long popularity from the 1720s–1770s (South 1964:118).

03–116b BUTTON
FIGURE: C-4 e
DIMENSIONS: Overall diameter – 5/8 in (1.5 cm)
Eye: height – 1/8 in (.3 cm)

The plain, flat crown and back are cast as one piece around the eye and a heavy mold line runs across the back and over the eye. The back face retains the maker's mark; a raised "S" and "E" are on either side of the eye. The button may have been made by master pewterer Simon Edgell, who worked in Philadelphia from 1713–1742 (Luscomb 1974:39).
Type 4, 4–A, and 4–B buttons have been classed together on the basis of the construction of their eyes; all have small eyes with no necks. Type 4, 4–A, and 4–B buttons, like Type 3 buttons, may have been worn on waistcoats or breeches, garments which required the buttons lay close to the fabric. The type has been associated with civilians at Brunswick Town and Kingsmill Plantation and with military personnel at Fort Michilimackinac and the Defense. They are found predominantly in the stern quarters on the Boscawen, but this may not imply that they were exclusively used by officers. Rather, they are unremarkable, common buttons likely to have been used on all classes of uniforms, and a type that may be a good example of button recycling.

Type 5; 7 Examples; Figure C-5 a-g.

Type 5 buttons consist of two elements, a brass disk and brass or copper eye. The plain crown and back are cast as a single unit around an omega–shaped wire eye. The crowns are flat to slightly convex and the backs are flat to slightly concave. No seam lines or casting plugs are visible. Sizes vary from 5/8 inch (1.5 cm) to 1 inch (2.5 cm) in diameter and 1/8 inch to 1/4 inch (.24 cm) thick. The feet are set into a sturdy boss. Type 5 buttons were very common eighteenth- century buttons and have been found on numerous civilian sites, including Rosewell, Virginia (1763-1772), Brunswick Town, Kingsmill Plantation, and the non–military sectors at Fort Michilimackinac (Noel Hume 1962:194–195; South 1964:117; Kelso 1984:128; Stone 1974:53). They have been associated with military personnel at Fort Ligonier (Type 9) and the Defense (Type 23) (Grimm 1970:66; Smith 1986:111).

03–159 BUTTON
UNIT: 413
FIGURE: C-5 a
MATERIAL: Brass
DIMENSIONS: Overall diameter – 1 in (2.5 cm)
The plain crown is flat with beveled edges and the back is slightly convex. The wire eye is missing.

03–266 BUTTON
UNIT: 412–413
FIGURE: C-5 b
MATERIAL: Brass
DIMENSIONS: Overall diameter – 5/8 in (1.5 cm)
Eye height – 5/16 in (.7 cm)
The crown is flat although one side is damaged, giving the face a slightly convex shape. The edges are beveled and the back is originally flat. The brass
eye is more rounded than on the other examples.

03–299 BUTTON  
FIGURE: C-5 c  
DIMENSIONS: Overall diameter – 1 in (2.5 cm)  
Both faces are flat and the edges are beveled. Crown exhibits several scratches and some indentations. The wire eye is absent.

03–414 BUTTON  
FIGURE: C-5 d  
DIMENSIONS: Overall diameter – 5/8 in (1.5 cm)  
Eye height – 1/4 in (.4 cm)  
The brass crown is slightly convex and the back is slightly concave. The omega shank eye is also brass.

03–434 BUTTON  
FIGURE: C-5 e  
DIMENSIONS: Overall diameter – 7/8 in (2.2 cm)  
Both faces are flat and the edges are beveled. The brass wire eye is broken but the ends remain. The boss is twisted and opened exposing the eye ends.

03–495 BUTTON  
FIGURE: C-5 f  
DIMENSIONS: Overall diameter – 7/8 in (2.2 cm)  
The plain crown is slightly convex with a rounded edge and the back is slightly concave. The wire eye is missing.

03–550 BUTTON  
FIGURE: C-5 g  
DIMENSIONS: Overall diameter – 5/8 in (1.5 cm)  
Eye height – 1/4 in (.4 cm)  
The crown is flat to slightly convex and the back is slightly concave. A brass omega shank eye is set into the boss. The crown has patches which appear to be gold plating.

Type 5–A; 2 Examples; Figure C-5 h-i.

These buttons exhibit all of the features of Type 5 buttons and have a decorative crown or cover.

03–101b BUTTON  
FIGURE: C-5 h  
DIMENSIONS: Overall diameter – 5/8 in (1.5 cm)  
The crown and back are both flat. The crown is engraved with a stylized sun or sunflower motif. Two curved rays are followed by a pointed ray which
may represent a leaf. Each ray or petal is formed by three parallel lines. The back retains the boss but the eye is missing. This button is heavier than the others in this class.

03-314c BUTTON
FIGURE: C-5 i
UNIT: 412
MATERIAL: Brass
DIMENSIONS: Overall diameter – 5/8 in (1.5 cm)
The base is a standard Type 5 button with a flat back. The copper eye ends are still present. A plain brass cover is convex and attached the the base by folded-over edges.

Type 5-B; 2 Examples; Figure C-5 j-k.

Type 5-B buttons are identical to Type 5 buttons in construction but also have a seam line along the back face.

03-181 BUTTON
FIGURE: C-5 j
UNIT: 512 level E
MATERIAL: Brass
DIMENSIONS: Overall diameter – 3/4 in (2 cm)
Eye height – 1/4 in (4 cm)
The crown is slightly convex with beveled edges and the back is slightly concave. A mold line on the back is faint and smooth. The wire eye is brass and thinner than the other Type 5 examples.

03-398 BUTTON
FIGURE: C-5 k
UNIT: 305 level B
MATERIAL: Brass
DIMENSIONS: Overall diameter – 3/4 in (2 cm)
The crown is originally flat but has been damaged. Several indentations are found in the center and around the button's edge. The back is also damaged but a heavy mold line is still visible. The boss has been twisted and the eye is no longer attached.

The decorative buttons suggest that many of the Type 5 buttons were once fitted with covers. Type 5 buttons were very common and used by both civilians and the military from the 1720s–1800s. They were manufactured in various sizes and used on many different types of clothing from cloaks and frock coats to breeches and spatterdashes, although the eye construction was not as suitable to surcoats or cloaks. The distribution was predominantly in the stern although some examples were found in the bow.

Type 6; 1 Example; Figure C-6 a.

The only example of a Type 6 button is a two piece copper fastener. The
crown and back are a single element that is cast around an omega eye shank. It closely resembles Type 5 buttons in eye construction. The crown is flat with slightly beveled edges rolling over onto the slightly concave, spun back. The type has been found on the French frigate *Machault*, at Kingsmill Plantation, and at Fort Ligonier (Type 9) (Sullivan 1986:79; Kelso 1984:128; Grimm 1970:66). It was popular among civilians from the early eighteenth century and into the nineteenth century.

03-493 BUTTON
FIGURE: C-6 a
DIMENSIONS: Overall diameter – 1 - 1/8 in (2.9 cm)
        Eye height – 1/4 in (.4 cm)
The flat crown and concave back are cast as a single unit around the eye. The size of the button, the largest in the entire collection, suggests it is probably a surcoat or cloak button.

Type 7; 1 Example; Figure C-6 b.
This is a single element button with an omega shank eye soldered to the back. The crown is slightly convex and decorated. The edges fold over onto a flat back. A wood or bone filler piece may have rested in the back. This button type has been recovered from Fort Ligonier (Type 14) and possibly from the *Defense* (Type 3).

03-482 BUTTON
FIGURE: C-6 b
DIMENSIONS: Overall diameter – 3/4 in (1.8 cm)
        Central depression diameter – 3/8 in (.9 cm)
        Eye height – 1/8 in (.3 cm)
The crown is convex. In the central depression is a stamped Tudor rose: a five petal flower, each petal separated by a small leaf. A raised ring surrounded the button's edge. This is the only button in the collection which can be identified as belonging to an officer's uniform. The Tudor rose was used on three classes of naval uniforms, Lieutenant's, Commander's, and Flag–Officer's full dress uniforms and frock coats. Button 03-482 is identical to the flag–officer's frock coat buttons in the National Maritime Museum in England and dates from 1748–1774 (Lewis 1945:64).
Type 8; 1 Example; Figure C-6 c.

This Type 8 button is composed of three separate elements: the crown, back, and eye. The crown is convex with the rounded edge brazed to the back. The eye is an alpha shank set into the back.

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<thead>
<tr>
<th>03–537 BUTTON</th>
<th>UNIT: 408 level C</th>
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<tr>
<td>FIGURE: C-6 c</td>
<td>MATERIAL: Brass</td>
</tr>
<tr>
<td>DIMENSIONS:</td>
<td>Overall diameter – 5/8 in (1.5 cm)</td>
</tr>
<tr>
<td></td>
<td>Eye height – 1/4 in (.4 cm)</td>
</tr>
</tbody>
</table>

The crown is decorated in a raised geometric and floral motif. The design is the same as a sleeve link found at Fort Michilimackinac (Class 5, Series A, Type 1, Variety a) (Stone 1974:68). This example may be a sleeve link and based on its shape would date to the 1750s (Noel Hume 1961:383).

Type 9; 6 Examples; Figure C-7 a-f.

This category consists of six sleeve links. The terminology for sleeve links is similar to that for buttons: crown (obverse face), back (reverse face or base), eye, set (glass fit into the back), and link (joins the two pieces). Each sleeve link has a sharply convex backing with a drilled eye cast into the back. All are of brass or pewter set with a convex glass stone. The diamond cut setting was placed into the base while the metal was still hot. The setting came in a variety of colors from clear to colored green, blue, red, yellow, or black. It could be smooth or faceted on the exposed surfaces. Side facets are visible only in plane view. Standard sizes are 7/16 inch (1.2 cm) in overall diameter and 3/8 inch (.9 cm) thick. Similar cuff links have been recovered from Forts Ligonier (Type 21) and Michilimackinac (Class 4, Series A, Type 2), as well as at Brunswick Town, North Carolina and Santa Rosa, Florida (1722-1752) (Grimm 1970:79; Stone 1974:70; South 1964:124–125; Smith 1965:69).

<table>
<thead>
<tr>
<th>03–153 SLEEVE LINK</th>
<th>UNIT: 413 beneath hull</th>
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<tr>
<td>FIGURE: C-7 a</td>
<td>MATERIAL: Pewter, glass</td>
</tr>
<tr>
<td>DIMENSIONS:</td>
<td>Overall diameter – 7/16 in (1.2 cm)</td>
</tr>
<tr>
<td></td>
<td>Glass setting diameter – 3/8 in (.9 cm)</td>
</tr>
</tbody>
</table>

The pewter back is convex with a small eye that has been flattened. The back has impressed parallel grooves radiating from the eye to the point of its maximum diameter. From that point the metal is smooth. The link is very ornate and measures 3/8 in (.9 cm). The clear glass inset has a smooth exterior and side faceting.
03–160 SLEEVE LINK
FIGURE: C-7 b
MATERIAL: Brass, glass
UNIT: 413
DIMENSIONS: Overall diameter – 7/16 in (1.2 cm)
Glass setting diameter – 3/8 in (.9 cm)
The convex brass back is plain with a small eye. The link is a simple figure "8" measuring 3/8 in (.9 cm). The clear glass setting is convex and flattened in the center to show off both top and side facets.

03–494a SLEEVE LINK
FIGURE: C-7 c
MATERIAL: Brass, glass
UNIT: 412
DIMENSIONS: Overall diameter – 7/16 in (1.2 cm)
Glass setting diameter – 1/4 in (.5 cm)
A plain, brass, convex back holds an opaline glass setting. The set has a smooth exterior surface and an engraved star at its base. The link is missing.

03–494b SLEEVE LINK
FIGURE: C-7 d
MATERIAL: Pewter, glass
UNIT: 412 level D
DIMENSIONS: Overall diameter – 7/16 in (1.2 cm)
Glass setting diameter – 3/8 in (.9 cm)
The pewter back is convex. The edge near the setting is riveted. The green glass inset is somewhat opaque and has top and side facets. No link remains.

03–540a SLEEVE LINK
FIGURE: C-7 e
MATERIAL: Pewter, glass
UNIT: 406–407 level C
DIMENSIONS: Overall diameter – 7/16 in (1.2 cm)
Glass setting diameter – 3/8 in (.9 cm)
The pewter back is convex and decorated. Two engraved lines encircle the base near its scalloped edge. The setting is clear blue glass with side facets and a star cut into its base. The glass is set into the base at an angle. No link remained.

03–540b SLEEVE LINK
FIGURE: C-7 f
MATERIAL: Pewter, glass
UNIT: 406–407 level C
DIMENSIONS: Overall diameter – 7/16 in (1.2 cm)
Glass setting diameter – 3/8 in (.9 cm)
The back is very convex and has a slightly different eye attachment. The eye is a thin omega shank that is not cast as one piece with the back. A mold line is visible across the back but not on the eye. Two engraved lines encircle the scalloped or riveted edge. The setting is clear glass, convex and flat in the center. The top surface is smooth and the sides are faceted. The link is missing.

Sleeve links were popular in the mid eighteenth century after 1740. The round shape of the sleeve links found on the Boscawen are typical for the
period of the 1750s and 1760s (Noel Hume 1961:383). Type 9 links with glass insets were more expensive than plain brass or pewter sleeve links and may have belonged to the officers. A single pair of General Amherst's sleeve links listed in his personal inventory of 1761 were valued at 2 shillings, 6 pence (W.O.R. 1761:034/01). When one considers that a sergeant's monthly salary was only 1 shilling, 6 pence, the likelihood that sleeve links belonged to the officers increases (W.O.R. 1762:043/5A).

Sleeve links are associated with civilians on several sites, but presumably with the more affluent citizens. On military sites, they are not encountered near the soldiers barracks with any regularity, but, rather, in areas frequented by officers (Stone 1974:76). The distribution of sleeve links is not exclusive to one area of the Boscawen's hull.

Type 10; 5 Examples; Figure C-8 a-e.

Type 10 sleeve links are constructed from one piece of brass with a drilled eye and both the disk and eye were cast at the same time. Eye shanks are slightly rounded or square; no mold lines are visible. Both faces are flat although the edge may roll over onto the back. All are decorated and joined by an oblong link. Several of the sleeve links on the Boscawen are identical to links found on other sites and the comparative material will be discussed in association with each example.

03–097 SLEEVE LINKS
FIGURE: C-8 a
UNIT: 413 level G
MATERIAL: Brass
DIMENSIONS: Overall diameter – 7/16 in (1.2 cm)
Eye height – 1/8 in (.3 cm)
Link length – 1/4 in (.4 cm)
The two octagonal disks are flat on both faces. The crowns are engraved with four point flowers. Separating each petal is a stylized leaf. An engraved border encircles the flower. The back is smooth. The two disks are joined by an "S" link. The links are extremely thin and delicate, measuring less than 1/16 in (.15 cm) in thickness.

03–130 SLEEVE LINK
03–417b SLEEVE LINKS
FIGURE: C-8 b, c
UNIT: 513 level C
UNIT: 406 level C
MATERIAL: Brass
DIMENSIONS: Overall diameter – 5/8 in (1.5 cm)
Eye height – 1/16 in (.15 cm)
Only one half of the pair 03–130 is present and it is torn nearly in half.
However, it is identical to 03–417b and additional information can be extrapolated from it. The octagonal crown is slightly convex or wedge shaped to display the small impressed floral motif. The five petal flower is centrally located. Each petal is separated by a small leaf. A stamped border surrounds the flower and the edge rolls over onto the back. The two disks are joined by an oblong brass link that is pinched slightly at one end. The design is very similar to a sleeve link from Fort Michilimackinac with an impressed geometric motif (Class 6, Series A, Type 2, Variety d) dating to the 1750s (Stone 1974:72).

03–417a SLEEVE LINKS
FIGURE: C-8 d
DIMENSIONS: Overall diameter – 9/16 in (1.6 cm)  
Eye height – 1/8 in (.3 cm)
UNIT: 404 level C  
MATERIAL: Brass
The crown is circular and flat and is decorated with six raised circles, each 1/8 in (.3 cm) in diameter, surrounding a central circle of the same dimensions. Between each large circle is a smaller 1/16 in (1.5 cm) diameter dot. The geometric pattern is set off by an engraved linear background. The back is smooth and attached to a square shanked eye. The link is oblong and pinched resembling a figure "8". A similar sleeve link was recovered at Fort Michilimackinac (Class 6, Series A, Type 1, Variety o) and was identified as having a raised geometric and floral crown popular after 1750 (Stone 1974:72). An identical silver Indian pawn button, worn by Native Americans and used as cash, has been identified in The Collector’s Encyclopedia of Buttons as dating to the late eighteenth and early nineteenth centuries (Luscomb 1974:108).

03–554 SLEEVE LINKS
FIGURE: C-8 e
DIMENSIONS: Overall diameter – 7/16 in (1.2 cm)  
Eye height – 1/4 in (.4 cm)
UNIT: 402 level C  
MATERIAL: Brass
Both faces are octagonal and flat. The crown is engraved with a four petal flower, resembling a dogwood blossom. Each petal is engraved with veins and separated by a stylized leaf and an engraved border surrounds the flower. The back is smooth with a rounded eye. An oblong link joins the two halves. This pair of cuff links are very delicate, measuring only 1/32 in (1 mm) thick. 

Type 10–A; 1 Example; Figure C-8 f.
This sleeve link is one half of a pair. It resembles Type 10 sleeve links in the eye attachment, but has a plain convex crown with folded over edges.
03–309 SLEEVE LINK  
UNIT: 411  
MATERIAL: Brass  
DIMENSIONS: Overall diameter – 1/2 in (1.2 cm)  
Eye height – 1/8 in (.3 cm)  
The round crown is plain and convex. An omega shank eye is soldered to the back. The link is oblong. Similar sleeve links were recovered at Fort Ligonier (Type 20) and Fort Michilimackinac (Class 6, Series A, Type 1, Variety h) (Grimm 1970:70; Stone 1974:70). This is a common type of 1750s sleeve link.

Type 11; 6 Examples; Figure C-9 a-f.

These button covers have been placed in a separate category although it is likely that they are varieties of other types. Since no definitive match could be made, they have been placed in a special category. All of the Type 11 button covers are undecorated caps whose edges fold over and clamp to a button base. Button covers are constructed from a thin sheet of copper, brass, or pewter.

03–125 BUTTON COVER  
UNIT: 413 level G  
MATERIAL: Copper  
DIMENSIONS: Overall diameter – 7/8 in (2.2 cm)  
Round, flat crown.

03–155 BUTTON COVER  
UNIT: 412  
MATERIAL: Pewter  
DIMENSIONS: Overall diameter – 15/16 in (2.3 cm)  
Round, convex crown with several indentations.

03–204 BUTTON COVER  
UNIT: 402 below hull  
MATERIAL: Copper  
DIMENSIONS: Overall diameter – 7/8 in (2.2 cm)  
Round, flat crown.

03–216 BUTTON COVER  
UNIT: 402 40–80" dbd  
MATERIAL: Copper  
DIMENSIONS: Overall diameter – 3/4 in (1.9 cm)  
Round, flat crown.

03–440 BUTTON COVER  
UNIT: 310 level C  
MATERIAL: Copper  
DIMENSIONS: Overall diameter – 15/16 in (2.3 cm)  
Flat crown with rounded edges.
03–461 BUTTON COVER
FIGURE: C-9 f
DIMENSIONS: Overall diameter – 5/8 in (1.5 cm)
Round, convex crown with rolled edges.

Type 11–A; 6 Examples; Figure C-10 a–f.

Type 11–A button covers are thin copper, brass, and pewter caps. The crowns are decorated with floral, geometric, and fabric-like designs.

03–034 BUTTON COVER
FIGURE: C-10 a
DIMENSIONS: Overall diameter – 5/8 in (1.2 cm)
The cover has a round, flat crown that has been torn around the edges. The face is impressed with a flowering vine surrounded by a wreath of leaves. The cover is extremely thin and delicate. The vine and wreath elements are similar to two button faces from Fort Michilimackinac (Class 4, Series B, Type 5, Varieties h,i) and Kingsmill Plantation dating between 1750–1780 (Stone 1974:61; Kelso 1984:128).

03–101a BUTTON COVER
FIGURE: C-10 b
DIMENSIONS: Overall diameter – 5/8 in (1.2 cm)
The cover is slightly convex with a raised pinwheel design. Between each spoke is a French scroll. A rope motif encircles the whole face and edges. The background is engraved parallel lines. Similar pinwheel patterns have been recovered from the Machault, Brunswick Town, and Fort Michilimackinac (Sullivan 1986:97; South 1964:118; Stone 1974:49). The pinwheel motif was popular throughout the eighteenth century, from the 1720s through the 1780s.

03–143 BUTTON COVER
FIGURE: C-10 c
DIMENSIONS: Overall diameter – 5/8 in (1.2 cm)
The convex crown is decorated with both impressed and raised figures on a plain background. Four small raised hearts are centrally located. Sixteen spokes radiate from the hearts: eight pairs of impressed longitudinal lines and eight spokes of raised horizontal dashes. The dashes increase in length as they radiate from the center. It resembles a Fort Ligonier button (Type 14) and an example from Fort Michilimackinac (Class 6, Category 3, Series B, Type 1, Variety ff) (Grimm 1970:70; Stone 1974:62).

03–357 BUTTON COVER
FIGURE: C-10 d
DIMENSIONS: Overall diameter – 7/8 in (2.2 cm)
The crown is flat to slightly convex with a raised geometric design on the face. Six spokes radiate out from the center ending in a French scroll. Lengths of rope are centered inside each spoke and a diamond rests at their junctures.

03-435 BUTTON COVER  UNIT: 410 level B
FIGURE: C-10 e  MATERIAL: Copper
DIMENSIONS: Overall diameter – 5/8 in (1.2 cm)
The crown is small and convex with a raised floral motif. A central six-point flower is surrounded by six petals composed of two rows of raised dots. A similar motif was found at Fort Michilimackinac (Class 6, Category 3, Series B, Type 1, Variety cc) (Stone 1974: 61).

03-557 BUTTON COVER  UNIT: 402 level C
FIGURE: C-10 f  MATERIAL: Pewter
DIMENSIONS: Overall diameter – 5/8 in (1.2 cm)
A small convex crown is decorated with alternating raised hearts and buckles which surrounded a central, double boxed flower. Each heart is formed with raised dots. The central background displays diagonal parallel lines.

Type 12; 13 Examples; Figure C-11 a-m.

Type 12 fasteners are actually wooden button backs, called blanks. Their edges have been rounded to fit into a crimped metal crown. Each disk has a centrally located hole to receive a wire eye. The crown is slightly convex with a flat back. Although Smith suggests that they were fastened directly to the fabric with thread, this would have been an unwieldy (and unlikely) attachment (Smith 1986:114). Most blanks were originally made in bone but the blanks recovered on the Boscauen were crudely carved and were likely manufactured on the site, to replace a lost or damaged backing. The blanks are found predominantly in the stern area of the hull, unlike the button covers which are more evenly distributed. They vary in size from 5/8 – 1 in (1.2–2.4 cm) in diameter and are approximately 1/8 in (.3 cm) thick. Wooden and bone blanks have been recovered from numerous eighteenth-century sites including Forts Michilimackinac and Ligonier, the Defense, the Terence Bay fishing schooner, Kingsmill Plantation, and Brunswick Town dating from the 1720s to the nineteenth century (Stone 1974:52; Grimm 1970:67; Smith 1986:114; Carter and Kenchington 1985:16; Noel Hume 1980:90).
02–072 BUTTON BLANK
FIGURE: C-11 a
DIMENSIONS: Overall diameter – 3/4 in (1.9 cm)
       Hole diameter – 1/8 in (.3 cm)
UNIT: 413 level F
MATERIAL: Wood

02–107 BUTTON BLANK
FIGURE: C-11 b
DIMENSIONS: Overall diameter – 7/8 in (2.2 cm)
       Hole diameter – 1/8 in (.3 cm)
UNIT: 412 level F
MATERIAL: Wood

02–137 BUTTON BLANK
FIGURE: C-11 c
DIMENSIONS: Overall diameter – 5/8 in (1.2 cm)
       Hole diameter – 1/16 in (.15 cm)
UNIT: 413 level H
MATERIAL: Wood

02–147 BUTTON BLANK
FIGURE: C-11 d
DIMENSIONS: Overall diameter – 5/8 in (1.2 cm)
       Hole diameter – 1/16 in (.15 cm)
UNIT: 413 level I
MATERIAL: Wood

02–218 BUTTON BLANK
FIGURE: C-11 e
DIMENSIONS: Overall diameter – 3/4 in (1.9 cm)
       Hole diameter – 1/16 in (.15 cm)
UNIT: 411 level I
MATERIAL: Wood

02–243 BUTTON BLANK
FIGURE: C-11 f
DIMENSIONS: Overall diameter – 5/8 in (1.2 cm)
       Hole diameter – 1/16 in (.15 cm)
UNIT: 412 level B
MATERIAL: Wood

02–255 BUTTON BLANK
FIGURE: C-11 g
DIMENSIONS: Overall diameter – 5/8 in (1.2 cm)
       Hole diameter – 1/8 in (.3 cm) – off center
UNIT: 412 level D
MATERIAL: Wood

02–256 BUTTON BLANK
FIGURE: C-11 h
DIMENSIONS: Overall diameter – 5/8 in (1.2 cm)
       Hole diameter – 1/8 in (.3 cm)
UNIT: 413 level C
MATERIAL: Wood

02–286 BUTTON BLANK
FIGURE: C-11 i
DIMENSIONS: Overall diameter – 1 in (2.4 cm)
       Hole diameter – 1/8 in (.3 cm)
UNIT: 403 level C
MATERIAL: Wood
02–288 BUTTON BLANK
FIGURE: C-11 j
DIMENSIONS: Overall diameter – 3/4 in (1.9 cm)
Hole diameter – 1/8 in (.3 cm)
UNIT: 305 level D–E
MATERIAL: Wood

02–327 BUTTON BLANK
FIGURE: C-11 k
DIMENSIONS: Overall diameter – 1/2 in (1 cm)
Hole diameter – 1/8 in (.3 cm)
UNIT: 410 level F
MATERIAL: Wood

02–352 BUTTON BLANK
FIGURE: C-11 l
DIMENSIONS: Overall diameter – 5/8 in (1.2 cm)
Hole diameter – 1/16 in (.15 cm)
UNIT: 410 level C
MATERIAL: Wood

02–415 BUTTON BLANK
FIGURE: C-11 m
DIMENSIONS: Overall diameter – 5/8 in (1.2 cm)
Hole diameter – 1/16 in (1.5 cm)
UNIT: 402 level C
MATERIAL: Wood

Type 12–A; 1 Example; Figure C-11 n.
This example is a five hole button back. It has a central hole used to index the turning tool and is surrounded by four attachment holes. The crown is notched to receive the cover and the back is flat. This button was attached with thread or wire cross eyes. Similar examples have been found on the Defense and at Forts Michilimackinac and Ligonier (Smith 1986:111; Stone 1974:57; Grimm 1970:66). Buttons of this type have been commonly worn by civilians from the 1750s up to the present time.

02–244 BUTTON BLANK
FIGURE: C-11 n
DIMENSIONS: Overall diameter – 5/8 in (1.2 cm)
Hole diameters – 1/16 in (.15 cm)
UNIT: 412
MATERIAL: Wood

Type 13; 3 Examples; Figure C-12 a-c.
Type 13 buttons are home–made leather disks with two holes for attachment. The holes are extremely small and indicate that thread rather than cat–gut was used to attach them. The crown and backs vary in shape from flat to convex to concave, although the different shapes may only reflect
uneven preservation. These buttons were undoubtedly used by ordinary seamen and soldiers, and may have been made in the field to replace lost buttons. Similar leather buttons have been recovered from the *Defense*, the *Machault*, Terence Bay wreck, and the Cornwallis Cave wreck (Smith 1986:111; Sullivan 1986:79; Carter 1985:16; Bass 1976:120).

04–051 BUTTON
FIGURE: C-12 a
DIMENSIONS: Overall diameter – 3/8 in (.9 cm)
Thickness – 1/8 in (.3 cm)
UNIT: 405 level F
MATERIAL: Leather

This button is very roughly cut and had three holes, one of which is close to the edge. It may have been mistakenly threaded and another hole was punched through closer to the center.

04–069 BUTTON
FIGURE: C-12 b
DIMENSIONS: Overall diameter – 5/8 in (1.2 cm)
Thickness – 1/8 in (.3 cm)
UNIT: 401 level C
MATERIAL: Leather

The disk is roughly cut and lacks attachment holes.

04–079 BUTTON
FIGURE: C-12 c
DIMENSIONS: Overall diameter – 5/8 in (1.2 cm)
Thickness – 1/8 in (.3 cm)
UNIT: 410 level C
MATERIAL: Leather

This disk is roughly cut, with squared off edges. No holes have been punched through.

Type 13–A; 6 Examples; Figure C-12 d-i.

Type 13–A buttons are also home-made leather disks with two holes punched through for thread. They have tooled crowns with chamfers and scored lines which appear to imitate the pinwheel design on many metal buttons. Some have been carefully carved while others appeared to have been produced rather quickly. Some did not have the holes punched. Buttons of the same type have been recovered from the *Defense* (Smith 1986:115).

04–028 BUTTON
FIGURE: C-12 d
DIMENSIONS: Overall diameter – 3/4 in (1.9 cm)
Thickness – 1/4 in (.6 cm)
UNIT: 404 level F
MATERIAL: Leather

The decorated disk has eight carved and scored spokes and the side has been
scored at the base of the crown. This example's tooling is very deliberate and careful. No attachment holes are punched in.

04–038a BUTTON AND THONG
UNIT: 413 level H
FIGURE: C-12 e
MATERIAL: Leather
DIMENSIONS: Overall diameter – 3/4 in (1.9 cm)
Thickness – 1/16 in (.15 cm)
The ovoid button is roughly carved and the back has separated from the crown. A leather strip 1-1/2 in (3.8 cm) long and 3/8 in (.9 cm) wide was found with the button.

04–042 BUTTON
UNIT: 413
FIGURE: C-12 f
MATERIAL: Leather
DIMENSIONS: Overall diameter – 5/8 in (1.2 cm)
Thickness – 1/8 in (.3 cm)
This button is fragmentary. It is roughly carved and has two holes.

04–057 BUTTON
UNIT: 505 level C
FIGURE: C-12 g
MATERIAL: Leather
DIMENSIONS: Overall diameter – 5/8 in (1.2 cm)
Thickness – 1/8 in (.3 cm)
This button appears to have been made quickly. The chamfers are shallow and the score lines are slightly off center. The crown has separated from the back and two holes are punched through.

04–085 BUTTON
UNIT: 408 level C
FIGURE: C-12 h
MATERIAL: Leather
DIMENSIONS: Overall diameter – 5/8 in (1.2 cm)
Thickness – 3/16 in (.35 cm)
The button's carving appears to be more careful than some of the other examples. The chamfers and score lines are equally spaced and the holes are larger and oval shaped.

04–086 BUTTON
UNIT: 409 level G
FIGURE: C-12 i
MATERIAL: Leather
DIMENSIONS: Overall diameter – 3/4 in (1.9 cm)
Thickness – 1/8 in (.3 cm)
The button is more oval than round. The crown is carved somewhat crudely and has separated from the back. No holes have been punched.

All of the leather buttons are probably replacement buttons worn by the sailors. It is noteworthy that no leather buttons were encountered at Forts Michilimackinac or Ligonier or other civilian land sites, but, rather, only on
the *Boscawen*, *Defense*, *Machault*, Terence Bay wreck, and Cornwallis Cave wreck.

Type 14; 1 Example; Figure C-12 j.

A small rumbler bell was also discovered on the *Boscawen*. Rumbler bells are the most common type of bells found on colonial sites. It is a round bell containing a loose iron ball, cast in two pieces with the edges brazed together. One end of the bell has open slot and the other end has a wire eye (also called an ear) soldered for suspension (Noel Hume 1980:58). Rumbler bells were used for several purposes, but bells on a military uniform do not seem like a good idea. The bell may have been a trade item for the Indians.

03–255 RUMBLER BELL
FIGURE: C-12 j
UNIT: 411 level 1
MATERIAL: Brass
DIMENSIONS: Overall diameter – 5/8 in (1.2 cm)
Thickness – 1/2 in (1 cm)
The brass bell is small and undecorated except for four engraved lines encircling the bell at its waist, two on either side of the seam. The eye is an alpha shank. One side of the bell has been depressed and the slot has expanded. The iron ball is missing.

**Buckles**

Over the course of the excavation, one complete buckle and fragments from five others were recovered representing four individual styles of buckles. Buckles were worn literally from head to toe from a queue on a wig to the buckle on a shoe or boot. In between, they were used on stocks, garters, breeches, belts, and weapon slings.

Diderot's *Encyclopedia* describes the buckle as having four parts: the frame, chape (toothed loop securing the lower strap), tongue (double-tined element resting on the upper face of the frame and holds the upper strap), and pin (holds the chape and tongue together) (Abbitt 1972:31) (Figure 11). The tongue and chape moved independently of each other to secure the straps. They were less visible and often were made of iron or brass. Frames came in a variety of metals including gold, silver, brass, pewter, pinchbeck, tomback, iron, and steel. Many were encrusted with real or paste gems, engraved, or plated with tin to copy expensive silver buckles (Wilcox 1948:118).
Type 1; 2 Examples; Figure C-13 a-b.

Type 1 are shoe buckles, the most common buckles encountered on colonial sites. In England, they were worn as early as the fourteenth century, but fell out of favor until the late seventeenth century. Their use was revived following a visit by Charles II to the court of Louis XIV. Charles' fondness for shoe buckles helped establish English fashion and create the bucklemaking craft which continued to thrive throughout the eighteenth century. General Amherst paid 10 shillings for a single pair, three times more than the cost of his shoes (W.O.R. 1762:034/1). Their popularity in England was reflected in the colonies until the early nineteenth century when buckles were replaced by laces (Abbitt 1972:25-30). Shoe buckles varied in size during the eighteenth century, becoming quite large in the 1740s. By the 1750s, the size had decreased, they were more rectangular, and generally worked in baroque designs, gadrooning, or interlacing patterns (Willet and Cunnington 1957:228). Type 1 shoe buckles are made of brass, with a plain face, curved to fit the shoe's contour, and squared corners. They are between 1-1/2 to 2 inches (3.2 – 5 cm) from top to bottom and approximately 2 inches (5 cm) from side to side. The hook attachment contained two movable elements attached to a pin running the width of the buckle. Shoe buckles are found on most eighteenth-century military and civilian sites.

03–202 BUCKLE FRAME FRAGMENT
03–224 BUCKLE FRAME FRAGMENT
03–491 BUCKLE FRAME FRAGMENT
FIGURE: C-13 a
UNIT: 405 level F
402 level 40"
410 level F
MATERIAL: Brass
DIMENSIONS: Overall length – 2 in (5 cm) estimated
Overall width – 1-5/8 in (4.1 cm)
Thickness – 1/16 in (.2 cm)

This extremely thin buckle frame has broken into three pieces, two of which have been reassembled. The overall length is derived from the curvature displayed at the corners. The buckle remnants display no decoration, although file marks are visible on one face near the edges. The frame is completely flat but the attachment elements are missing. Similar frames from Fort Michilimackinac are fitted with flat, rectangular single pronged shapes and tongues (Class 1, Series A, Type 4) (Stone 1974:26).
FIGURE 11. Parts of a Buckle.

03–348 SHOE BUCKLE
FIGURE: C-13 b
UNIT: 304 level B/C
MATERIAL: Brass

DIMENSIONS: Overall length – 1-7/8 in (4.6 cm)
Overall width – 2 in (5 cm)
Thickness – 1/4 in (.6 cm)

This two strap buckle is in excellent condition and is the only example in the collection with all the movable elements still present. The rectangular frame is plain but file marks are visible on the inner edges. It is slightly curved to fit the contour of the shoe. The chape and tongue are mounted in the center by a movable brass pin. Two tines secure the chape. The double pronged tongue is flat on the bottom and convex on the top. The tips are slightly bent. Identical buckles have been recovered at Forts Ligonier (Type 1) and Michilimackinac (Class I, Series B), as well as at Colonial Williamsburg (Type 1) (Grimm 1970:56; Stone 1974:28; Abbitt 1972:32).

Type 1–A; 1 Example; Figure C-13 c.

The Type 1–A shoe buckle is convex with rounded corners and is decorated.
03–520 SHOE BUCKLE FRAGMENT
FIGURE: C-13 c
UNIT: 207 level C
MATERIAL: Brass
DIMENSIONS: Extant length – 1 1/2 in (3.7 cm)
Extant width – 1 in (2.5 cm)
The remains of the frame consist of one rounded corner with an incised
toolmark near the edges. The upper face is convex and the back is flat. The
fragment indicates the top and bottom arms may have been rounded but the
sides were straight. No attachment elements remain. Similar buckles have
been recovered at Colonial Williamsburg (Type 3) (Abbitt 1972:32).

Type 1 and 1–A shoe buckles are typical eighteenth-century buckles. They
have been encountered at military fortresses as well as on the Machault, the
Defense, and the Terence Bay Fishing Schooner (Sullivan 1986:76; Smith
1986:121; Carter and Kenchington 1985:14). The styles were used by civilians,
officers, and enlisted men and cannot be attributed to any particular group.
Use is not indicated by the distributional evidence. This style of buckle was
common from the 1750s to the 1780s.
Type 2; 3 Examples; Figure C-14 a-c.

Type 2 buckles are knee buckles. Knee buckles were made in the same
manner as shoe buckles, but much smaller. They fastened knee–length
breeches and garters, or secured a strap on the spatterdashes just below the
knee. The average size was 1 1/4 inch (2.9 cm) in length. The chape and
tongue could be single or double pronged and were attached with a pin that
spanned the length rather than the width of the buckle. Knee buckles were
generally less ornate than shoe or belt buckles and were made in copper, brass,
pewter, pinchbeck, or iron. They have been found on most eighteenth-
century military and civilian sites including Forts Michilimackinac, Ligonier
and Chambly, the wrecks of the Defense, Machault, August, and at Colonial
Williamsburg.

03–056 KNEE BUCKLE
FIGURE: C-14 a
UNIT: 414 level E
MATERIAL: Copper
DIMENSIONS: Overall length – 1 3/16 in (3 cm)
Overall width – 1 1/8 in (2.7 cm)
Thickness – 1/16 in (.15 cm)
This small, plain, copper knee buckle is slightly convex in cross section. It has
square corners and the edges are slightly beveled. No pin or attachment
elements remain.
03–146 KNEE BUCKLE
UNIT: 413 level H
FIGURE: C-14 b
MATERIAL: Iron
DIMENSIONS: Overall length – 1 in (2.2 cm)
Overall width – 7/8 in (2 cm)
Thickness – 1/16 in (.15 cm)
This may actually be a small harness buckle based on the material it is made from. Iron is generally considered to be the poorest of metals to fashion buckles out of, and is usually reserved for items other than clothing or shoes (Noel Hume 1980:86). However, many of the enlisted men may not have been able to find or afford fancier buckles during the war. Therefore, since it could not be positively identified as a harness buckle, it has been tentatively categorized as a knee buckle. The iron is severely degraded. The overall shape is rectangular although one corner is broken. The shape was attained by bending the hot iron until the two ends touched. The corners are squared. The metal has deteriorated so much that the shape of the faces can not be determined and no pin hole is visible. No attachment elements remain.

03–231 KNEE BUCKLE
UNIT: 511 level G
FIGURE: C-14 c
MATERIAL: Brass
DIMENSIONS: Overall length – 1-1/4 in (3.2 cm)
Overall width – 1-1/8 in (2.7 cm)
Thickness – 1/8 in (.3 cm)
This buckle differs from the other examples in that the corners are rounded. The face is convex and beveled on the interior edge. The back is flat. The buckle is slightly convex in cross section and thicker at the pin holes, 1/4 in (.6 cm). No attachment elements remain.

The Type 2 knee buckles were a common type from the eighteenth century, and span the period from 1715 to the 1780s. Although all were recovered in the stern units, the distributional evidence was not conclusive enough to attribute them as belonging to the officers.

Type 3; 1 Example; Figure C-14 d.

The Type 3 example is part of a stock buckle. A stock was worn around the neck and was fastened by a buckle and cloth or leather strap (Grimm 1970:60). Stock buckles were similar to knee buckles in size, shape, and position of the pin. The difference lays in the chape. Rivets rather than prongs secured the strap.
03–046 STOCK CLASP
FIGURE: C-14 d
UNIT: 403 level C
MATERIAL: Copper
DIMENSIONS: Overall length – 1-1/4 in (3.2)
Overall width – 3/4 in (2 cm)
Thickness – 3/8 in (.9 cm)
This example includes the riveted chape from a stock buckle with three rivets or knobs to secure the strap. The frame and tongue are missing. The riveted side is 1/8 in (.3 cm) longer than the pin side. The faces are plain and flat.
Seven four-rivet stock buckles have been recovered from Fort Ligonier (no type designation) and two four-rivet stock buckles were found at Fort Michilimackinac (Class 4, Series A) dating from 1740 to 1780 (Grimm 1970:60; Stone 1974:34). Paintings from the mid eighteenth century show stocks worn by officers and enlisted men in the both the army and navy.

Shoes
Forty-four remnants from over a dozen leather shoes and six nearly complete shoes were recovered. When reconstruction was possible, pieces were reassembled, but most fragments could not be identified as belonging to a particular shoe. Those items were then analyzed by function.
In the eighteenth century France’s Louis XV set the fashion for the period and Englishmen on both continents scrambled to find the latest styles. The typical mid eighteenth-century shoe was black or brown leather with a tapering strap ascending from each side of the heel. The straps crossed over one another and were then tied or buckled. The uppers were rounded at the toe and the lifts were modest in height (Willet and Cunnington 1957:79; Wilcox 1948:118).
The cavalry favored boots, particularly the jack boot, known today as Wellingtons. The jack boot rode over the knee in front and was cut out in the back. Spurs and leather straps were buckled around the ankle (Wilcox 1948:119).
In the colonies, only officers wore boots. Enlisted men were issued English-made, civilian-type, cowhide shoes covered by spatterdashes or gaiters (Wilcox 1948:120). The shoes needed to be sturdy enough to survive miles of marching over rough terrain.
Good shoes were always in demand in the later stages of the war. In 1758 General Amherst repeatedly sent letters to England requesting shoes for the men. He complained that his soldiers were nearly barefoot while his requests
were ignored. English merchants at this time were guilty of price gouging, charging 4 shillings, 2 pence rather than the usual 3 shillings, 6 pence per pair (W.O.R. 1758:036/21). When the shoes did arrive at Ticonderoga a full year later in 1759, only 3,000 pairs were sent to be distributed between 10 regiments with a total of 4,792 men (Munsell 1857:107–108). Even the general had difficulty finding a good pair of shoes. After buying two pairs within four months at the inflated prices, he resorted to ordering two more pairs a month later and paid 2 pounds for them (W.O.R. 1762:034/01). Many of the shoes from the Boscawen attest to the difficulty in acquiring durable footwear. Worn holes in the soles and repaired uppers testify to the difficulty in finding new shoes.

The shoe was designed to be closed with either a lace or buckle. It consisted of an upper (right and left quarters or straps, tongue, vamp, and toe guard), soles (inner, outer, arch support, and welting), and lift. To avoid confusion in the terminology, "heel" refers to the back of the foot and "lift" refers the bottom of the shoe.

The upper was fitted, lined, and stitched together, flesh sides out. The smoother side was next to the foot for greater comfort; this also eliminated the need for polishing. Quarters joined the sides of the vamp at the heel and a pair of inner soles were pinned to the vamp. The welt was placed on the inner sole and the pieces were stitched together with heavy gauged thread. An arch support was inserted, a pair of outer soles were channeled, and then stitched to the welt. Finally the lift was pegged to the outer sole (Figure 12) (Wilcox 1948:174–175).

During this time most shoes were supposedly made to be worn interchangeably and eventually assumed the shape of the foot. They were often switched after a period of time to make them last longer. The use of an arch support may suggest that the shoes were not as interchangeable as previously believed. In fact, a shoe with an arched placed on the right side that was then worn on the left foot would be most uncomfortable. Most of the soles or complete shoes recovered from the Boscawen exhibit wear patterns indicating a distinct preference for one foot or the other.
Leather shoes have been recovered from several colonial sites including Colonial Williamsburg, Forts Ligonier and Chambly, the Machault, and the Defense. The styles were nearly universal with only minor differences in strap styles and heel heights. Since the shoes were predominantly fragmentary, distributional evidence will be considered as a whole rather than following each segment.

Quarters and Quarter Straps; 11 Examples; Figures C-15 to C-21.

Twelve quarters and straps were recovered from the Boscawen. Of the 11, seven are right quarters, three are left quarters, and one is unidentifiable. The quarter and strap may be a single element or two individual pieces sewn together.

The quarters were joined to each other at the heel and to the welt along the lower edge. The straps were sewn to the vamp and then rose to cross over the tongue where they were tied or buckled in place. The heel and straps were stitched at a 45 degree angle to prevent the thread from rubbing against the foot. The corners of the straps were rounded or also cut on an angle for
comfort. Two strap tip styles were noted: pointed (Fort Ligonier Type 9) or rounded (Fort Ligonier Type 2) (Grimm 1970:107).

04–007 2 QUARTERS AND 1 STRAP  UNIT: 413 level F
FIGURE: C-15  MATERIAL: Leather
DIMENSIONS: Right - Overall length – 3-7/8 in (9.7 cm)
            Overall width – 2-1/4 in (5.5 cm)
Left -        Overall length – 3-5/8 in (9.2 cm)
            Overall width – 2 in (5 cm)

The left and right quarters, although found near each other, do not appear to be from the same shoe. The left quarter has nine welt holes and the right has 11. Further, the heel stitching does not align properly. The left quarter has a straight cut heel and the right quarter is rounded. Both has straps sewed to the quarter. The surviving strap belongs to the right quarter. Nine stitch holes connect the two pieces. Once assembled, the upper edge continues in a smooth curve. The strap tip is missing.

04–010 QUARTER AND STRAP FRAGMENT  UNIT: 414 level E
FIGURE: C-16  MATERIAL: Leather
DIMENSIONS: Overall length – 4-7/8 in (12 cm)
            Overall width – 2-1/4 in (5.3 cm)

This fragment is from a left quarter and strap. The upper edge is nearly straight and 18 holes attach the strap to the vamp. The tip is missing.

04–029 QUARTER AND STRAP  UNIT: 413 level G
FIGURE: C-17  MATERIAL: Leather
DIMENSIONS: Overall length – 6 - 5/8 in (17.8 cm)
            Overall width – 2 in (5 cm)

This example is right quarter and strap. The stitching at the heel is at a 45 degree angle and the leather is cut straight and then folded to prevent the thread from touching the back of the foot. Six larger stitch holes join the quarter to the welt and three holes at the strap’s base connect it to the vamp. The upper strap edge is cut in a pronounced curve and the tip is pointed. No buckle holes are visible.

04–032b QUARTER STRAP  UNIT: 413 level B
FIGURE: C-18 a  MATERIAL: Leather
DIMENSIONS: Overall length – 6 - 1/8 in (15 cm)
            Overall width – 2 in (5 cm)

This strap is part of a right strap sewed to the quarter. The tip is rounded but also slightly pointed. The tip’s crude shape suggests that it may have been pointed and was altered by the owner. No tongue or chape holes have been punched through.
04–035 QUARTER STRAP  UNIT: 413 level G
FIGURE: C-18 b  MATERIAL: Leather
DIMENSIONS: Overall length – 2 - 1/2 in (6.3 cm)
Overall width – 2 in (5 cm)
The quarter strap fragment suggests it is part of a left quarter attached by four stitch holes. Two holes are pierced for a double tined chape and the tip is pointed.

04–070 QUARTER AND STRAP  UNIT: 401 level C
FIGURE: C-19 a  MATERIAL: Leather
DIMENSIONS: Overall length – 8 - 1/2 in (22 cm)
Overall width – 2- 1/8 in (5.3 cm)
The right quarter and strap are a single element. Twenty–two holes join the two halves at the heel and at least seven holes attach the welt and vamp. Three holes join the strap to the tongue. The upper edge has a less pronounced curve and the strap’s tip is missing.

04–077 QUARTER STRAP FRAGMENT  UNIT: 306 level D
FIGURE: C-19 b  MATERIAL: Leather
DIMENSIONS: Overall length – 1 - 3/4 in (4.6 cm)
Overall width – 1 - 1/4 in (3.4 cm)
The strap is very fragmentary. The tip is pointed but lacked any buckle holes. The curvature on one end suggests it may have been part of a right strap.

04–082 QUARTER AND STRAP  UNIT: 507 level E
FIGURE: C-20  MATERIAL: Leather
DIMENSIONS: Overall length – 6 - 1/8 in (15 cm)
Overall width – 2 - 1/4 in (5.5 cm)
The right quarter and strap are a single element attached to the vamp by 11 holes. The tip is missing.

04–084 TWO QUARTERS  UNIT: 507 level F
FIGURE: C-21  MATERIAL: Leather
DIMENSIONS: Overall length – 4 - 1/8 in (10.5 cm)
Overall width – 2 - 1/2 in (5 cm)
The two halves are from the same shoe; stitching holes at the heel and the number and spacing of the welt holes align. The straps are sewn to the quarters. The upper edges have deteriorated and their original curvature is unknown.

Vamp; 1 Example; Figure C-22 a.

The front portion of the upper, or vamp, includes the tongue and may extend from the toe to, but not around, the ankle. Tongues came in a variety
of styles. The flesh or rough side of the hide faced the outside of the shoe. Only one vamp was recovered from the *Boscawen*.

04–019 VAMP  
UNIT: 413 level E  
FIGURE: C-22 a  
MATERIAL: Leather  
DIMENSIONS: Overall length – 7 - 1/4 in (18.4 cm)  
Overall width – 4 -3/16 in (10.6 cm)  
The vamp extends from the toe to the ankle on the right side. The toe is broad and rounded, terminating at the tongue. The tongue has deteriorated but its original shape appears to have been rounded, similar to Fort Ligonier's Type 11 (Grimm 1970:100). The stitching holes along the lower edges are spaced 1/4 in apart. The vamp is attached to the quarters by folding the leather to prevent the thread from rubbing against the foot.

Toe Reinforcement; 1 Example; Figure C-22 b.

Toe reinforcements, also called "safety toes", were placed inside the vamp to prevent the vamp from wearing out. They were attached to both the vamp and the inner sole, with the smooth side against the foot. Most shoes were not fitted with the reinforcements (Grimm 1970:135).

04–010b TOE REINFORCEMENT  
UNIT: 414 level E  
FIGURE: C-22 b  
MATERIAL: Leather  
DIMENSIONS: Overall length – 1 - 1/2 in (3.6 cm)  
Overall width – 3 - 1/4 in (8 cm)  
Thickness – 1/4 in (.6 cm)  
The toe reinforcement actually resemble a lift fragment in all aspects except stitching holes; two sets of holes follow the curve of the vamp and sole toes. No stitching secures the straight edge of the reinforcement. The wear patterns and impressions indicate this is from a shoe worn predominantly on the left foot. It is identical to Fort Ligonier Type 2 toe reinforcements (Grimm 1970:101).

Inner Soles; 7 Examples; Figures C-23 to C-29.

Seven inner soles were recovered, many of which were paired with outer soles. A pair of inner soles were scored and attached to the vamp by the welt. The soft, smooth side touched the sole of the foot. Of the seven soles, three are for a left shoe, two for a right shoe, and two are undetermined. They all measure between 9 - 1/2 to 10 - 1/2 inches (24 cm to 27 cm) in length. Widths appear to vary according to the shape of the toe. Three toe shapes are evident: round, straight with the foremost edge turned up, and round and turned up. Generally, round toes are over 3 inches (7.5 cm) wide and straight toes are
under 3 inches (7.5 cm) wide. Similar styles were found at Forts Ligonier and Chambly, on the Defense, and on the Machault.

04–003 INNER SOLE  
UNIT: 414 level E  
FIGURE: C-23  
MATERIAL: Leather  
DIMENSIONS: Overall length – 9 - 1/2 in (24 cm)  
Overall width – 3 - 1/4 in (8 cm)  
This sole is very fragmentary, with only the surface of the sole actually remaining. Wear impressions indicates it was worn predominately on the left foot. The toe is rounded. The stitching or gathering style is undetermined due to the deterioration of the leather.

04–005 INNER SOLE  
UNIT: 414 level E  
FIGURE: C-24  
MATERIAL: Leather  
DIMENSIONS: Overall length – 10 - 1/4 in (26 cm)  
Overall width – 3 in (7.5 cm)  
The leather is thick, heavy and stiff on this sole. Wear impressions and a slight arch suggest it belongs to a left shoe. The toe is straight and turned up and the stitching is on a diagonal. The sole is rather narrow and would seem to have been uncomfortable unless the owner had an unusually narrow foot. Impressions on the reverse side indicate a second, inner sole was even narrower than this sole.

04–024 INNER SOLE FRAGMENT  
UNIT: 413 level E  
FIGURE: C-25  
MATERIAL: Leather  
DIMENSIONS: Overall length – 9 - 1/2 in (24 cm)  
Overall width – 3 - 1/4 in (8 cm)  
This sole is very fragmentary; the toe is missing and so its original shape and gathering style are undetermined. The impressions of lift pegs and an arch suggested it is the second inner sole and worn in a right shoe.

04–035 INNER SOLE FRAGMENT  
UNIT: 413 level G  
FIGURE: C-26  
MATERIAL: Leather  
DIMENSIONS: Overall length – 8 - 1/2 in (21.4 cm)  
Overall width – 3 - 1/2 in (8.9 cm)  
Only the upper surface remains thus the gathering style is unknown. The toe is rounded but no impressions are visible to indicate which foot it was worn on. Based upon the toe shape and width, the suggested reconstructed length is 9 - 1/4 to 9 - 1/2 in (27 cm).

04–045 INNER SOLE  
UNIT: 511 level E  
FIGURE: C-27  
MATERIAL: Leather  
DIMENSIONS: Overall length – 9 - 5/8 in (24.5 cm)  
Overall width – 2 - 7/8 in (7.3 cm)  
The inner sole is for a very narrow left foot. A straight, turned up toe is
stitched to the welt on a diagonal. The stitching holes completely surround the sole, unlike most of the other examples. Three peg holes on the bottom surface suggested this is the lower sole in the pair.

04–055 INNER SOLE FRAGMENT
FIGURE: C-28
DIMENSIONS: Overall length – 6 - 1/2 in (16.4 cm)
Overall width – 2 - 1/2 in (6.9 cm)
The sole is extant only to the heel. The toe is slightly rounded, although much of it has worn away. No stitching holes remain and the gathering style is unknown. The toe area is small indicating the owner's foot was narrow. No wear patterns remain to suggest on which foot it was worn.

04–060 INNER SOLE
FIGURE: C-29
DIMENSIONS: Overall length – 10 in (26 cm)
Overall width – 3 - 1/2 in (8.9 cm)
The sole is made with extremely stiff leather and may have been the lower inner sole. Lift peg impressions also imply the sole was not against the foot. The toe is rounded. Stitching is horizontal through a "V" shaped gather on the bottom surface. The impression of an arch suggests it belongs to a right shoe.

Outer Soles; 4 Examples.

Four outer soles were recovered. A pair of outer soles extended from the toe to the lift. A beveled edge was joined to a second length of leather under the lift terminating at the back of the heel. The toes were generally rounded. The lower soles were channeled to preserve the heavy gauged thread used to attach it to the Welt. These soles were sturdier and stiffer than inner soles and naturally revealed more wear than any other part of the shoe. Two soles are from right shoes, one is from a left shoe, and one is undetermined.

04–005b OUTER SOLE
FIGURE: C-24
DIMENSIONS: Overall length – 10 in (26 cm)
Overall width – 3 - 5/8 in (9.3 cm)
This outer sole is not heavily worn and may have been the third layer of the sole assembly. It extends from the rounded toe to the middle of the lift where it terminates in a beveled edge. The second extension is missing. No channel has been cut. The sole is gathered for vertical stitching. Eleven peg holes are visible for the lift. The sole was recovered with an inner sole identified as belonging to a left shoe.
04–024 OUTER SOLE
FIGURE: C-25
DIMENSIONS: Overall length – 10 in (26 cm)
Overall width – 3 - 1/2 in (8.9 cm)
This outer sole is badly worn. Stitching holes surround the sole and are
doubled at the heel suggesting the presence of a heel welt. Impressions
indicate it belongs to a right shoe.

04–045 OUTER SOLE
FIGURE: C-27
DIMENSIONS: Overall length – 9 - 3/4 in (24.9 cm)
Overall width – 3 - 1/2 in (8.9 cm)
The sole is not heavily worn. It extends from the toe to near the end of the
heel. The end is not beveled but cut straight across. It is sewed to the welt
and pegged to the lift. The channel suggests it is the fourth layer in the series.
The inner sole indicates it is from a left shoe.

04–068 OUTER SOLE
FIGURE: C-30
DIMENSIONS: Overall length – 6 - 1/4 in (15.9 cm)
Overall width – 3 - 1/8 in (8 cm)
Only half of this outer sole exists, extending from the rounded toe to the arch.
No channel is cut and the leather has been gathered for vertical stitching.
Depressions indicate this is for a right shoe.

Arch Supports; 4 Examples; Figure C-31 a-d.
Situated between the inner and outer soles, an arch support extended from
the middle of the sole to the lift where it was held in place by wooden pegs.
The leather was much thicker and stiffer than that used for the soles to
prevent the support from flattening. The length and style varied according to
the size of the foot and amount of support needed. Four arches were
recovered exhibiting two distinct designs and methods of attachment. Three
of the arch supports are rectangular with rounded corners and the fourth has
square corners. The lengths vary from 3 to 4 inches (7.6 to 10 cm) and the
widths from 1 to 2 inches (2.5 to 5 cm).

04–003b ARCH SUPPORT
FIGURE: C-31 a
DIMENSIONS: Overall length – 3 - 7/8 in (9.7 cm)
Overall width – 1 - 1/2 in (3.7 cm)
Thickness – 1/16 in (.15 cm) extant
The arch support is fragmentary and the original thickness has been lost. It
is rectangular in shape with squared corners. A single stitching hole remains at its base where it was attached to the inner sole.

04–045 ARCH SUPPORT
FIGURE: C-31 b
UNIT: 511 level E
MATERIAL: Leather
DIMENSIONS: Overall length – 4 in (10 cm)
Overall width – 2 - 1/2 in (6.2 cm)
Thickness – 1/2 in (1.2 cm)
This example is the largest in the collection and is more oval than rectangular with rounded corners. Stitching holes run along the edge where it was sewn to the inner sole indicating it belongs to the left shoe. Peg holes are found in the lower half.

04–055 ARCH SUPPORT
FIGURE: C-31 c
UNIT: 411 level G
MATERIAL: Leather
DIMENSIONS: Overall length – 3 - 1/2 in (8.8 cm)
Overall width – 1 - 1/2 in (3.7 cm)
Thickness – 1/16 in (.15 cm) extant
Only the top layer of the support remains. The support is rectangular with rounded corners. The piece tapers 1/8 in (.3 cm) from top to bottom where it is secured by three lift pegs.

04–072 ARCH SUPPORT
FIGURE: C-31 d
UNIT: 403 level C
MATERIAL: Leather
DIMENSIONS: Overall length – 3 in (7.6 cm)
Overall width – 1 - 1/4 in (3.1 cm)
Thickness – 1/8 in (3 mm)
The support is rectangular with rounded corners. The leather is the stiffest in the collection, more so than any of the soles or lifts. Seventeen stitching holes attach the arch to the inner sole.

Welts; 15 Examples.

The welt joined the vamp, inner, and outer soles together. It consisted of a single strip of leather that surrounded the entire circumference of the sole. Fifteen welts were recovered exhibiting two distinct styles. Eighty percent of the welts contain two rows of stitching (Type 1). The 12 Type 1 welts (04–003c, 04–013, 04–020, 04–026, 04–035, 04–038, 04–044, 04–04–063, 04–080, 04–082, 04–083) are pierced along the inner edge to join the vamp to the inner soles and along the outer edge to attach the outer sole. These welts are slightly curved in cross section. The three Type 2 welts (04–029, 04–043, 04–048) exhibit three rows of stitching. The central row connects the uppers
to the inner sole. The other rows join the vamp and lower edges of the outer sole. The Type 2 welts are folded in cross section with the thread penetrating vertically through the outer holes and horizontally through the central holes. All of the welts are fragmentary and their original lengths are unknown. The average width is 1/4 inch (.6 cm) and they are 1/4 inch (.6 cm) in thickness. Lifts; 5 Examples; Figure C-32 a-e.

The lift was the support under the heel of the shoe. Several thin layers were sewn to a heel welt with three rows of stitching. Additional layers were secured with small maple pegs penetrating through the lift and into the pair of outer soles. All of the lifts were longer from side to side than from front to back, but two arch styles were observed: concave (Type 1) and straight (Type 2). The number of pegs used varied from 10 to 19. The number of layers also varied but the height of the pegs was consistent, 1/2 inch (1.2 cm) indicating the average lift height was 1/2 inch.

04–024 HEEL WELT
FIGURE: C-32 a
UNIT: 413 level F
MATERIAL: Leather
DIMENSIONS: Overall length – 3 in (7.5 cm)
Overall width – 1 in (2.5 cm)
The heel welt is designed to secure the lift to the inner sole and uppers with three rows of stitching. The innermost row joins the welt beneath quarter, the middle row attaches the lift, and the outer row to the inner sole. The arch is straight.

04–032a LIFT
FIGURE: C-32 b
UNIT: 413 level G
MATERIAL: Leather
DIMENSIONS: Overall length – 3 in (7.5 cm)
Overall width – 3 - 1/8 in (8 cm)
Thickness – 1/2 in (1.1 cm)
This Type 1 lift with a concave arch has only four layers still remaining. A fragment of the heel welt is sewn to the lift in two rows. One central peg survives.

04–059 LIFT
FIGURE: C-32 c
UNIT: 412 level F
MATERIAL: Leather
DIMENSIONS: Overall length – 3 - 1/8 in (8 cm)
Overall width – 3 - 1/4 in (8.3 cm)
Thickness – 1/2 in (1.1 cm)
Only five layers remain to this Type 1, concave-arch lift. Nineteen diamond–shaped pegs secure the lift to the soles. Three pegs run along the
arch and one peg is centrally located. The remaining 15 follow the outer curve.

04–062 LIFT
FIGURE: C-32 d
UNIT: 411 level I
MATERIAL: Leather
DIMENSIONS: Overall length – 3 in (7.5 cm)
Overall width – 3 -1/4 in (8.3 cm)
Thickness – 3/8 in (1 cm)
This example is a Type 2, straight-arch lift. Sixteen thin layers are pegged to the sole with 15 diamond–shaped pegs. On the upper side 22 stitching holes remain from the heel welt. The lower side shows some wear.

04–064 LIFT
FIGURE: C-32 e
UNIT: 412 level C
MATERIAL: Leather
DIMENSIONS: Overall length – 3 in (7.5 cm)
Overall width – 3 -1/8 in (8 cm)
Thickness – 1/2 in (1.1 cm)
Only five layers remain from this Type 1 lift. Nineteen square-sided pegs secure the lift to the soles.

Complete Shoes; 6 Examples; Figures C-33 to C-38.

This category includes only those examples which contained uppers, soles, welts, and lifts. Most were recovered nearly intact but when additional pieces were identified as belonging to one example, it was reconstructed. Six shoes are complete or nearly complete, three of which are right shoes and three are left shoes. The stitching has rotted away on these shoes, but one example (04–038) managed to survive completely intact. This shoe answered many questions on thread types and gauges used on various portions of the shoe.

The separated pieces have provided us with information about the shoe’s individual elements, yet some details were only apparent with a complete shoe. For example, two shoes (04–038, 04–044) did not have arch supports but each had an additional inner sole. Another shoe (04–044) had a toe reinforcement sewn only to the vamp, but not to the inner sole. And one upper (04–080) was made from two layers of leather.

The shoes are not all identical. Four different styles were recovered: two with a rounded toes and pointed tongues, two with rounded toes and straight tongues, one with a rounded toe and tongue, and one with a square or boxed toe and pointed tongue.
04-013 SHOE
FIGURE: C-33
DIMENSIONS: Overall length – 10 in (25.5 cm)
Overall width – 3-3/8 in (8.6 cm)
This right shoe consists of a quarter, vamp, inner soles, welt, outer sole, and lift. The quarter is for the right side and has a sewn on strap, which is detached. The vamp is very fragmentary, but the rounded toe and straight tongue still remain. The two inner soles has rounded, turned up toes gathered in a deep "V" for the welt. The Type 1 welt has been attached with a double row of horizontal stitching.

04-026 SHOE
FIGURE: C-34
DIMENSIONS: Overall length – 9-1/2 in (24.2 cm)
Overall width – 3-1/4 in (8.4 cm)
This left shoe consists of a left quarter and strap, vamp, inner sole, and welt. The quarter and strap are a single element with a pointed tip, but no buckle holes are visible. The rounded-toe vamp terminates in a pointed tongue similar to vamp 04-019. The inner sole is also rounded and turned up at the toe for a "V" gather with a single row of horizontal stitches. The entire inner sole is attached to a Type 1 welt.

04-038 SHOE
FIGURE: C-35
DIMENSIONS: Overall length – 10-1/2 in (26.7 cm)
Overall width – 3 in (7.5 cm)
This right shoe is the only example in the collection that is still intact. The quarters and straps are a single element joined by a single-tined buckle no more than 2 - 1/2 in wide. The vamp has a square toe that extends to an squared tongue. The quarters are attached to the tongue by two rows of stitching. No arch support was found in the shoe, but three inner soles are attached. All have pointed, turned up toes gathered to join the welt with a single row of horizontal stitching extending only to the lift. One outer sole is worn but intact and another is present only near the lift. The outer sole is chamfered and the thread is in excellent condition. Heavy-gauge thread is doubled for the soles. A heel welt join the three inner soles to one section of the outer sole. The lift has 12 thin layers and is 3/4 in (1.9 cm) high. Thirty-four pegs secure the lift around the circumference and in the center.

04-044 SHOE
FIGURE: C-36
DIMENSIONS: Overall length – 10 in (25.5 cm)
Overall width – 3-1/4 in (8.4 cm)
This left shoe consists of the vamp, toe reinforcement, inner soles, welts,
outer soles, and lift. The vamp has deteriorated but the round toe and straight tongue remain. An unusually shaped toe reinforcement is sewn to the vamp. The reinforcement is long and rectangular, placed at the end rather than under the upper surface of the vamp. Three inner soles have very pointed toes, turned up for a "V" gathering style. The welt is attached by two rows of stitching (Type 1). The outer soles are in pieces, pegged along the top and stitched to the inner sole with a very fine needle. It appears to be a repaired section of the sole. The lift is also unique to the collection. Four 1/4 in thick layers are pegged to the soles and sewed to the heel welt. Most layers in the other lifts are less than 1/16 in thick, requiring several layers to reach the standard lift height. This lift has only four layers and is higher than the others. It is attached by 17 square pegs and exhibits some wear around the edges.

04-049 SHOE
FIGURE: C-37
UNIT: 405 level F
MATERIAL: Leather
DIMENSIONS: Overall length – 10 in (25.5 cm)
Overall width – 3-3/8 in (8.6 cm)
This left shoe consists of the vamp, inner soles, welt, outer sole, and lift. The vamp has a rounded toe with a pointed tongue. It is very worn and has a repair on the right side where another piece of leather is stitched to it. The inner soles have round, turned-up toes. The "V" gather joins the inner soles to the Type 1 welt. Only one outer sole is present. It was in two pieces. Two sets of stitching holes indicate the outermost sole is missing. The lift has thirteen layers of varying thickness, joined together with 54 maple pegs. Two rows of pegs surround the lift and a single row runs from top to bottom in the center.

04-080 SHOE
FIGURE: C-38
UNIT: 507 level E
MATERIAL: Leather
DIMENSIONS: Overall length – 9-1/2 in (24.2 cm)
Overall width – 3-1/4 in (8.4 cm)
This right shoe consists of the vamp, inner soles, arch support, welt, and outer sole. The vamp is made of two layers of leather sewed together along the edges. The toe and tongue are round. The inner sole is pointed and turned up for a "V" gather stitched horizontally to the welt. Between the inner soles, an arch support is sewed and pegged to the lower inner sole. The outer sole is stitched to the welt and second inner sole. The sole extended to the lift where it was cut off. The outermost sole is missing and the wear on the existing soles suggests it was lost before the shoe was discarded.

Seventy-two percent of the shoes and shoe fragments were located in the stern with 36 percent in Unit 413. The remaining 28 percent were distributed
evenly between the bow and midship units. All of the shoes and fragments were located either along the keel units or on the port side. The distribution seems to be the result of longitudinal and lateral displacement and probably does not reflect the original deposition. The distribution cannot be attributed to a particular division of the crew, but the styles were more indicative of the footwear provided to enlisted men.

**Pins**

Twenty pins were found on the *Boscawen*. All of the pins are brass with a brass wire wrapped one to two times around the shank to create the head.

Pins were the colonial equivalent of today's paper clip. They remind us that clothes were expensive and in times of war, had to last (Sullivan 1986:92). The pin-making industry was well developed in the eighteenth century supplying pins to buyers in Europe and the colonies. However, as common as they were, they usually are not found in great quantity on most archaeological sites; two were recovered from the *Defense*, six from the *Machault*, and only 237 of the 81,000 artifacts at Fort Ligonier were pins. Nineteen of the pins found on the *Boscawen* were recovered in the dredge bag material, suggesting that perhaps others slipped through the mesh bags and were lost.

The pins are identical in all aspects except length and therefore can be treated as a group. Twelve pins (03–112a–b, 03–127, 03–263, 03–304, 03–319a–g) are 1 inch (2.5 cm) in length. Three (03–241, 03–244, 03–263a) are 1 - 1/16 inches (2.7 cm) long. Four (03–241b, 03–263b, 03–403, 03–416) are 1 - 1/8 inches (2.9 cm) in length. The final example (03–104) is 1 - 5/8 inches (4 cm) long. All of the examples have a coiled wire head. Nineteen of the pins' heads measure 1/16 inch (.15 cm) in diameter and pin 03–104 has a 1/8 inch (.3 cm) diameter head. Eighty-five percent of the pins were recovered from dredge bag material in the stern units.

The distribution of the dress-related artifacts indicated that the majority of the finds (81 percent) were located in the 400 units, along the length of the keelson. Although the artifacts were found predominantly along the keel, they were concentrated in two areas, in the bow and stern units, in portions of the hull likely to have been designated as living quarters for the *Boscawen*'s
crew (Figure 13). The presence of three deck beams suggested that there was a continuous deck below the Boscawen's main deck. The bow and midships portion of the sloop's lower deck just forward and aft of the mast were likely the crew's quarters, and the officers' quarters would have been located in the stern. The forwardmost area of the bow was probably used for storage (Crisman 1994, pers. com.).

The distribution of the dress related artifacts appears to be concentrated in the living quarters. While the shoes, buckles, and pins exhibited very little differentiation in type to reflect social status or class which could help to explain their distribution, the buttons exhibited significant variety in styles and craftsmanship and their distribution may indicate to whom they belonged. Of the buttons, the decorated fasteners were evenly distributed in areas of the ship frequented by both soldiers and officers: 49 percent were located in the bow and midships areas and 51 percent in the stern units. However, the sleeve links, the more expensive fasteners, and the wooden backs for covered buttons were predominantly located in the stern units (68 percent), where the officers were quartered, whereas 75 percent of the home-made leather buttons were recovered from the bow and midships units. Although the distribution is far from conclusive, it does give some indication to the segregation of the men.

Without any physical remains from the uniforms worn by the crew, it is difficult to determine specifically which clothing-related items found on the Boscawen were lost by officers and enlisted men. The accessory items which have been recovered have revealed that most of the men were of modest means, able to afford either plain or decorated buttons and brass or copper buckles. The leather buttons, worn-out shoes and pins, however, suggest that in the later stages of the war, when supplies were limited, the men were required to make do with what they had.
H.M. SLOOP BOSCAWEN
DISTRIBUTION OF DRESS-RELATED ARTIFACTS.

Figure 13. Distribution of the Clothing-Related Remains from the Boscawen.
CHAPTER VII
FOODWAYS

"With the ravages of war last summer, we were all the winter in the greatest want of all sorts of vegetables, to which accident, the source of that fatal disorder, the scurvy, may be partly impaled"
(W.O.R. 1760:037/2A).

In the fall of 1759, as 240 men gathered at Ticonderoga to man Britain's Lake Champlain warships, General Amherst began the monumental task of provisioning his fleet. By 11 October, the brig, sloop, and radeau were fitted out with terces, barrels, and casks of bread, flour, beef, pork, butter, peas, rice, water and rum for seven days. As the Boscawen departed, Lieutenant Grant and his crew had rations to last until the 18th of October (Munsell 1857:179).

Provisioning an army the size of the forces in North America was a thankless job directly overseen by the General. The standard weekly ration per man consisted of seven pounds of bread, seven pounds of beef or four pounds of pork, three pints of peas, one pound of cheese or six ounces of butter, one pound of flour and one-half pound of rice (W.O.R. 1759, 014:61).

Amherst contracted with several companies to supply the necessary provisions for his troops, but the prices were not regulated, much to his disgust. He frequently complained about paying 4 pence, 3 farthings per ration one week and 6 pence the next. On the frontier, where supplies were limited and demand was high, he was forced to pay 15 pence sterling per ration (W.O.R. 1759, 014:62). The morning the fleet departed Ticonderoga, Amherst was still haggling with the local sutlers over the cost of provisioning his ships. He finally agreed to 6 pence per ration for a pound of flour and a pound of fresh beef for two days a week, an amount far below the standard allowance (W.O.R. 1759 014:62). The situation became so confused, he created a daily allowance of provisions for every mess group when they were on board the transports (Table 1).
### TABLE 1

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</table>

*Source: W.O.R. (1759, 014:63)*

The orders were explicit. When fresh meat was available, one pound of beef and one pound of flour constituted a complete ration. If beef was scarce, one-half pound of rice, one pound of bread or flour, and one-third pound of pork was served. If beef and rice were unavailable, one pound of pork and two pounds-12 ounces of flour equaled a complete ration. If beef, rice, and butter were wanting, the cook substituted one and one-quarter pounds of pork or three and one-half pounds of bread. Finally, if a "variety" of provisions were unavailable, a complete ration could consist solely of two pounds-three ounces of beef, or one and one-quarter pounds of pork, or three pounds of flour, or three pints of peas, or two and one-half pounds of rice, or 12 ounces of butter (W.O.R. 1759, 014:63).

Most meals consisted of meat and bread. Commanders, recognizing the nutritional deficiencies in the fare, frequently requested vegetables and fruits.
to supplement the crew’s diet. Turnips, carrots, potatoes, red cabbage, onions, and mustard seed, as well as apples and lemons, were recognized as helping to prevent malnutrition and scurvy (W.O.R. 1760, 037:24A).

The diet Amherst provided for the men on board the Lake Champlain transports differed from the standard weekly rations specified for crews on board warships in the Royal Navy. While Amherst provided his men with beef, bread, pork, peas, and butter, Royal Navy seamen also received oatmeal, cheese and beer. Although the diet was restrictive, Royal Navy sailors received almost twice as much beef and bread per ration as the men aboard the Boscawen, four pounds of beef and seven pounds of bread in the navy as opposed to two pounds of beef and four pounds of bread on the army transports (Rodgers 1986:83).

Military men may have been hard to please, but some kept their senses of humor. For most soldiers, the daily fare was beef and bread one day and bread and beef the next and sailors declared the last cask of salt beef was actually “salt horse.” Alexander Anderson in Windjammer Yarns called salt beef a failure in all ways and recalled how the sailors made a small half-model of a ship from it that looked like mahogany when polished (Snyder 1964:197). And when an especially hard piece of beef was retrieved from the kid, the older seamen performed a ceremonial ritual and recited a poem before heaving it over the side.

One reason for the good humor regarding the meals may have been the constant supply of spruce beer and cider supplied to the crew (W.O.R. 1760, 037:24A). The libations were regularly given to the troops, as much as they wanted, for warmth and “medicinal” purposes (Munsel 1857:126). General Amherst was so fond of spruce beer, he recorded the recipe in his personal journals (Amherst in Knox 1968:152)

The excavation of the Boscawen revealed much about the crew’s diet and messing arrangements. Bone and plant remains, staved containers, mess tags, utensils, bottles and cork stoppers, and ceramics were recovered. The collection totals 1,116 items, over half of which (782) are organic remains.

The large proportion of seeds and bone fragments have skewed the distribution patterns. Although 92 percent of the nuts and seeds were
recovered in the stern, only 26 percent of the bones were located in the same area. Most bones were located in the midships area, where the sloop's brick "camboose" or cookstove had been. Heavier material, such as glass and ceramics, was more evenly distributed throughout the hull, 46 percent in the bow, 28 percent in the middle units, and 26 percent in the stern. Overall, 67 percent of the food-related material was located in the stern, 20 percent in the bow, and 13 percent in the midships section (Figure 14). The lighter density artifacts (seeds, small utensils, mess tags, and cork) were overwhelmingly found (90.5 percent) in the stern units indicating the slope of the lake bottom affected the longitudinal distribution. The vessel's list also disrupted the distribution; 94 percent of the material was recovered on the port side, 85 percent in the 400 units running along the keel where the remains rolled towards the keel and were lodged in the open spaces (Table 2).

Organics

Following the completion of the 1985 field season, all faunal remains were sent to Jerri Kochan of the University of Vermont Cultural Resource Management program for identification. Kochan consulted with several experts including Dr. Arthur Spiess of the Maine Historical Preservation Commission, veterinarian Dr. Albert Maraska, and animal science pathologist Dr. Roger W, Murray. Kochan's report, Analysis of the Faunal Remains from the Boscawen, contains a detailed description of the results (Kochan 1987).

One hundred and thirty four bone fragments and teeth were recovered from the Boscawen. Of these, 60 percent are identified as a specific bone or tooth, four percent are tentatively identified, and 36 percent are unidentifiable (Crisman 1987:8). Of the identified fragments, 95 percent are mammalian, including cattle, pig, sheep, deer, and muskrat. The remaining five percent include fowl (goose and chicken) and fish (bass).

Twenty nine bone fragments and teeth (51 percent) are from cattle, 18 of which are skull fragments and teeth. All of the skull fragments are from the left side of the skull and are presumably from the same individual. Tooth eruption and wear suggest the animal was five and one-half to six years old at its death (Crisman 1987:9). The remaining bovine bones include four
Figure 14. Distribution of the Faunal Remains from the Boscawen.
Plan by Kevin J. Crisman
TABLE 2
DISTRIBUTION OF FOOD-RELATED ARTIFACTS ON THE BOSCAWEN

<table>
<thead>
<tr>
<th>UNITS</th>
<th>BONE</th>
<th>SEEDS</th>
<th>MESS TAGS</th>
<th>UTENSILS</th>
<th>CERAMIC &amp; GLASS</th>
<th>PEWTER PLATES</th>
<th>BARREL STAVES</th>
<th>CORK</th>
</tr>
</thead>
<tbody>
<tr>
<td>200s</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>300s</td>
<td>9</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>48</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>400s</td>
<td>69</td>
<td>642</td>
<td>4</td>
<td>3</td>
<td>203</td>
<td>1</td>
<td>11</td>
<td>4</td>
</tr>
<tr>
<td>500s</td>
<td>48</td>
<td>7</td>
<td>0</td>
<td>0</td>
<td>43</td>
<td>0</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>600s</td>
<td>6</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>132</td>
<td>650</td>
<td>4</td>
<td>3</td>
<td>308</td>
<td>2</td>
<td>13</td>
<td>4</td>
</tr>
</tbody>
</table>

vertebrae, two radius fragments, one tibia, one distal seismoid, and three unidentified long bones.

Pigs represent 28 percent of the sample, or 13 fragments and teeth. One lower molar, one lower incisor, and two premolars exhibit little wear, suggesting an age from 15 - 18 months. The remaining bones include two humerus, oneradius, two femur, two tibia, and two metacarpal bone fragments. The two femurs are both left, mid-shaft portions, indicating at least two individuals were on board.

Five percent of the sample includes deer, sheep, goose, muskrat, and bass bones. A deer metacarpal with two articulated condyles and a second phalange were uncovered within the wreck, all from the same individual. The metacarpal is not fused indicating the deer was aged between 15 and 65 months at the time of death (Crisman 1987:9). Only three bones could be positively identified as belonging to sheep. These include one vertebra, a navicular cuboid and a lateral malleolus. A radius and ulna belong to either a deer or sheep.

Two fragments from a humerus are identified as goose bones, probably from the same individual. A femur and humerus fragment have been tentatively identified as chicken bones. The remaining bones include two
separate musk rat mandibles, a fox or cat vertebra, and an epihyl from the skull of a bass.

Most of the bones are unremarkable, but a few exhibited some unusual features. An unidentified fragment, 06-015, has a protrusion on one side from an injury or illness during the animal’s lifetime. Three bovine bones (06-076, 06-086, 06-117) are white and friable (calcined) from loss of protein due to exposure to prolonged, low-level heat, possibly from boiling. Of the calcined group, fragment 06-117 is also charred. Finally, two unidentified bones (06-141, 06-217) display butchering marks from a knife (Crisman 1987:10).

The seed husks and nut shells recovered during the excavation were sent to botanist Peter F. Zika at the University of Vermont for examination. Zika identified nine edible and eight inedible plant species. The edible species include hickory, wild plum, squash, chestnut, hazelnut, butternut, cucumber, peach, and peanut. Ninety-five percent of the husks are from shagbark hickory nuts (Carya ovata). Six-hundred and fifteen shagbark husks and fragments were recovered from the dredge bag. These nuts are very sweet and are an excellent source of protein (Platt 1972:32). The shagbark hickory tree flowers in the spring and bears fruit in the early fall.

Wild plum pits (Prunus nigra), also known as “horse plums,” and squash seeds (Curcubita pepo) are the next most common edible remains found on the Boscawen. Twenty plum pits and 15 squash seeds were located primarily along the stern keel units. Prunus nigra is very common to the Lake Champlain area in the late summer months of August and September. The squash seeds have been tentatively identified as pumpkin seeds since numerous cultivated varieties have been derived from the pumpkin (Peter F. Zika to Kevin J. Crisman 1984, pers. comm.). Pumpkins are harvested from early to late fall.

The remaining husks and seeds include chestnut acorns (Castanea dentata), hazelnuts (Corylus americana), butternuts (Juglans cinerea), cucumber seeds (Cucumis sativa), a peach pit (Prunus persica), and a peanut shell (Arachis hypogaea). The peanut shell is undoubtedly a recent intrusion to the site. The remaining species all flower in the early spring or summer, and produce their fruit in the summer and early fall.
The inedible plant species found on the wreck include nuts from the white spruce (*Picea glauca*), black oak (*Quercus velutina*), oak (*Quercus*), arbor-vitae (*Thuja occidentalis*), basswood (*Tilia americana*), rose or avens (*Geum sp.*), hemlock (*Tsuga canadensis*), and cocklebur (*Xanthium strumarium*). All of these species are common to the northeast; some of them can be seen on the shore where the *Boscawen* was found, and were probably intrusive.

The organic remains represent only a fraction of the crew’s actual meat and vegetable consumption. The cattle and pig bones correspond with Amherst’s instructions for the diet. Most meat was either salted or pickled and stored in barrels, but the presence of foot and skull bones suggests they had access to fresh meat as well. Since 70 percent of the bones recovered were non-meaty bones, we can assume the crew was dressing the fresh meat below deck and tossing the bones in the bilges. The soldiers presumably had their meals on the main deck and therefore the majority of the meaty bones were conveniently tossed overboard.

The other bones, nuts, and seeds were not part of Amherst’s directed diet and suggest the crew did some foraging to supplement their rations. Hunting and fishing were permitted, as long as the men returned the bateaux clean (Munsell 1857:160). During these excursions, the soldiers could hunt for deer and goose or fish for bass for the evening meal.

The sheep bones were somewhat unusual for a military site and no mention has been made for them in the orderly books from Ticonderoga. In 1758 Thomas Franks, however, does mention killing a sheep they came upon and having “the heart and lights for breakfast” (De Peyster 1921:272). Sutlers were permitted to travel with the army to supply the officers with various items and the sheep may have been purchased by an officer tired of the regular fare. It was not considered part of the standard diet.

The cat or fox bone was perplexing. If the bone was from a fox, it may have been trapped for its fur and then disposed of since the meat was not particularly tasty. Another possibility was the *Boscawen* had a “ship’s cat” or the bone may have been a later intrusion to the wreck.
Finding such a large quantity of seeds and nuts suggested the men were not satisfied with what the commissary supplied to them. Most of the species were late summer or early fall varieties. As Richard Brocklesby’s remarks indicate, vegetables were particularly scarce in the winters and these fall fruits would have been welcome.

**Staved Containers**

The faunal evidence indicates the crew had access to fresh meat, but they still needed a means to transport the rest of their provisions. The remains of at least six staved containers were recovered including portions of wooden lids for casks, barrel hoops and withy fragments, and a stave from a wooden tankard or firkin. Since the *Boscawen* carried a large quantity of dry-goods and preserved meat, these containers were presumed to have transported food-related provisions. It should be noted, however, that they were also used to store other perishable goods such as rope and gunpowder, and some of the cask elements may have once contained those materials.

The cooper was the village handyman in the eighteenth century, capable of adapting his talents to meet the needs of his customers. The “wet” cooper specialized in casks and barrels for meat, vinegar, rum, oil, beer, and lime juice while the “slack” cooper made containers for dry provisions such as peas, oatmeal tea, flour, fruits, and sugar (Broadwater 1989:59). A “white” cooper made small pieces such as buckets, churns, tubs, and pantry tools. Finally, the “traveling” cooper was able to do a little of everything and make repairs as he made his way through the countryside. Coopers were so useful that merchant vessels and warships regularly carried them as part of the crew to maintain or fix the casks on board (Gould 1962:31-34).

A staved container was any wooden receptacle formed from multiple planks or staves held together by iron straps or wooden withies (Ross 1991:225). Staves were made to fit together tightly to form the curved sides of the container. The ends were interchangeable on double-ended vessels and specially constructed on open-ended containers. The *chime* was beveled on the interior surface and the hollowed surface below the chime was the *chiv*. The chiv was channeled to form the *croze groove* which the lids fit into. The smoothed or planed sides tapering from the exterior to the interior were
joints. A stave with a filling hole was the **bung stave** and the others were called **case staves**. The **bung hole** was drilled through the stave to fill and drain the cask without needing to remove the lid and the hole was stopped with a tapered disk known as a **bung**. **Vent holes** allowed air to escape during filling and were stopped with a **plug**. The **tap hole** was drilled through the lid on the end opposite from the bung stave to draw off liquid through a **tap** (Ross 1991:230). Finally, the joints between the staves were sealed with **rush flagging**, cloth, or caulking (Stockham 1976:53). Bung and plug holes were sealed with fabric gaskets placed between the hole and stopper (Figure 15) (Ross 1991:231).

**Heads** for the containers were constructed from one to six individual **head pieces** set into the croze grooves. Head pieces with a single joint and continuous curve were known as **cants**. Cants formed the two outermost pieces and were joined to the **middle pieces** which had two joints and symmetrical ends. The **center pieces** had two joints but the ends were more symmetrical. The pieces were beveled on both faces to facilitate fitting the ends, or **bites**, into the croze groove. **Head piece dowels** held the adjacent pieces together and a **reinforcement**, spanning the widths of the head pieces, secured the whole structure. Reinforcements were generally recycled staves or head pieces (Ross 1991:225). The staves were held in place by **hoops**, narrow iron straps or wooden withies, placed around the circumference of the cask. Two **hoop tips** overlapped at the **hoop join** where they were secured by either iron rivets or wooden bindings.

The historical record refers to all of the containers as "barrels" but staved containers were made in several sizes including casks, barrels, hogsheads, terces or tierces, kegs, tankards, firkins, buckets, and tubs. A cask could be a barrel of any size, but 32-gallon casks were the most common container used to hold beef, pork, flour, bread, and water in the eighteenth century. True barrels held 31.5 gallons and stored similar material as casks, but rope and gunpowder were also carried in barrels (Broadwater 1989:51). Sixty-three to 140-gallon hogsheads were the largest containers and held water on deck or
large quantities of meat below. A terce or tierce stored dry goods and was capable of holding between 32 and 63 gallons, but 42 gallons were the most common capacity for terces. Kegs were smaller containers, usually holding less than 10 gallons, and were specifically constructed to transport spruce beer or cider, and small eight-gallon tubs or firkins typically stored butter or lard (Webster 1957:546, 691, 800, 1524).

Sixteen staved container fragments were recovered representing five casks, one keg, and one tankard or firkin. One cask bung and keg plug were also recovered.

02-073 KEG HEAD
02-141 a,b KEG HEAD
FIGURE: C-39
UNIT: 413 level F
UNIT: 413 level H
MATERIAL: White Oak
DIMENSIONS: Overall diameter - 11 in (27.8 cm)
Thickness - 5/8 in (1.6 cm)

This keg head consists of two cant pieces and one center piece. The wood grain, curvature, tool marks, and bite all suggest the pieces were from the same container. 02-073 is larger than than the other pieces and may have replaced the original cant. Both surfaces are beveled near the bite, although it
is more pronounced on the interior surface. The pieces are fastened laterally; no dowels are present but the holes are 1/4 in (.6 cm) in diameter.

02-122 CASK HEAD
FIGURE: C-40
DIMENSIONS: Overall diameter - 17 in (43.3 cm)
Thickness - 3/4 in (1.9 cm)
The cask head consists of a cant which has cracked in two pieces. Both surfaces are beveled near the bite. The piece appears to be half of the head and no middle or center pieces are necessary. No dowels are present but the holes measure 1/4 in (.6 cm) in diameter. No reinforcement was found, but the construction of the lid, with just two cant pieces fastened laterally to each other, suggests some sort of reinforcement would have been necessary.

02-142 KEG STAVE
FIGURE: C-41
DIMENSIONS: Overall length - 16 in (40.7 cm)
Overall width - 3-1/2 in (8.9 cm)
Thickness - 1/4 in (.6 cm)
The small stave is from a keg. The chiv and chime blend into one smooth bevel on the interior surface. Croze grooves are 1/16 in (.15 cm) deep and the joints are slightly slanted inward. Five peg holes run along the bottom edge and the uppermost hole found at the top edge suggests this stave may have been recycled into a reinforcement.

02-214 CASK HEAD
02-242 a,b CASK HEAD
FIGURE: C-42
DIMENSIONS: Overall diameter - 23 in (59.6 cm)
Thickness - 1/2 in (1.2 cm)
The three head pieces appear to be from the same lid; 02-214 is a cant and 02-242 a,b are middle pieces. The cant is beveled along the bite, but the middle pieces are irregularly shaped and severely worn at the bite. No dowels or dowel holes are visible suggesting a reinforcement secured the pieces. Tool marks from a scorp, a tool used by coopers to smooth the wood’s surface, are visible on the exterior face.

02-304 CASK HEAD
FIGURE: C-43
DIMENSIONS: Overall diameter - 11-3/4 in (29.8 cm)
Thickness - 1/2 in (1.2 cm)
The cant piece may belong to the cask head containing pieces 02-214 and 02-242 a,b. Although several features are similar, namely the bite bevels, wood grain, and thickness, the overall shape of the head would be slightly distorted.
and ovoid rather than circular, as the individual cant curvatures suggest. No dowel holes are visible, indicating a reinforcement joined the pieces.

02-306 a,b  CASK HEAD
02-308 a,b  CASK HEAD
FIGURE: C-44
DIMENSIONS: Overall diameter - 18-1/2 in (46.8 cm)
Thickness - 3/4 in (1.9 cm)
This is the only complete cask head in the collection. The four pieces are actually two cants broken in half. No middle or center pieces are necessary as the head is made from the two halves. The lid is roughly finished and scorp marks are visible. The bite is beveled nearly 1/2 in (1.2 cm) on the interior surface and fits into a 1/4 in (.6 cm) croze groove. The halves are joined with two 1/4 in (.6 cm) square dowels. A third dowel is driven through cant 02-308b to plug a vent hole. Since no broad arrow has been carved on the lid, this may be the base or bottom of the cask.

02-146 WITHY
FIGURE: C-45 a
DIMENSIONS: Overall length - 6-1/2 in (16.5 cm)
The withy is either part of the hoop or the binding which secured the tips of the hoop. It has a convex exterior face and a flattened interior face which rests against the stave. It is extremely brittle, although this may be due to conservation treatment.

03-233 HOOP
MATERIAL: Iron
DIMENSIONS: Overall length - 9-1/2 in (24.2 cm)
Overall width - 3/4 in (1.9 cm)
The iron hoop is fragmentary but the curvature suggested it belongs to a cask. One tip remains, but no rivet holes are present indicating either a binding fastened the tips or the hoop has never been used.

02-294 PLUG
FIGURE: C-45 b
DIMENSIONS: Overall length -2 in (5 cm)
Diameter - 1/2 in (1.2 cm)
The plug has a flattened head which tapers in thickness from 1/4 in (.6 cm) to 1/2 in (1.2 cm). Two symbols, a "M" or "W" and a "C", are carved into each face, presumably to indicate an open or closed tap. The neck is cylindrical with a beveled tip. The plug may have belonged to a small keg or possibly to a powder horn.
02-358 BUNG
UNIT: 404
FIGURE: C-45 c
MATERIAL: Wood
DIMENSIONS: Overall length - 1-1/2 in (3.9 cm)
Overall diameter - 1-3/4 in (4.5 cm)
The cask bung is made from a softwood, probably tamarack, larch, or spruce. It
was turned and roughly shaped and tapers slightly.

With the exception of the stoppers, the majority of the staves and head
pieces were recovered from the lower levels of the stern units indicating that
not all of the provisions were stored in the bow. Ship’s masters and captains
recognized that the vessel’s stability, flotation, and speed depended on the
proper stowage of the ship’s stores and provisions (Broadwater 1989: 51-52).
Most of the provision casks found on other eighteenth-century vessels, such
as Revolutionary War vessels Defense and Yorktown Shipwreck 44Y088
supply ship, were located well forward, in the bow of the vessels, or
amidships (Smith 1986:54; Broadwater 1989:57). It is likely that the Boscawen
followed the same stowage pattern as other warships and merchant vessels.

Contemporary appraisers listed the gross weights of full beef and pork
barrels at 280 pounds and 250 pounds respectively (Smith 1986:48); 208 to 210
pounds of this weight was the brine contained in the barrel. According to
Amherst’s stipulations, for the Boscawen’s first voyage the 17 mess groups
shared 252 pounds of beef and 144 pounds of pork per week. Although
provisions were distributed in two to four day installments, the Boscawen
was fitted out for seven days (W.O.R 1759, 014:62). For a week’s provisioning
for the crew, the sloop would have carried the beef and pork in at least three
casks. The remainder of the provisions included 504 pounds of bread, or 84
six-pound loaves, 27 pounds of butter, 27 gallons of peas, 36 pounds of rice,
and 756 tills of rum. Amherst’s provision orders required the Boscawen to
carry 504 gallons of water, but Lake Champlain is a fresh water lake and
Lieutenant Grant may not have seen the need to carry water on board.
Therefore, an additional three full casks would have stored the butter, peas,
and rice, at least two terces were needed for the bread and flour, and three
rum kegs completed the crew’s week of provisions, totaling at least ten
barrels.
The _Boscawen_, however, not only carried provisions for her crew of 115 men, but we can also presume she carried extra provisions in 1759 for Amherst’s invading army. Provisions and stores would have been stowed in all sections of the ship, wherever space was available, since the sloop had very little hold space. Much of her cargo and stores must have been stowed among the crew on the berth deck.

The container fragments found in the wreck showed signs of hasty construction, using two large cant pieces and omitting the middle and center pieces for the ends. This would not be too unusual considering the enormous demand for casks and barrels generated by Amherst’s campaign and the _Boscawen’s_ hurried provisioning. The coopers would have been forced to take short-cuts and recycled portions of old barrels to meet Amherst’s October deadline. One curious omission was the absence of the broad arrow marking the property as belonging to the British army. It was possible that the arrows were on the missing head pieces, but it was notably absent from the only complete cask lid.


**Mess Tags and Utensils**

Once the provisions were stowed on board, a system for distribution had to be devised to feed the crew. Contemporary accounts describe how the men were divided into messes to facilitate serving the meals and keeping the mess utensils clean (Melville 1925:59; Jamieson 1984:24). Messing activity on the _Boscawen_ is represented by one tankard stave, three tags, one messkid stave, two spoons, a ladle, and one pewter plate.

Generally, the officers, master, purser, surgeon, and chaplain (if one was aboard) made up one mess and all other men were either assigned to a mess or were allowed to voluntarily form their own (Snyder 1964:14; Jamieson 1984:24). The captain usually dined alone.
Each mess was made up of five to 15 individuals, depending on the size of the vessel and crew. James Home served aboard the Revolutionary War vessel *Intrepid* with 32 marines, who were divided into three messes of 10 or 11 men (Jamieson 1984:24). The wreck of the *Defense*, which carried 100 men, yielded 20 mess tags, indicating each mess had only five men (Smith 1986:65). Based on Amherst’s daily allowance chart, the *Boscawen* carried 115 men and would have had 17 messes composed of six men in each and an officer’s mess.

One man from each unit was assigned the duty of “mess cook”, responsible for selecting the rations from the barrels or “kid”, marking the meat with a wooden mess tag, presenting it to the cook, and gathering his messkid, utensils, and, if available, bowls. When it was time to eat, the mess cook gathered the allotment of meat, bread, and other victuals in the messkid, and returned to the other men in the mess. Following the meal, all members were responsible for cleaning their own utensils (Snyder 1964:15; Dandridge 1911:340-341). Each mess breakfasted between 6 and 8 a.m. and had supper at 5 to 7 p.m. (Snyder 1964:11). On the morning of 25 October 1759, Commissary Wilson relayed orders that the dinner hour during the Lake Champlain campaign was to be held between 12 and 1 p.m. (Munsell 1857:191). It must have been interesting to watch 18 mess cooks scramble for their rations at the noon meal.

One tankard stave, three possible tags, one messkid stave, two spoons, one ladle, and one pewter plate were recovered representing at least three and possibly four mess groups. The wooden items identified as possible mess tags are similar in size and appearance to tags found on the Revolutionary War vessel *Defense*. The tags from the *Defense*, however, have recognizable mess markings cut in their surfaces, while the *Boscawen* tags are plain (Smith 1986:62).

02-202 TANKARD STAVE
UNIT: 411 level I
FIGURE: C-46 MATERIAL: Maple
DIMENSION: Overall length - 5-1/2 in (14.2 cm)
Overall width - 3/4 in (1.9 cm)

This single case stave is from a tankard or possible from a firken. The wood is smoothly finished and tapers from 3/4 in to 5/8 in (1.9 cm to 1.6 cm) in width. The joints are planed from the exterior to the interior surface. Since this was
an open-faced container, only the bottom end has a chiv, chime, and croze groove. The original container was small, estimated at only 6 inches in diameter at its base (Crisman 1985:406). The stave is finely finished and carefully made. Tankards, like messkids, were shared possessions from which grog or water was dispensed into cups.

02-203 MESS TAG
FIGURE: C-47 a
UNIT: 411 level I
MATERIAL: White Pine
DIMENSIONS: Overall length - 2 5/8 in (6.7 cm)
Overall width - 7/8 in (2.2 cm)
Thickness - 1/8 in (.3 cm)
The tag is very thin, with a round head and rectangular body. The joint between the head and body is narrowed but not notched. The body then flares to the same width as the head.

02-219 MESS TAG
FIGURE: C-47 b
UNIT: 411 level I
MATERIAL: White Pine
DIMENSIONS: Overall length - 1 1/2 in (3.9 cm)
Overall width - 1/2 in (1.2 cm)
Thickness - 1/8 in (.3 cm)
This is the smallest tag in the collection. The head and body are carved into two hexagons divided by "V"-shaped notches in the center for the string.

02-290 MESS TAG
FIGURE: C-47 c
UNIT: 411 on keelson
MATERIAL: White Pine
DIMENSIONS: Overall length - 2 3/4 in (7 cm)
Overall width - 3/4 in (1.9 cm)
Thickness - 3/8 in (1 cm)
The tag is flat on one surface and convex on the other. The small head is round and notched on either side to attach a string.

02-303 MESSKID STAVE
FIGURE: C-47 d
UNIT: 408 level F
MATERIAL: White Oak
DIMENSIONS: Overall length - 4 1/2 in (10.8 cm)
Overall width - 2 7/8 in (7.3 cm)
The stave is smoothly finished on both surfaces and tapers from 2 -7/8 in to 2 1/2 in (2.7 to 6.2 cm) in width. The joints slant inward and the croze groove is 1/4 in (.6 cm) deep along the bottom edge. The stave is part of the container which held the majority of food allotted to a mess group. Messkids resembled small, handleless buckets banded with wooden withy hoops near the top and base of the container. Similar messkid staves are found on the Defense (Smith 1986:85-88).
03-007 SPOON  
UNIT: 414 level B  
MATERIAL: Pewter  
DIMENSIONS: Overall length - 4 3/4 in (12.1 cm)  
Maximum width - 7/8 in (2.2 cm)  
The pewter spoon consists only of a tapered and rounded handle; the bowl is missing. The handle has an overlapping, double-scaled junction on the handle end which turns down. The top face is decorated and the reverse face has three manufacturer's stamps: an "X", "LONDON", and "BURFORD GREEN". The marks identify the metal as extra hard with less lead, the place of manufacture, and the trifler company, Burford and Green. Thomas Burford and James Green were first given leave by the crown to strike their touch in 1748 to 1750, suggesting the spoon is a relatively new acquisition (Cotterell 1963:219). Similar LONDON-stamped spoons have been recovered from Forts Michilimackinac (Series A, Type 2) and Ligonier, and on the Defense (Stone 1974:181; Grimm 1970:147; Smith 1986:90).

03-078 SPOON  
UNIT: 413 level F  
MATERIAL: Pewter  
DIMENSIONS: Overall length - 7 3/4 in (18.5 cm)  
Bowl width - 1 5/8 in (1.6 cm)  
This Hanoverian spoon is one of the most common mid eighteenth-century spoon types. The egg-shaped bowl is attached to a rat-tail handle. The handle is an upcurving spatula with a rib-front or central ridge emanating from the terminal end. The reverse face of the handle is scratched with a zig-zagged pattern and the initials "H E". The letters may identify the mess it belonged to or are the owner's initials. Rat-tail spoons were popular from the 1710s to the 1750s and are found on many colonial sites.

02-136 LADLE  
UNIT: 413 level H  
MATERIAL: Maple  
DIMENSIONS: Overall length - 6 1/4 in (15.9 cm)  
Bowl width - 2 3/4 in (7 cm)  
The ladle is carefully carved from a single piece of wood. The handle is squared and gently slopes into a shallow bowl. The end of the handle is slightly hooked. The ladle appears to be too short and shallow for soup or stew, but closely resembles Shaker butter scoops or paddles used to take butter from churns (Gould 1962:92-93).

03-080 PLATE FRAGMENT  
UNIT: 404 level E  
03-376 PLATE FRAGMENT  
UNIT: 304 level D  
MATERIAL: Pewter  
DIMENSIONS: Estimated overall diameter - 10 in (25 cm)  
The two plate fragments are torn but measured 4 1/2 in (11 cm) in length and 3 1/2 in (8.5 cm) in width. Fragment 03-080 is folded over itself. The raised rim has a single bead on the front and back and has a design scratched into
quarters. The weights have a central hole penetrating through the weights diameter. Finally, example, 03-442 is a barrel-shaped net weight pierced at the top end for a line. This weight is 1-1/2 in long (3.8 cm) as opposed to all of the others which are 5/8 in long (1.6 cm).

Royal Navy ships were outfitted with fishing tackle, including hooks and lines for issue to the men and the orderly books reported that Amherst permitted the soldiers in the army to fish, as long as the bateaux were returned clean (Rodger 1986:45; Munsell 1857:159). Although fishing was permitted and the crew participated in it, these weights may have been intrusive to the site.

**Glass and Cork**

The British army formally issued alcohol to maintain the health and morale of the soldiers, stating that "as the government has provided a good store of rum for the men, half a gill may be delivered out regularly everyday, and a gill when the weather is wet and cold, or when the men are much fatigued with work and duty (Public Archives of Canada [PAC], 1779:MG 23, B23). Even the army hospitals were occasionally permitted to dispense alcohol to their patients (W.O.R. 1760, 037:24A). The commanding officers attempted to regulate and limit access to liquor by forbidding it in the barracks, punishing those guilty of disorderly behavior, and confining the men to their quarters after supper. The 288 fragments from wine and liquor bottles and stemware, however, reveal that their efforts were not wholly successful.

The officers and crew were allowed to purchase wine and liquor from sutlers for their private reserves (Jones 1985:7). The common soldiers were limited to rum and beer due to the cost of spirits. Rum was the more popular drink and was purchased in small quantities and consumed immediately (Jones 1985:7). Officers or anyone with the capital had a greater variety of spirits to choose from including claret, madeira, port, porter, sherry, punch, and distilled liquors such as rum, gin, brandy, and whiskey for after-dinner socializing (Smith 1983:31). They frequently purchased cases and casks of alcohol and stored it, but the officers were just as willing to drink to excess as the troops were. General Amherst recognized the growing problem,
commenting in his journal that his officers were spending too much of their
time at the ale houses and not at work (Jones 1985:10). This is not to say that
the *Boscawen* was a floating saloon manned by a sauced crew, but, rather, that
the men found in alcohol some respite from the difficulties of frontier
military life.

Distilled liquor, beer, and wine were transported and stored in casks and
kegs, but most of the alcohol was purchased in bottles, sealed with a cork, and
packed in cases. These bottles are the most common glass artifacts found on
colonial sites. Even though the bottles are called English “wine” bottles, they
held a variety of beverages. Sizes varied from a half-pint to a gallon; the
British standard for wine bottles in the early eighteenth century was a gallon
measuring 231 cubic inches. By the late eighteenth century, wine bottles
measured 1/5 of a gallon or 23-26 ounces, but the sizes were generally more
conceptual than real (Brown 1971:101).

A bottle consisted of the finish, neck, shoulder, body, and base. The finish
contained the bore or opening at the top of the bottle which is surrounded by
a lip. It was either plain or molded. Common lip finishes included flat,
downward sloping, cracked-off, flanged, down-tooled, rounded, and “V”-
tooled. A string rim was often applied to the lip creating a ledge which
protruded from the surface. It was formed from glass added to the bottle. The
neck was the narrowed section between the finish and shoulder. Neck shapes
included tapered, cylindrical, and bulged. The widening portion of the bottle
between the neck and body was the shoulder which was either rounded,
sloped, tapered, or horizontal. The main part of the container was the body.
Common body shapes included round, ovoid, square, rectangular, and
octagonal which terminated at the base. Most bases were either flat or had a
kick, a basal indentation. The scar left on the base after the bottle was
removed from the rod was the pontil mark (Figure 16).
These features help to date bottles as bottle shapes and finish styles continued to change throughout the eighteenth century. In the early part of the century, alcohol bottles were either short, wide bodied and short necked wine bottles or straight-sided, square case bottles. Later, wine bottles were taller, narrower, and more graceful with elongated necks, cracked-off or down-tooled lips, and string rims. This latter form was commonly encountered on pre-Revolutionary War sites and was the type recovered from the Boscawen.

Of the 255 glass fragments, 247 are wine bottle body shards, listed in Table 3. The 18 identifiable pieces include seven necks and finishes, four bases with kicks, one complete bottle composed of four fragments, and six fragments from a wine glass. Seven cork bottle stoppers were also recovered.

05-007 BOTTLE FINISH
FIGURE: C-52 a
UNIT: 403 level C
DIMENSIONS: Overall length - 3/4 in (2 cm)
Bore diameter - 1/2 in (1.2 cm)
This olive-green finish has a constricted bore and rounded lip, with a rounded-trail string rim. The string rim was applied by rotating the bottle while a thin stream of glass was poured onto the lip. This type of finish is common from the 1740s to 1760s.

05-010 BOTTLE NECK AND SHOULDER
FIGURE: C-53 a
UNIT: 403 level D
DIMENSIONS: Overall length - 3 in (7.5 cm)
Bore diameter - 1-1/8 in (2.8 cm)
The green glass cylindrical neck joins a rounded shoulder. The lip is cracked-off, revealing a constricted bore. A rounded-trail string rim is applied at an angle. The glass contains a number of air bubbles. The bottle is a classic example of a 1750s wine bottle.

05-043 WINE BOTTLE
FIGURE: C-54
UNIT: 413 level G
DIMENSIONS: Overall height - 10 in (20.8 cm)
Bore diameter - 1-1/4 in (3.2 cm)
Base diameter - 3-3/4 in (9.5 cm)
This green bottle is reconstructed from four large fragments. The two-part finish consists of a constricted bore and rounded lip. An up-tooled string rim is applied with the lower surface tooled up and out from the lip. The top is rounded. The neck is roughly cylindrical to slightly bulged just below the finish. The shoulder is rounded and joins a circular body which terminates in a rounded heel. The basal profile is domed and a small pontil mark is
visible on the kick. The bottle is a typical 1750s to 1760s English wine bottle with an estimated capacity of 25 ounces.

05-042 BOTTLE NECK  UNIT: 513 level C
FIGURE: C-53 b  MATERIAL: Glass
DIMENSIONS: Overall length - 2- 3/4 in (7 cm)
   Bore diameter - 1 in (1.2 cm)
The olive colored bottle neck is cylindrical and terminates in a cracked-off lip with a rounded-trail string rim. The bore is slightly constricted, but this may have been accidental during the manufacturing process.

05-068 CASE BOTTLE BASE  UNIT: 513 level G
05-105 CASE BOTTLE BASE  412 level E
FIGURE: C-55  MATERIAL: Glass
DIMENSIONS: Overall height - 3 in (7.6 cm)
   Overall width - 2 -1/2 in (6.2 cm)
The green rectangular body extends to an abrupt, squared-off heel. The base is flat and has a small pontil mark. There appears to be an impression cast into the base, but it is illegible. Dark green case bottles with straight bodies date from the 1740s to 1760s and contain both wine and distilled liquors.

05-070 BOTTLE BASE  UNIT: 410 10 inches below hull
FIGURE: C-56 a  MATERIAL: Glass
DIMENSIONS: Overall Height - 4- 1/2 in (11.4 cm)
   Base diameter - 4- 1/2 in (11.4 cm)
The greenish-brown glass bottle base was located beneath the underside of the hull. Enough of the body remains to indicate it is circular. The heel is rounded and the profile is domed with a pontil mark. The color and slightly wider body suggests that this may be a beer bottle (Smith 1983:35).

05-072 BOTTLE BASE  UNIT: 510 level E
FIGURE: C-56 b  MATERIAL: Glass
DIMENSIONS: Overall height - 3- 3/4 in (9.5 cm)
   Base diameter - 4- 1/4 in (10.4 cm)
This greenish-brown bottle base is similar to base 05-070. The circular body terminates in a rounded heel and domed profile. A pontil mark is visible. The base may be from a wine or beer bottle.

05-083 BOTTLE NECK  UNIT: 511 level G
FIGURE: C-53 c  MATERIAL: Glass
DIMENSIONS: Overall length - 6 in (15.1 cm)
   Bore diameter - 1- 1/2 in (3.5 cm)
The neck is dark green in color, cylindrical and slightly bulged and widened slightly at the rounded shoulder. The lip is round with a down-tooled string rim.
05-101 BOTTLE FINISH
FIGURE: C-52 b
DIMENSIONS: Overall length - 1-1/8 in (2.9 cm)
Bore diameter - 1 in (2.5 cm)
The green glass finish has a round lip and down-tooled string rim.

05-115 BOTTLE NECK
FIGURE: C-53 d
DIMENSIONS: Overall length - 3-1/4 in (8 cm)
Bore diameter - 1 in (2.5 cm)
The neck is brown glass and tapers into the shoulder, however, it is shorter than most of the other examples, resembling wine bottles from the 1740s. The lip is rounded with a down-tooled string rim.

05-129 BOTTLE FINISH
FIGURE: C-52 c
DIMENSIONS: Overall length - 1 in (2.5 cm)
Bore diameter - 1 in (2.5 cm)
Less than half of the circumference of the finish remains. The lip is cracked-off with a rounded-trail string rim applied to the dark green glass lip.

05-134 BOTTLE FINISH
FIGURE: C-52 d
DIMENSIONS: Overall length - 1 in (2.5 cm)
Bore diameter - 1 in (2.5 cm)
This small, green glass fragment consists of a cracked-off lip and a rounded-trail string rim. The bore is slightly constricted.

05-159 BOTTLE NECK
FIGURE: C-53 e
DIMENSIONS: Overall length - 1 in (2.5 cm)
Bore diameter - 1 in (2.5 cm)
The dark green neck fragment has a cracked-off lip and rounded-trail string rim. The bore is constricted.

05-184 BOTTLE BASE
FIGURE: C-56 c
DIMENSIONS: Overall height - 3-1/8 in (8.2 cm)
Base diameter - 4 in (10 cm)
The green glass bottles has a circular body which ends in a rounded heel. The basal profile is domed and a pontil mark is visible.
05-006 WINE GLASS BOWL FRAGMENT UNIT: 415 level E
05-012 WINE GLASS STEM FRAGMENT 414 level E
05-146 WINE GLASS BOWL FRAGMENT 414 on keelson

FIGURE: C-57 MATERIAL: Glass

DIMENSIONS: Overall height - 3-1/2 in (8.8 cm)
Base diameter - 1-1/2 in (3.7 cm)

This clear or crystal wine glass includes fragments from the bowl and stem. The bowl shape appears to be conical or trumpetted. The collar and neck tapers to a ball-knob stem formation topping a conical foot with a raised rim (Jones 1985:47). Shorter stems such as this one were popular in the 1760s and 1770s (Jones 1985:39).

06-016 BOTTLE STOPPER UNIT: 413 level F
06-040 BOTTLE STOPPER 413 level G
06-133 BOTTLE STOPPER 413 level H
06-148a-c BOTTLE STOPPER 413 69" dbd
06-161 BOTTLE STOPPER 413 level G

FIGURE: C-58 MATERIAL: Softwood

DIMENSIONS: Height - 1 in to 1-3/8 in (2.5 to 3.5 cm)
Diameter - 7/8 in (2.2 cm)

Four of the five bottle stoppers are nearly identical cylinders, varying only slightly in height. Only 06-133 is unique to the collection as the stopper is shaped to fit into the bottle. The top knob, or knob, is rounded with square sides and sits on a neck which is narrowed for a string. The top flares to the rounded shoulder and the body tapers to the foot.

The remaining glass fragments are body shards and are presented in Table 3.

TABLE 3
BOTTLE FRAGMENTS RECOVERED FROM THE BOSCAWEN

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<th>UNIT:</th>
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<td>THREE FRAGMENTS</td>
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The most common glass fragments (89 percent) are from green wine bottles. Brown beer and liquor bottles make up five percent of the sample, four percent of the glass is olive-colored, and two percent is clear glass from stemware and window glass. The majority of the glass (47 percent) was found in the bow, particularly units 402, 403, and 404 (51 percent), and the remaining 53 percent was evenly distributed between the middle units and stern.

The glass found on the Boscawen revealed a good deal about the life of the soldiers. Alcohol was regularly doled out and privately purchased to keep the men healthy, warm, and content. Officers were permitted to bring their own fine wines and at least one preferred to drink it from a crystal wineglass. The men drank alcohol for preventative measures as well as for medicinal purposes and the quantity of glass recovered indicated that this was one order no one minded following (PAC 1779, MG:23, B:23; W.O.R. 1760, 037:24A).

**Ceramics**

The majority of the crew probably took their meals directly from the messkid, but British military officers were supplied with stoneware and earthenware place settings (Sussman 1978:93). Provincial officers were more likely to supply their own tableware (Crisman 1993, pers. comm.). Other ceramics were used for storage. Fifty three fragments found on the Boscawen are associated with the officers’ tableware and food storage containers.

Almost all ceramics discovered on British military sites were mass produced. Each regimental mess purchased its dinnerware independently, but conformity to military standards resulted in a homogeneity among the collections. The Royal Army provided the regiments with an allowance to obtain the necessary articles. General Thomas Gage’s ledger from the early 1760s quotes the sum at 9-1/2 pence for bowls, platters, and spoons (Sussman 1978:95). Any additional furnishings were supplied by the men. The Royal Army expected its officers to maintain themselves in a style and manner befitting their station.

The officers’ steward retrieved their allotment of meat in ceramic pans, platters, and bowls. These coarse, lead-glazed yellow ware containers were made from buff colored clays and a white slip was occasionally applied onto the body. Ceramics manufactured in the colonies were nearly identical in
form and quality to their English counterparts and many stewards may have purchased the tableware from local potters (Deetz 1977:48).

In the mid eighteenth century, the most common dinnerware used was white salt-glazed stoneware. Colonial potters successfully manufactured this hard-bodied ceramic which was impervious to water. Regiments frequently purchased entire place settings with the same patterns, such as basket, barley-grain, feather-edge, and gadrooned-edge. Kilns in Philadelphia, New Jersey, and New York produced gray, blue and gray, and cream colored stoneware jugs, bottles, crocks, pitchers, tea services, bowls, platters, dishes, and plates to satisfy local demand (Deetz 1977:48; Noel Hume 1980:100-101; Perry 1989:24; Sussman 1978:96).

By the eighteenth century, tin enameled ceramics, also known as delftware, were primarily manufactured in Liverpool and Bristol, England and in Glasgow, Scotland, then shipped to America. British delftware had a pale yellow, pink, or buff body coated with a lead glaze. The glaze contained tin oxide which turned the surface a characteristic opaque white. The enamel could be painted with cobalt blue, manganese purple, copper green, antimony yellow, or rust orange before a final firing (Noel Hume 1980:106). The main disadvantage to tin enameled wares was the tendency of the glaze to chip off. It was not a suitable ceramic for cups, bowls, or plates, although these items were commonly made and purchased by customers whose desire was for something resembling Chinese porcelain, but could not afford real porcelain. By the 1760s, tin enamel was used less often as creamware appeared on the market (Hamilton 1994: pers. comm.).

The most expensive tableware was porcelain and bone china, made from a mixture of kaolin clay and feldspathic rock or powdered bone, decorated in an underglaze blue and fired at high temperatures to fuse the glaze to the body (Noel Hume 1980:258). Although British and colonial potters were manufacturing porcelain, the quality and quantity were not equal to the Chinese wares. Porcelain was not likely to be found in less affluent homes and then it was most likely to be a tea service. In the military it was typically the personal property of the higher ranking officers, who brought their own tea services with them.
Of the 51 ceramic fragments found on the Boscawen, 25 are tin enamel, 12 are coarse red earthenware, nine are white salt-glaze stoneware, two are yellow ware, and two are porcelain, and one is tentatively identified as porcelain. Thirteen sherds are from an identifiable vessel or are decorated and are discussed below.

05-004 STORAGE JAR FRAGMENT  
UNIT: 503 level D

05-005 STORAGE JAR FRAGMENT  
UNIT: 503 level D

05-016 STORAGE JAR FRAGMENT  
UNIT: 404 level D

FIGURE: C-59  
MATERIAL: Tin Enamel

DIMENSIONS: Height - 6 -1/2 in (17.6 cm)  
Diameter - 5 in (13.2 cm)  
Thickness - 3/16 in (.4 cm)

This tin enamel storage jar is reconstructed from three large pieces and is nearly complete. The buff body is coated with a pale blue slip and clear glaze. The base is left without the slip or glaze and the enamel has chipped off the rim. The jar exhibits extensive crazing in the glaze.

05-062 BODY FRAGMENT  
UNIT: 512 level E

FIGURE: C-60 a  
MATERIAL: Tin Enamel

DIMENSIONS: Length - 1/2 in (1.5 cm)  
Thickness - 1/8 in (.3 cm)

This small, tin enameled shard is from the base of a relatively flat vessel, such as a plate or platter. The body is pink with a white glaze which has begun to craze and is painted with brown stripes, resembling the “Mocha” wares of the nineteenth century.

05-064 BOWL BASE  
UNIT: 511 level D

FIGURE: C-60 b  
MATERIAL: Red Earthenware

DIMENSIONS: Height - 1-3/4 in (4.3 cm)  
Length - 2-1/2 in (6.4 cm)

The base appears to be from a coarse earthenware bowl. The body is red clay and a clear lead glaze was applied. The glaze has discolored and is slightly blackish-green.

05-066 RIM FRAGMENT  
UNIT: 511 level D

FIGURE: C-60 c  
MATERIAL: Salt-glaze Stoneware

DIMENSIONS: Length - 7/8 in (2 cm)  
Thickness - 1/8 in (.3 cm)

The sherd is from a white, salt-glazed stoneware dish, plate, or saucer decorated with a feather-edge pattern. The rim is splashed with cobalt blue. Similar feather-edge, cobalt flatware has been recovered at Fort Beausejour in Canada (Sussman 1978:96).
05-073 BODY FRAGMENT  UNIT: 412 level B
FIGURE: C-60 d  MATERIAL: Yellow ware
DIMENSIONS:  Length - 1-3/8 in (3.3 cm)
Thicknes - 1/8 in (.3 cm)
This small fragment is classed as yellow-bodied earthenware, but may actually
be white slat-glazed stoneware. A white slip was applied to the body followed
by a tan slip resembling a process called “dipped glazing” used on salt-glazed
stoneware in the 1750s (Noel Hume 1980:115). The tan slip is painted with a
brown swirl and white stripe.

05-135 DISK  UNIT: 412 level F
FIGURE: C-60 e  MATERIAL: Ceramic
DIMENSIONS:  Overall diameter - 1/2 in (1 cm)
This small disk is somewhat perplexing. It is not from any form of tableware,
but rather, appears to be a ceramic bead or mosaic inlay. It may also be part of
a button, but no base could be matched. Therefore, it has been tentatively
placed in the ceramics category. The disk may be porcelain since the body has
a translucent quality. The top surface is scalloped to resemble a shell and each
line is painted black. Three green stripes are incised and painted across the
black lines.

05-149 HANDLE  UNIT: 304 level C
FIGURE: C-60 f  MATERIAL: Yellow ware
DIMENSIONS:  Length - 8 in (20 cm)
The handle appears to be from a jug or storage jar. It is coarse earthenware
with a buff to yellow paste tempered with grog and glazed with a clear lead
glaze that has yellowed slightly.

05-164 BODY FRAGMENT  UNIT: 404 level C
FIGURE: C-60 g  MATERIAL: Tin Enamel
DIMENSIONS:  Length - 5/8 in (1.3 cm)
Thicknes - 1/4 in (.6 cm)
The small sherd has a buff to pink paste covered with a light blue slip. The
exterior surface is painted with cobalt blue lines and dots. The interior surface
is mottled purple on the blue slip.

05-183 RIM FRAGMENT  UNIT: 507 level E
FIGURE: C-60 h  MATERIAL: Salt-glazed
Stoneware
DIMENSIONS:  Estimated diameter - 11 in (27.6 cm)
Thicknes - 1/8 in (.3 cm)
The estimated diameter and curvature indicates that the white salt-glazed
stoneware fragment is from a plate or large bowl. The body is very thin and
delicate.
05-208  RIM FRAGMENT  UNIT:  408 level C
05-213  RIM FRAGMENT  406 level C
FIGURE:  C-60 i  MATERIAL:  Porcelain
DIMENSIONS:  Estimated diameter - 2 1/2 in (6.3 cm)
              Thickness - 1/16 in (.15 cm)
These fragments are from a Chinese porcelain cup, possibly belonging to a tea
service. The rim is very delicate and painted with a diamond-diaper border
on the inner surface and a leaf or tree pattern on the outer surface (Macintosh
1986:14). The diamond-diaper motif was a very old pattern dating to the
fourteenth-century Yuan Dynasty, but one which was favored by the British.
This cup would not have been purchased from the general mess allowance,
but rather, was more likely from a personal set brought from home.

The remaining 38 fragments were only identifiable by their fabric and are
listed in Table 4.

The most common sherds are from tin enameled ceramics (47 percent).
Red earthenware vessels make up 25 percent of the sample, 15 percent are
from white salt-glazed stoneware plates, dishes, and bowls, seven percent are
yellow ware, and six percent is porcelain. Over half of the ceramics (57
percent) are located in the bow and the remaining fragments are distributed
throughout the midships area (26 percent) and stern (17 percent). Since quite
a few sherds are from storage containers or ceramics of lesser quality, it is not
surprising that the majority of the examples were recovered from areas
frequented by the main body of the crew.

The ceramics clearly demonstrated the difference in social status and
lifestyles between the crew and officers. While the men were eating directly
from the messkid, the officers were dining on fine tableware. Coupled with
the crystal winestem and porcelain tea service, at least some members of the
Boscawen's crew maintained a higher level of elegance they were accustomed
to.
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TOTAL: 38
CHAPTER 7
PERSONAL POSSESSIONS AND AMUSEMENTS

"Breakfast at 8, quarters at 9, dinner at 12, supper at 5, quarters at 6 - these were the landmarks which announced the passing of the day."
Charles Nordhaff - 1840 (Snyder 1964:11)

The crew of the *Boscawen* spent the day performing the various duties necessary to keep a war vessel operating. In addition to the demands of war, all hands were kept busy cleaning and ornamenting the sloop, scraping away tar and grease from the decks, waxing the guns, repairing the rigging, and finally, overhauling their clothing.

Conditions onboard a warship were miserable. Each man was issued a hammock for a space barely as large as a good size grave (King 1903:55). They were often crowded into a room large enough for only half of them and which was also filled with equipment, as was demonstrated by Richard Henry Dana aboard the brig *Pilgrim*: "The steerage in which I lived was filled with coils of rigging, spare sails, old junk, and ship stores which had not been stowed away" (Dana 1840:44-45). The area was too small for a mess table, so the men had their choice of taking their meals between decks amidst the bilge-water, rats, lice, and fleas, or on the main deck. When not on duty, they spent their time in a poorly lighted, inadequately ventilated room where sanitation was ignored and "the air was most foul" (King 1903:60) and "inconceivably putrid and offensive" (laffin 1970:104). Any additional crew members who did not have a space below deck, made their place on the main deck.

The British Navy was always in need of men to crew their vessels, and when a captain lacked men, he simply sent out a press gang to kidnap a few drunken sailors and bring them aboard. The army, under General Amherst and Captain Loring, did not have to resort to impressment to find a crew for the *Boscawen*. They recruited sailors from various provincial militia units until 50 seamen were found, and they selected Lieutenant Alexander Grant for command. Grant was just 25 years of age when he received his commission. Born in Glenmonster, Inverness-shire, Scotland in 1734, he was
bred to the sea. He came to the Americas in 1757 as an officer of the 17th Regiment to serve in Forbes' 1758 campaign against Fort Duquesne. He distinguished himself in battle, was made a Lieutenant of the 77th Regiment, and was rewarded with command of the Boscawen. Following his successful campaign in 1759, he was given command of all vessels on Lake Champlain and from 1763 to 1776, he had charge of all British vessels on all the lakes. From the Revolutionary War to the War of 1812, he commanded vessels on Lakes Erie, Huron, and Michigan. He served as a Lieutenant of the Essex County militia, a legislator, and finally as acting governor of upper Canada, although he remained in the United States until his death in 1813, at the age of 79 (NAC 1839, Clarence M. Burton Papers).

Grant and Mr. Ball, the ship's doctor, are the only members of the Boscawen's crew whose identities are known; the names of the remaining 113 individuals have yet to be discovered. Further archival research in the Public Records Office in London may yet produce a muster list identifying the crewmen.

Communication and routine were necessary to keep order among so many men crowded together. Each man was required to know what duties were assigned to him and where his station was. On most large warships one or two crew members were responsible for care of a particular class of stores that they were familiar with, such as the boatswain's, master's, or purser's stores. On smaller vessels, experienced personnel filled critical positions, for example, care of the navigation or gunner's stores, but other tasks were divided among the remaining crew members and sharing of duties was the norm (Broadwater 1989:52). This was probably the case on the Boscawen; Loring had difficulty finding experienced sailors and, therefore, it was likely that he only employed specialists for the most essential duties.

When mustered, the crew reported to their stations and the procedure was repeatedly practiced so that "by dint of continued drilling, even the most persistently stupid were taught their places and duties" (Snyder 1964:11). Those crew members who failed to learn their place and duties faced disciplinary action. Discipline on British ships was notorious for its regularity and severity. Older seamen looked upon it rather dispassionately, as if
flogging and other corporal punishments were barely worthy of comment. William Spavins, an impressed seaman in 1796, and John Wetherell, on the 
HMS Hussar in 1803, commented that punishments were meted out at the 
captain’s discretion. Misbehaving boys were forced to flog one another with 
stinging nettles or were strapped to a cannon and whipped with the cat-o- 
nine tails. Anyone found guilty of lying was hung by his arms from the 
mainstay for 30 minutes. After his release, he cleaned the latrine, or head, 
and thereafter was referred to as a “liar of the head” (Snyder 1964:88). 
Disorderly behavior resulted in the offender being scrubbed clean with a 
broom of nettles, and thievery was rewarded by running the gauntlet before 
being towed toward shore with a rope around the neck and set adrift.

Flogging, however, was the preferred form of discipline in the Navy. 
Swearing, drunkenness, mischief ashore, excessive noisiness, and any other 
real or imagined transgression resulted in a man being seized up. Each 
offense could receive no more than a dozen lashes, and if more were ordered, 
a court martial was assembled. Many charges were dismissed, but those 
sailors unlucky enough to be convicted, could find themselves sentenced to a 
flogging through the fleet, receiving 300 to 700 lashes for their offense. Most 
ever survived.

Discipline was as severe in the Royal Army as it was in the Royal Navy. 
To maintain order in the camps, the commander informed his men of what 
constituted offensive behavior and specified the punishments one could 
expect to receive. In 1758, the orders at Fort Edward declared that regular 
soldiers caught gambling would immediately receive 300 lashes without 
benefit of a court-martial hearing; drunkenness received 200 lashes for the 
offender and the sutler who sold the liquor; and raising false alarms resulted 
in execution. Name calling and fist-fighting between the regular and 
provincial soldiers was so common that Lieutenant Colonel John Bradstreet 
sconded his troops in 1758 over the skirmishes and promised that those who 
continued did so “on pain of being punished with the utmost severity” 
(Anderson 1984:120). Discipline in the Royal Army was often so severe the 
 provincials commented that the regular soldiers were known to commit 
Suicide was rare in the Provincial Army, but then apparently so was severe punishment. In 1755, provincial soldiers who left their encampment at Grand Pre' were not disciplined, but "reminded ... of the former orders" not to pass beyond the picket line without permission (Anderson 1984:128). In 1759, the provincials at Fort Cumberland stole clothing from the purser's stores and exchanged them for liquor. The fort's commander, Colonel Joseph Frey, responded by lecturing his men on the sin of thievery and ordered that no sutler was to sell liquor to the men for four days. Rather than extreme physical coercion, provincial officers allowed their troops to accept the consequences of ill health and personal dishonor for their transgressions. As a last resort, confinement to the quarter guard (prison) or a flogging of 30 lashes was administered.

The men who survived war with the French as well as life in the Royal Navy and Army faced other hazards as well. Storms on the lake came up quickly and violently. Crew members climbed up amidst the rigging, and occasionally some did not climb back down. Most sailors did not know how to swim, and when a man fell overboard he seldom resurfaced.

War and military life also had an effect on the emotional health of the men. Lethargy, an increase in physical complaints, and a drop in morale were noted in the provincial army. Entries from Seth Pomeroy's journal repeatedly stated that the mood of the soldiers was "melancholy and listless" (Pomeroy in de Forest 1926:104). Soldiers in both the British and French provincial and regular armies reported that several men appeared disoriented and had radical mood swings following battle (Anderson 1984:145).

The emotional stress, or battle fatigue, the troops underwent affected their physical health as well, making them more susceptible to disease (Kupperman 1979:26). Disease was rampant and more men were lost to disease than in battle. In the early stages of the war, Loudoun reported that small pox was of epidemic proportions among the troops, and entire regiments were segregated to prevent its spread (Pargellis 1969:361). They also faced scurvy, dysentery, pleurisy, ship fever (typhus), consumption (tuberculosis), pneumonia, bronchitis, rheumatism, and various fevers, and
within the close confines of camp and aboard ship, every illness had the potential of spreading (Zoske 1970:155; Laffin 1970:103-104). Following the battle of Lake George in 1755, the sickness intensified to a point where ten days after the battle, wagon loads of men had to be furloughed home to prevent the illness from spreading further (Pomeroy in de Forest 1926:119). Three years later in 1758, again on Lake George, the Reverend John Cleveland kept a journal of the number of deaths due to disease during the campaign, noting that within the span 50 days, 23 soldiers in one regiment had died (Cleveland 1959:198).

Soldiers who were too ill to perform their duties yet not sick enough to warrant early dismissal from military service were sent to troop hospitals to recuperate. The hospitals were staffed by regimental surgeons and their mates and enlisted men acting as nurses who were primarily responsible for treating the ill and wounded men from their own regiments (Anderson 1984:105). A sergeant was appointed to assist the surgeon in maintaining order among the men while in the hospital and a sentry was posted to insure that no one entered without first scraping the mud from his shoes (Zoske 1970:155-156).

Army hospitals were generally temporary facilities set up in a nearby barn or stable and were wholly inadequate for the needs of the patients or doctors, but in 1760 Dr. R. Brocklesby introduced "hospital huts" specifically designed to house the sick and wounded out of the cold and rain (Zoske 1970:155). Sanitation was often as much of a problem in the hospitals as it was in camp; Lieutenant John Frost remarked on the hospital at Crown Point in 1760, "of all the smells that I ever smelt, there was none that ever smelt so bad" (Anderson 1984:106). The hospitals in Halifax were no better; they did not have clean linen for the beds, prompting Sergeant David Perry in 1762 to write "the body lice were eating me up, and [I] told one of those who waited on me, to heat a tailor's goose...and iron my blanket on both sides; which he did and it turned as red as blood" (Anderson 1984:106).

As harsh as military life was, existence was not always dismal. The men could spend several days with nothing to do and during such times they played games and cards, smoked, and drank, disobeying Royal Army
regulations. From 10 May to 12 May 1759, Thomas Franks wrote that he played cards all day, lost five dollars, and “spent the day very agreeably and crowed the night with mirth and jollity - almost drunk” (de Peyster 1921:272). General Amherst permitted the soldiers at Fort Ticonderoga to take the bateaux out on Lake Champlain to fish and hunt, but when several boats were returned dirty, Amherst warned that “if they do not make a better use of the privilege which is given them...[I] will entirely put a stop to any being taken out” (Munsell 1857:159).

Although the army regulated smoking, drinking, and gambling, the soldiers continued to engage in these and other activities, as is reflected in the variety of personal possessions recovered from the Boscawen. Pipes, gaming pieces, a brush and comb, coins, a Jew's harp, key, a set of navigational dividers, and lead pencils were found within the hull. Several fragments from medicine bottles were also recovered. These small artifacts were located primarily in the stern units (62 percent) along the keel and on the port side of the vessel (97 percent) and appeared to reflect the vessel's orientation and trim on the bottom of the lake.

**Smoking Pipes**

It was possible to find a sailor or soldier who did not smoke or chew tobacco, but he was a rare creature; a “sailor’s pleasure” was found in dancing, singing, playing, and smoking (Dana 1946:54). Tobacco use was widespread in the eighteenth century, and some boys, such as John Nicol, started smoking at the early age of ten (Milville-Deschenes 1987:80; Smith 1986:142). Smoking was a purely leisure activity. In the military, men were permitted to smoke while off-duty or during meals, but anyone caught smoking while on duty was disciplined (King 1903:99). Fire was a real threat and while most captains preferred the men not smoke on board ships, they realized the difficulty in enforcing it. Therefore, it was limited to specific times and places. Although smoking was a common recreational activity, relatively few pipes were recovered from the Boscawen; 20 pipe fragments consisting of 18 stems, and two pipe bowls with the stems were found during the 1984 and 1985 excavations.
The English kaolin tobacco pipe is one of the most common artifacts found on colonial sites. Most pipes were manufactured, imported, purchased, smoked, and disposed of, all within a year or two. It was an inexpensive habit, with pipes costing as little as two shillings a gross in the eighteenth century (Noel Hume 1980:296).

The pipe was composed of two parts, the bowl and stem. The bowl included the base (receptacle for the tobacco), mouth (cavity opening), and heel or spur (short projection from the base). The bowl may have had a cartouche or maker’s mark and the bowl’s shape and form varied according to the pipe makers’ molds. The stem projected from the heel to the mouth piece. Its size was not dependent upon the size of the bowl, but rather, on the diameter of the bore. The bore was made by pushing a wire through the length of the stem while the clay was still wet. When the stem was relatively short, the hole was made by a thick wire, but a long stem required a thinner wire to avoid puncturing the sides (Figure 17). In the late seventeenth century the average length of tobacco pipe stems was 11 to 12 inches and by the early eighteenth century the pipes averaged 13 to 13-1/2 inches in length. During the second half of the eighteenth century, pipe lengths of 9 inches were the norm, although a few enormous pipes called “church wardens” were made with stems over 2 feet long (Noel Hume 1980:296-297).

These features, particularly bore size, enable a date to be assigned to the pipes. In 1954 archaeologist J.C. Harrington concluded that pipe bore holes became smaller through the colonial period as the stems became longer and therefore it was possible to date a site by documenting the mean hole diameter of stems. Harrington measured hole diameters in 64ths of an inch and published a chart illustrating the percentages of the different diameters of pipes from 1620 to 1800 (Noel Hume 1980:298).

Archaeologist Lewis Binford took Harrington’s concept one step further and developed a mathematical formula for obtaining a mean date. The formula is

\[ Y = 1931.85 - 38.26X \]

where \( Y \) is the mean date of the pipe stems or the date when the stem holes would have disappeared had their diameter continued to decrease. 38.26 represented the number of years between each 1/64 -inch
decrease in diameter and X is the mean hole diameter from the site (Crisman 1984:420).

The collection of pipe stems is relatively small (20) and since the dates of the *Boscawen* 's active service are well established, the formula is not necessary for dating the wreck. Because the *Boscawen* presents an interesting test case for the Harrington-Binford formula, it has been applied to the sample. All 20 bores were measured and the results were as follows: two measure 3/64-inch (05-154, 05-052), nine are 4/64-inch (05-008, 05-123a-b, 05-130a-b, 05-132a-b, 05-147a-b), seven measure 5/64-inch (05-020, 05-025, 05-035, 05-046, 05-047a-b, 05-100a, 05-152), and one is 6/64-inch (05-100b). The mean hole diameter of the stems is 4.263/64-inch. Therefore, Y = 1931.85 - (38026 x 4.263) and the mean date arrived at is 1764.73 or 1765. The date fits nicely into the *Boscawen* 's history; it is two years after the conclusion of the war and two years before final recorded mention of the sloop by Francis Grant in 1767.

In addition to the pipe stems, two larger tobacco pipe fragments, retaining portions of the bowls, were recovered.
05-025 PIPE BOWL  UNIT: 413 level G
FIGURE: C-61 a  MATERIAL: Clay
DIMENSIONS: Length - 2-1/2 in (6.1 cm)
Bore diameter - 4/64
The stem is attached to a broken bowl which is blackened, suggesting the pipe was used and later discarded. There are no heel or spur projections and no cartouche on the bowl.

05-052 PIPE BOWL  UNIT: 413 level I
FIGURE: C-61 b  MATERIAL: Clay
DIMENSIONS: Length - 2-1/2 in (6.1 cm)
Mouth diameter - 7/8 in (1.7 cm)
Bore diameter - 3/64
This pipe consists of the entire bowl and a portion of the stem. A small spur projects from the base of the bowl. On the right side of the bowl is a raised cartouch with the letter “G E”. The pipe maker was George Eberry (also listed as Ebery, Ebborrey, and Every), who was made a freeman in Bristol, England in 1721. Eberry was apprenticed to George Vinery until 1747, when he struck out on his own. He was still alive and making pipes as late as 1781. Examples of George Eberry’s pipes have been recovered at New Brunswick, Fort Michilimackinac, and Colonial Williamsburg (Walker 1977:172).

The number of smoking pipes recovered from the Boscawen seems small compared to the size of the crew and the number of years she was in service. The lack of fragments suggests that pipes were not used much below deck and hence, were not exposed to breakage in this location. If pipes were used and broken on deck, the fragments were more likely to get tossed over the side. Furthermore, standard smoking regulations specified that smoking was only permitted in certain areas; with the amount of gunpowder, tar, and other combustible materials on board, a ship-wide ban on smoking below deck may have been in place.

Amusements

Games of chance were extremely popular during the eighteenth century, and though they were not well paid, the crew may have wiled away the hours gambling. Others found respite in music. Twenty gaming pieces and a jew’s harp were found within the hull.

Soldiers and camp followers caught gambling were severely punished receiving 300 lashings for the offense (Anderson 1984:127). Nevertheless, chess, dice, draughts, nine man’s morris, backgammon, and cards were
common past-times where a man could lose nearly a month's salary in one afternoon. Popular card games included dupe, faro, basset, reversi, and brelan; all were games of chance requiring little skill (Milville-Deschenes 1987:81-82).

A total of 20 wooden gaming counters for checkers, draughts, or sennets was located in the bow and stern units running along the keel. Eleven round disks (02-066, 02-110a, 02-138, 02-187, 02-188, 02-232a-b, 02-398a-c, 02-414) and seven square counters (02-132, 02-181, 02-220, 02-232c-e) are incised with an “X” across one face. One square counter (02-110b) is not incised. The final piece (02-104) is a spiraled cylinder, possibly from a different game (Plate 62).

During analysis it became apparent that the pieces are from two, possibly three, separate sets. Pieces 02-188, 02-292, and 02-414 are 1 inch (2.5 cm) in diameter and 1/4 inch (.6 cm) thick. They are mahogany, and are finely turned and shaped. The incised “X”s are centered on the disks. Disks 02-138, 0-220, and 02-398a-c are also 1 inch (2.5 cm) in diameter, but their thicknesses vary from 1/8 inch (.3 cm) to 1/4 inch (.6 cm). The wood is lighter in color, resembling pine, and they are crudely carved, approximating a round or square shape. The “X”s are not centered and several are deeply gouged out. The third type consists of the remaining 12 counters (02-066, 02-110a-b, 02-132, 02, 181, 02-187, 02-223, and 02-232a-e). These pieces vary from 3/8 inch (1.1 cm) to 3/4 inch (1.8 cm) in diameter and from 1/8 inch (.3 cm) to 1/4 inch (.6 cm) in thickness. They are also lighter colored and crudely carved and incised, but they are markedly smaller than the other counters, suggesting they are from a separate set. All of the pine pieces are crudely fashioned and give the impression of being home-made.

Similar wooden counters have been recovered from the Machault and lead counters were seen on the 1750s Terence Bay fishing wreck and on the slave ship Whydah (Sullivan 1986:89; Carter and Kenchington 1985:24; Hamilton 1991:107). These counters are not commonly found on terrestrial military sites, suggesting that they belonged to a game favored by sailors rather than soldiers.

One member of the crew brought a jew’s harp on board. It is the only other recreational artifact located on the Boscawen. A jew’s harp is a small
metal musical instrument consisting of a lyre-shaped frame and a slender
tongue or vibrator attached to the frame’s head. The frames are hand-forged
and notched to receive the vibrator.

03-091 JEW’S HARP
UNIT: 413 level G
FIGURE: C-63 a
MATERIAL: Iron
DIMENSIONS: Length - 2-1/2 in (6.4 cm)
Width - 1-1/2 in (3.3 cm)
The harp has a round head and short, parallel shanks, and the iron frame is
diamond-shaped cross section. The vibrator has broken off and may explain
why the instrument was discarded. Similar jew’s harps have been found on a
number of colonial sites, including Big Tree, New York; Longlac, Ontario -
Canada; and Forts Michilimackinac and Ligonier (Stone 1974:141; Grimm
1970:100).

Personal Possessions

When the men began their service in the provincial and Royal Army or
Navy, they brought many of their personal belongings with them. The men
serving aboard the Boscawen brought their clothes, private reserves of
alcohol, and possibly a few personal mementos from home which they stored
in bags or chests. The excavation produced a brush and comb, two razor
handles, several fragments that may be from medicine bottles, five coins, a
key, a set of navigational dividers, and two lead pencils.

Grooming and Personal Hygiene.

The British were more fastidious about cleanliness than the provincials
and the Royal Navy had many concerns about the personal hygiene of their
sailors (Rodger 1986:107). The Royal Navy and Army recognized the
connection between dirt and disease and required the men to keep their
clothes clean to prevent the spread of disease among the ship’s crew or in
notably J. Pringle (1752) and R. Brocklesby (1764), suggested changes in
uniform breeches, coats, and footgear to improve the personal hygiene of the
men; they suggested that linen stockings, gaiters, and hard shoes promoted
foot trouble, garters restricted circulation, and wool coats and breeches
retained perspiration (Zoske 1970:154). Other doctors attempted to control
hygiene by suggesting that “disordered and infectious or foul ulcerous
persons” not be permitted aboard ship (Laffin 1970:105).
The soldiers in the regular army and navy were accustomed to having many men living together in close confines and understood the necessity of proper sanitation. The common soldier in the provincial camps came from rural communities where the population was dispersed and thus was not as aware of the link between cleanliness and disease. Latrines, kitchens, graves, and slaughtering places were all mixed together, prompting Lieutenant Colonel Ralph Burton to write to Lord Loudon in 1756 that the camp at Fort William Henry was "nastier than anything I could conceive" (Anderson 1984:95). The British commanders repeatedly ordered that sanitary measures consist of the men washing their hands and faces daily and washing their shirts weekly, but many provincial soldiers found the practice difficult to maintain. One soldier, ironically named William Sweat, proudly noted that he laundered his clothing four times during the campaigns of 1758 (Anderson 1984:97).

The *Boscawen* was under the command of the regular army and therefore conditions were probably not as unsanitary aboard the sloop as they were in provincial camps. The personal grooming artifacts found in the wreck show that some members of the crew combed, shaved, and kept their uniforms relatively clean.

02-208 BRUSH BACK
FIGURE: C-63 b
UNIT: 413 level G
MATERIAL: Beech
DIMENSIONS: Length - 6-1/2 in (16.5 cm)
Width - 2-3/4 in (7 cm)
Thickness - 5/8 in (1.6 cm)
The brush back is carved from American beech and has 46 evenly spaced holes drilled for the bristles. One end is pointed and the other is squared off. There does not appear to have been a place for a handle. The brush may have been for personal grooming but it seems rather large and awkward for that purpose. It may also have been used for a scrub brush, although it seems too small for many cleaning applications. Clothing brushes were used to remove dirt from wool uniforms and this may perhaps be an example of a uniform brush.

02-325 COMB FRAGMENT
FIGURE: C-63 c
UNIT: 410 level E
MATERIAL: Pine
DIMENSIONS: Length - 1-5/8 in (3.3 cm)
Width - 1-5/8 in (3.3 cm)
The white pine comb is single-edged with closely spaced teeth. The teeth are
too fine for this to be a wig comb and lice-combs are double-edged (Noel Hume 1980:175). This is an example of a head or beard comb.

03-193 RAZOR HANDLE
03-288 RAZOR HANDLE
FIGURE: C-64 a,b
UNIT: 512 level E
412 - on keelson
MATERIAL: Iron
DIMENSIONS: Length - 03-193 - 3-3/4 in (9.5 cm)
- 03-288 - 3-1/2 in (8.9 cm)
Width - 03-193 - 1/2 in (1.2 cm)
- 03-288 - 1/2 in (1.2 cm)

Both folding razor handles consist of two pieces of iron riveted to a thin iron blade at the head, middle, and heel. The blades are square in section. There does not appear to be any evidence of hinges, but the handles are so deteriorated that the hinges may have corroded.

Medicine

The British attempted to control the spread of diseases through better sanitation and personal hygiene, but the presence of medicine bottles provides some indication that additional measures were taken to treat serious ailments. Scurvy, dysentery, diphtheria, typhus, typhoid fever, small pox, and venereal disease were rampant during the war (Anderson 1984:99; Pargellis 1969:361). To treat these ailments, mid-to-late eighteenth-century medicine chests at the Wellcome Historical Medical Museum in London contained standard medications including cinchona, cascarilla, ipecac, tartar emetic, white antimony glance, opium, laudenum, magnesioum sulfuricum, potassium bitartrate, mercurial ointment, calomel, ammonium carbonate, spirit of vitriol, gum arabic, and various vesicating plasters (Goethe, et al 1984:24). Intact medicine bottles recovered from the Defense revealed additional compounds; analyses of bottle contents found mercuric sulfide, mercuric oxide, calcium carbonate, rosin acids, and terpenoids used to treat wounds, fever, flux, and sore muscles (Smith 1986:153). It is likely that similar compounds and élixirs were used by the Boscawen's surgeon, Mr. Ball.

Three percent of the entire glass collection, or 18 shards, may be from medicine bottles. Eight fragments are aqua colored glass (05-019, 05-118, 05-138, 05-141, 05-191, 05-196, and 05-205) and 10 fragments are clear glass from small bottles or vials (05-022, 05-033, 05-044, 05-057, 05-111, 05-113, 05-150, 05-
171, 05-181, and 05-207). All of the glass pieces, with one exception, are body fragments. Fragment 05-019 is an aqua glass base from a small bottle. The heel was rounded and it had a small kick with a pontil mark (Figure C-65).

Coins

During the colonial period coins were in short supply as England suffered from a silver shortage. Several industrious individuals took it upon themselves to produce their own copper coins until Charles I ordered the minting of official copper farthing and half pennies. But the shortage continued well into the eighteenth century and the full copper penny did not appear until 1797. This shortage encouraged the use of foreign silver in the colonies and many coins were quartered and halved to create different denominations (Noel Hume 1980:171). Therefore, it is not surprising that only one British, one German, and three French coins were recovered from the Boscawen. The German 1-heller piece, however, is an unusual find.

Numismatists have developed a standard terminology to describe a coin. The blank refers to the metal disk before it has been struck by a die. Once struck, the coin has an obverse face (front) and reverse face (back). The central design is the type. A legend or inscription surrounds the type and the space between the two is the field. The space below the type containing the date is referred to as the exergue. Finally, the crenelated edges are called the grain (Noel Hume 1980:154-155).

**03-048 1-HELLE R COIN**

**FIGURE: C-66 a**

**UNIT: 415 level E**

**MATERIAL: Copper**

**DIMENSIONS:** Diameter - 3/4 in (1.8 cm)

This coin may be the most unusual item recovered on the Boscawen due to its German origin. An ornate “F” is stamped onto the obverse face and the reverse legend reads “1 BAYREUTHER HELLER.” A hole is drilled through leaving the numbers “1...2.” Archaeologist William Bayreuther identified the coin as a 1-heller piece issued by the German state of Brandenburg-Bayreuth. This state issued their coins between 1750 and 1753; this coin was thus minted in 1752 (Craig 1966:82). The drilled hole suggests it was strung on a line and worn as a necklace.
03-223  TWO-SOU COIN  UNIT:  505 level C
03-307  TWO-SOU COIN  612 level E
03-341  TWO-SOU COIN  412 - on keelson
FIGURE: C-66 b-d  MATERIAL:  Billon
DIMENSIONS: Diameter - 15/16 in (2.3 cm)
The three coins are French two-sou, or sol marque, coins. Two of the coins are whole and one (03-223) has been snapped in half. They are extremely thin and made from an alloy of copper and silver. Coin 03-341 is in very good condition and permits an inspection of the legend. The obverse face's type is a large "L" surrounded by a crown and three fleur-di-lis. The obverse legend reads "V-REX-LUD-XV-D-G-FR" followed by a crown. The reverse face's type is a stylized "L" below a crown. The legend and exergue read 'SIT NOM-
DOM-V-BENEDICTUM-1738" 03-307 is identical except for the date, 1753, and 03-223 has no date. The coins were issued during the reign of Louis XV. Coin 03-341 has a hole drilled through it (Noel Hume 1980:171).

03-287  FARTHING COIN  UNIT:  412 on keelson
FIGURE: C-66 e  MATERIAL:  Copper
DIMENSIONS: Diameter - 1 in (2.5 cm)
The only British coin found on the wreck is a copper farthing and this coin is a bit unusual. The type on the obverse face is a bust of a young George I facing to the right. The surrounding legend reads "GEORGIUS REX." The REX is closely spaced. The reverse face's type depicts Britannia seated with a shield and trident. The legend and exergue, "BRITANNIA 1718," surrounds the type. Both faces are encircled by a pronounced ridge and the edges are crenelated. The first farthings were issued in 1717-1718 and are thicker and smaller than later coins. These early coins, which included 03-287, were known as the "dump" series because they were quickly replaced from 1719-1724 with larger and thinner coins. The coins were not issued from 1725-1730, and when the minting resumed, George II was on the throne and a new type was used (Noel Hume 1980:162).

The remaining personal possessions consist of one key, a set of navigational dividers, and two small strips of lead, identified as lead pencils.

03-064  KEY  UNIT:  414 level E
FIGURE: C-67 a  MATERIAL:  Iron
DIMENSIONS: Length - 5-3/8 in (13.6 cm)
The key was found on top of the stern knee. The bow or handle-loop has a raised collar at the junction between the bow and shank. The solid shank extends beyond the key blade, which is notched on both sides. The key may be to a door lock or for a padlock on a chest.
03-132 DIVIDERS
FIGURE: C-67 b
DIMENSIONS: Length - 2-1/2 in (6.3 cm)
Diameter - 3/8 in (.9 cm)
Dividers were typically part of a navigator's stores which during the
eighteenth century often included a Gunter scale, ball of twine, and a Davis
quadrant (Smith 1986:169). These dividers are finely crafted but missing the
iron points. The arms are semi-circular and joined by a small hinge that
resembles a ball; the ball-like hinge is divided into eight sections. The
presence of the dividers suggests that one member of the crew, probably an
officer, was equipped to navigate the lake by means of maps or charts. Similar
dividers were recovered on the Defense and Machault; the dividers from the
Defense have the same ball hinge and cross section for the arms, but the set
from the Machault has a flattened disk-like hinge (Smith 1986:169; Sullivan

03-045 PENCIL
03-228 PENCIL
FIGURE: C-67 c,d
DIMENSIONS: Length - 03- 2 1/4 in (cm)
- 03- 4 1/2 in (cm)
Thickness - 3/16 in (cm)
These four-sided lead bars are tapered to a point on one end and closely
resemble lead pencils recovered from Fort Michilimackinac (Stone 1974:154).
The presence of lead pencils found on the Boscauen raises the question of
literacy among the armed forces. While it is true that the journals and letters
from the period give evidence of the men's ability to read and write, in 1748
the Navy Board objected to the validity of a letter of attorney on behalf of a
ship's company because less than half of the men aboard were capable of
signing their names (Rodger 1986:45). Although many of the journals are
from ministers and officers, the journals from the common soldiers indicate
that a portion of the men were functionally literate.

Shipboard life and the lure of the sea have often been romanticized; the
reality was something different. Seamen entered the navy "like men dragged
to an execution" (Hone 1827:125). Almost half were pressed into service.
Others went unpaid as their commanders held their wages in arrears,
sometimes up to six years. In the colonies, the men complained even more
about the conditions. Edward Barlow lamented that "a hot country, stinking
meat, and maggoty bread with the noisome and poisonous scent of the bilge
water, have made many a brave English sailor food for crabs and sharks"
(Barlow in Hone 1827:126). The crew on the Boscawen seems to have fared better than most men who served in the British Navy or the provincial army. They were provided with food and water and allowed to supplement their rations, given the freedom to hunt and fish for pleasure or necessity, permitted to smoke in designated areas, and were able to purchase alcohol.

Historical documentation about the Boscawen has recorded the size and tonnage of the sloop, the number of men who served aboard her, and the provisions that were stored on her. The archaeology has revealed more about the personal habits, health, hygiene, and diversions of the crew, bringing the lives of the men into clearer focus.
CHAPTER IX
CONCLUSIONS

Naval service was often deemed a punishment that "incorrigible army soldiers were drafted into" (Copeland 1977:5). This study has focused on many aspects of early American naval service on Lake Champlain during the French and Indian War. Since 1689 England and France struggled for control of the North American continent. In 1759, after four disastrous years, the British under the command of General Jeffrey Amherst launched a naval campaign on Lake Champlain that began the fall of the French regime in Canada. The sloop Boscawen was integral to that success on Lake Champlain.

Wars are routinely discussed on a political level that focuses on the global effects of battle but barely touches on the human side of the conflict. The artifact assemblage from the Boscawen has served to reveal the war from the perspective of the soldiers and sailors who experienced it, through an examination of shipboard routine and lifestyle.

Who were the men who served aboard the Boscawen? Orderly books from Fort Ticonderoga have indicated that the crew was derived from several different Royal and Provincial regiments. The sailors came from provincial units from Massachusetts, New Jersey, Connecticut, and Rhode Island and the soldiers were sent from Montgomery's 77th and Prideaux's Royal Army regiments. Command of the Boscawen was given to 25-year-old Royal Army Lieutenant, Alexander Grant, and an army surgeon's mate, Mr. Ball, was assigned as the ship's doctor (Munsell 1857:179).

With men from many different regiments serving aboard the sloop, questions regarding the mode of dress arise. Did they all wear the same uniforms or did they wear their former regimental uniforms, or did the crew even have uniforms? The men from the Regular Army would have been provided with traditional "red-coat" uniforms, but provincial units were expected to furnish clothing for their armies. With each unit choosing its own uniforms, a variety of styles was seen among the colonial regiments. Some followed the style set by the Royal Army or Navy, varying jacket colors
to distinguish themselves, others adopted Indian dress with leggings and hunting shirts, but most men simply wore their own civilian clothing.

In 1751, the British had orders to display the regimental numbers on the button faces of uniforms. Was this order followed in the colonies? Ninety-three buttons were recovered from the Boscawen but not one of them displayed regimental numbers. While all the designs were of a non-military nature, it is likely that this was not due to deliberate disregard of orders, but, rather, that the soldiers in both the Royal and Provincial armies did not have the same access to numbered buttons. Regiments, therefore, were distinguished by the style and color of the uniform, rather than by numbers displayed on the buttons.

By the end of the decade, the British were experiencing severe shortages in supplies, particularly shortages in suitable footwear, and many men were barefoot. The officers were issued boots, but the men wore English-made, civilian-type cowhide shoes, which were not durable in the wilderness. All of the shoes recovered from the Boscawen had holes in the soles or repairs to the uppers, testifying to the difficulty in obtaining new shoes during the war.

The supply shortages extended to other areas of military service, most notably in provisioning the troops with adequate food rations. In the early years of the war, the British suspected the provincials of embezzling stores and food, and the commanders attempted to control the rations sent to the provincial units. But the rations were seldom sufficient to sustain an entire regiment, and many men went hungry. Sergeant Robert Webster from Crown Point commented, "We are at work but haven’t any bread nor salt nor haven’t had this [for] eight days...we live on some Chakabra leaf broth...I am not well" (Webster 1931:142).

Rationing was enforced aboard the Boscawen when Amherst created a schedule for provisioning the soldiers aboard his transports. Was the daily allowance sufficient for sustaining the crew? A daily intake of 3,000 calories is recommended for modern soldiers doing garrison duty and 4,500 calories a day for soldiers on heavy work details (Anderson 1984:84note). The men were issued beef or pork, flour for bread, and peas or rice, totaling anywhere from 1,100 to 2,138 calories a day (Table 5). While the men would have
received double the recommended daily allowance of protein (54 grams are recommended for men 19 to 20 years of age) the diet lacked vitamins C, D, E, folic acid, B₆, and B₁₂, magnesium, zinc, calcium, and iodine, all of which are considered essential daily requirements (Ashley and Duggal 1975:25).

The diet was clearly not sufficient to sustain the men and would have left them in a physically weakened state if the rations were all they were eating. How would these nutritional deficiencies have affected the soldiers? A lack of calcium and magnesium would have made the men irritable and nervous, and a shortage of B-vitamins lowers the body's resistance to disease and promotes digestive disorders, particularly dysentery, which were prevalent during the war (Ashley and Duggal 1975:243-254). Insufficient amounts of folic acid leads to anemia and the lack of vitamin C causes scurvy.

Soldiers were aware of the nutritional deficiencies in the standard diet, and the commissaries attempted to provide the troops with fruits and vegetables to combat malnutrition. Did the crew also supplement their daily
rations? The organic remains found on the *Boscawen* included the bones from deer, sheep, chicken, and geese, and the seed husks from shagbark hickory nuts, chestnuts, hazelnuts, and butternuts, pits from wild plums and a peach, and squash and cucumber seeds, indicating the crew was hunting and foraging to supplement their diet. Although the added meat and nuts increased their already high protein and carbohydrate levels, it also increased their caloric intake, which would help to combat fatigue.

Joseph Nichols at Ticonderoga complained that his “hard service and poor keeping makes Jack a dull boy” (Anderson 1984:90). In addition to their duties and meager diet, the men aboard the *Boscawen* faced other conditions to make their existence dull. They lived in crowded, inadequately ventilated quarters where inactivity led to prolonged boredom. What did the men do when not occupied with their shipboard duties or in battle? The artifacts recovered from the *Boscawen* have indicated that they spent their time smoking, playing games and music, and drinking, disobeying Royal Army regulations.

Life in the military during the French and Indian War was harsh. The men not only faced battle and battle fatigue, but also exhausting work, brutal winters, sickness, malnutrition, a host of diseases from a poor diet and lack of sanitation, severe boredom, and low pay that only increased the depression noted in many of their personal journals. The majority of men from the colonial units who arrived in July were barely fit for service by November (Anderson 1984:107*note*). There was a steady loss from the army as sick and disabled men were discharged from service and returned to civilian life. How long the crew of the *Boscawen* served before they were discharged is not known, but one can be sure that they welcomed the end of their tour of duty as much as Obadiah Harris did when he returned home: "Where I am yet and ever like to be" (Obadiah Harris in Anderson 1984:109).
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DORR, MOSES.

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EARLE, ALICE MORSE.

EGGLESTON, GEORGE CARY.

ELTING, JOHN R.

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GAWALT, GERALD W.

GIBSON, LAWRENCE HENRY.

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GOULD, MARY EARLE.

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GRUBER, ALAIN.

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SUSSMAN, LYNNE.  

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## APPENDIX A

### TABLES

### TABLE 6.

**LIST OF VESSELS BUILT OR TAKEN ON THE LAKES**

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Built</th>
<th>Taken</th>
<th>Nationality</th>
<th>Lake</th>
<th>Tons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Halifax</td>
<td>Sloop</td>
<td>1758</td>
<td></td>
<td>English</td>
<td>George</td>
<td>130</td>
</tr>
<tr>
<td>Duke of Cumberland</td>
<td>Brig</td>
<td>1759</td>
<td></td>
<td>English</td>
<td>Champlain</td>
<td>155</td>
</tr>
<tr>
<td>Boscawen</td>
<td>Sloop</td>
<td>1759</td>
<td></td>
<td>English</td>
<td>Champlain</td>
<td>115</td>
</tr>
<tr>
<td>Musquelongy</td>
<td>Sloop</td>
<td>1759</td>
<td>1759</td>
<td>French</td>
<td>Champlain</td>
<td>65</td>
</tr>
<tr>
<td>Brochette</td>
<td>Sloop</td>
<td>1759</td>
<td>1759</td>
<td>French</td>
<td>Champlain</td>
<td>65</td>
</tr>
<tr>
<td>L'Eturgeoen</td>
<td>Sloop</td>
<td>1759</td>
<td>1759</td>
<td>French</td>
<td>Champlain</td>
<td>65</td>
</tr>
<tr>
<td>Vigilante</td>
<td>Schooner</td>
<td>1760</td>
<td></td>
<td>French</td>
<td>Champlain</td>
<td>70</td>
</tr>
<tr>
<td>Waggon</td>
<td>Sloop</td>
<td>1760</td>
<td>1760</td>
<td>French</td>
<td>Champlain</td>
<td>65</td>
</tr>
<tr>
<td>Grand Diable</td>
<td>Galley</td>
<td>1760</td>
<td></td>
<td>French</td>
<td>Champlain</td>
<td>?</td>
</tr>
</tbody>
</table>

*Source: W.O.R. (1759, 014:139)*

### TABLE 7.

**PER DIEM COST TO MAINTAIN ONE BATTALION IN NORTH AMERICA-1759**

<table>
<thead>
<tr>
<th>Rank</th>
<th>Individual Cost</th>
<th>Total Cost Per Diem</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RANK</strong></td>
<td></td>
<td>(Pounds * Shillings * Pence)</td>
</tr>
<tr>
<td>1 Colonel &amp; Captain</td>
<td>1* 21* 0</td>
<td>(or)</td>
</tr>
<tr>
<td>1 Lt. Colonel &amp; Captain</td>
<td>0* 17* 0</td>
<td>(or)</td>
</tr>
<tr>
<td>1 Major &amp; Captain</td>
<td>0* 15* 0</td>
<td>(or)</td>
</tr>
<tr>
<td>6 Captains</td>
<td>3* 0* 0</td>
<td></td>
</tr>
<tr>
<td>10 Lieutenants</td>
<td>2* 6* 8</td>
<td></td>
</tr>
<tr>
<td>8 Ensigns</td>
<td>1 * 9* 4</td>
<td></td>
</tr>
<tr>
<td>1 Chaplain</td>
<td>0* 6* 8</td>
<td></td>
</tr>
<tr>
<td>1 Adjutant</td>
<td>0 * 4 * 0</td>
<td></td>
</tr>
<tr>
<td>1 Quarter master</td>
<td>0* 4* 0</td>
<td></td>
</tr>
<tr>
<td>1 Surgeon</td>
<td>0* 4* 0</td>
<td></td>
</tr>
<tr>
<td>1 Mate</td>
<td>0 * 3 * 6</td>
<td></td>
</tr>
<tr>
<td>18 Sargeants</td>
<td>1 * 7 * 0</td>
<td></td>
</tr>
<tr>
<td>18 Corporals</td>
<td>0* 18* 0</td>
<td></td>
</tr>
<tr>
<td>9 Drummers</td>
<td>0* 9* 0</td>
<td></td>
</tr>
<tr>
<td>423 Privates</td>
<td>14 * 2 * 0</td>
<td></td>
</tr>
<tr>
<td>500 MEN</td>
<td>27 * 10 * 10</td>
<td></td>
</tr>
</tbody>
</table>

*Source W.O.R. (1759, 043/5A)*
<table>
<thead>
<tr>
<th>ITEM</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Regimental Coat with Hooks, Eyes, &amp; Ca.</td>
<td>5</td>
</tr>
<tr>
<td>Waistcoat</td>
<td>2</td>
</tr>
<tr>
<td>Pair of Breeches</td>
<td>1</td>
</tr>
<tr>
<td>Hat with Cockade, Button, Loop, &amp; Hair String</td>
<td>1</td>
</tr>
<tr>
<td>A shirt with Sleeve Buttons</td>
<td>1</td>
</tr>
<tr>
<td>A Stock with a Buckle</td>
<td>?</td>
</tr>
<tr>
<td>A Pair of Knee Buckles</td>
<td>-</td>
</tr>
<tr>
<td>A Pair of Stockings &amp; Garters</td>
<td>-</td>
</tr>
<tr>
<td>A Pair of Shoes with Buckles</td>
<td>1</td>
</tr>
<tr>
<td>A Regimental Firelock, with a Sling &amp; Buckle Hammer Cap &amp; Stopper</td>
<td>11</td>
</tr>
<tr>
<td>A Waist Belt with a Buckle</td>
<td>-</td>
</tr>
<tr>
<td>A Hanger, Sword Knot, and Scabbard</td>
<td>2</td>
</tr>
<tr>
<td>A Bayonet and Scabbard</td>
<td>2</td>
</tr>
<tr>
<td>A Tomahawk, and Cover</td>
<td>1</td>
</tr>
<tr>
<td>A Cartridge Pouch with Belt, Buckles, &amp; Match Case</td>
<td>3</td>
</tr>
<tr>
<td>Containing 24 Cartridges</td>
<td>2</td>
</tr>
<tr>
<td>Brush, Wire, Worm, and Turnkey Oyl Bottle &amp; Rag</td>
<td>-</td>
</tr>
<tr>
<td>2 Flints, &amp; a Steel</td>
<td></td>
</tr>
<tr>
<td>A Knapsack with Strap, &amp; Buckles</td>
<td>1</td>
</tr>
<tr>
<td>Containing 2 Shirts</td>
<td></td>
</tr>
<tr>
<td>2 Stocks</td>
<td>2</td>
</tr>
<tr>
<td>2 Pair Stockings</td>
<td></td>
</tr>
<tr>
<td>A Pair Summer Breeches</td>
<td>1</td>
</tr>
<tr>
<td>A Pair Shoes</td>
<td>1</td>
</tr>
<tr>
<td>A Clothes Brush</td>
<td></td>
</tr>
<tr>
<td>pairs Shoes Brushes</td>
<td></td>
</tr>
<tr>
<td>and a Black Ball</td>
<td>1</td>
</tr>
<tr>
<td>A Pair Leggins &amp; Garters</td>
<td>1</td>
</tr>
<tr>
<td>A Handkerchief</td>
<td></td>
</tr>
<tr>
<td>2 Combs, a Knife &amp; Spoon</td>
<td>--</td>
</tr>
<tr>
<td>A Haversack, with a Strap</td>
<td>--</td>
</tr>
<tr>
<td>Containing Six Days Provisions</td>
<td>10</td>
</tr>
<tr>
<td>A Blanket with Strap &amp; Harters</td>
<td>3</td>
</tr>
<tr>
<td>A Canteen with a String &amp; Stopper, full of water</td>
<td>3</td>
</tr>
</tbody>
</table>

(GROSS WEIGHT) 63 3

*Source: Katcher Armies of the American Wars.*
APPENDIX B

AMHERST TO THE ARMY FOR ADVANCING DOWN LAKE CHAMPLAIN IN 1759

The advanced guard is to consist of Gages Light Infantry with the flat-bottomed English Boat on the Right, and the 3 boats with the 3-pounders on the Left, their Whale Boats drawn up abreast covering the Heads of the Columns, and Commanding Officer will keep a Party always near the West shore while the troops advance to make discovery of Boats or anything left by the Enemy in or near the Shore. The troops to row in 4 columns; the right and first column to consist of Light Infantry of Regiments, Grenadiers; the second Column of the Brigade of the Royal, and the third column of all the Boats of Artillery, Stores, Tools, Commissaries, etc; the fourth and Left column is to consist of the 2nd Brigade; the Rear Guard is composed of all the Rangers and Indians who are to draw up abreast covering the Rear of the Columns and the commanding officers will keep a Party always near the East Shore for the same purpose as Gages on the West. The first and 2nd columns will march and embark by the left, the Front Rank in the Boats on the Right, and Rear in the Boats on the left; the commanding officers of Corps on the Left in a whale boat to lead their Corps; the fourth Column will march and embark by the right, the front Rank in the Boats on the left and Rear ranks in the boats on the right, the commanding officers of corps in a whale boat on the right of the columns, the columns to row always two boats abreast and the boats to follow very close; the Brig and Sloop will cruise and try to cut off the enemy’s vessels from the enemy’s forts, on the other side of the lake and will not wait for the army, which the artillery boats will cover. The Artillery commanded by Major Ord will form the Ligonier radeau in the center, and the howitzer on the right and one on the left of the radeau; the 12-pounder in the front of the column on the right and one in front of the column on the left; and a 12-pounder in the center in the Rear of the whole, following the Rangers. Signals to be made on board the Ligonier Radeau at the mainmast, a small Union flag for Adjutants to come for orders; a red flag is for sailing and rowing: when struck is for halting and the boats are to close up to their proper
places immediately: a blue flag is for landing; the white pennant is for three right columns to close to the left column and west shore; a red pennant is for three left columns to close to the right column and east shore; a blue pennant is to form to the right if the columns are to the east shore, and to the left of the columns are to the west shore. The column of artillery are always to draw up between the first and second brigade, and when the troops land the whale boats and bateaux are to be closed in a single range along the shore; the radeau and boats with guns will be posted on the right and left and rear to cover the bateaux; when the army is landed the greatest attention must be given to closing in and forming to either shore upon the signals that no accident may happen on storms arising, but nothing is to be done in a hurry to create confusion. When the troops land, the commanding Officers of the corps will immediately advance Front Platoons or a Picket; every corps is to secure his own ground. Firing in the Night is absolutely forbid; the enemy, if any should appear, is to be received with fixed Bayonets, and the same Orders are to be obeyed as was given on crossing Lake George. The first column is to be commanded by Colonel Haviland, the second by Colonel Foster, and the fourth by Colonel Grant. The men ordered to remain here of the regular regiments are to be ready to embark on the shortest notice and to carry as many tents with them as are necessary for their numbers. Lieutenant Colonel Eyre will make out a proportion of such tools as can be spared from hence, which are to be put on board the boats with artillery stores. Each bateaux ordered for the regiments, exclusive of the Sutlers, to carry three terces of Bread and two barrels and a half of pork each; they will receive Orders when to load them.

- General Jeffrey Amherst for 10 October, 1759, in Commissary Wilson’s Orderly Book for Fort Ticonderoga (Munsell 1857:183).
Figure C-1. Type 1 Buttons: a. 03-101c; b. 03-103; c. 03-105; d. 03-116a; e. 03-199; f. 03-242; g. 03-272a; h. 03-272b; i. 03-314a; j. 03-314b; k. 03-318; l. 03-353; m. 03-407; n. 03-419; o. 03-487; p. 03-498; q. 03-560.
Figure C-2. Type 1-A, 2 and 2-A Buttons: a. 03-397; b. 03-199b; c. 03-220; d. 03-413; e. 03-101c.
Figure C-3. Type 3 Buttons: a. 03-093; b. 03-121; c. 03-433.
Figure C-4. Type 4, 4-A, and 4-B Buttons: a. 03-040; b. 03-137; c. 03-262; d. 03-404; e. 03-116b.
Figure C-5. Type 5, 5-A, and 5-B Buttons: a. 03-159; b. 03-266; c. 03-299; d. 03-414; e. 03-434; f. 03-495; g. 03-550; h. 03-03-101b; i. 03-314c; j. 03-181; k. 03-398.
Figure C-6. Type 6, Type 7, and Type 8 Buttons: a. 03-493; b. 03-482; c. 03-537.
Figure C-7. Type 9 Buttons: a. 03-153; b. 03-160; c. 03-494a; d. 03-494b; e. 03-540a; f. 03-540b.
Figure C-8. Type 10 and 10-A Buttons: a. 03-097; b. 03-130; c. 03-417b; d. 03-417; e. 03-554; f. 03-309.
Figure C-9. Type 11 Buttons: a. 03-125; b. 03-155; c. 03-204; d. 03-216; e. 03-440; f. 03-461.
Figure C-10. Type 11-A Buttons: a. 03-034; b. 03-101a; c. 03-143; d. 03-357; e. 03-435; f. 03-557
Figure C-11. Type 12 and 12-A Buttons: a. 02-072; b. 02-107; c. 02-137; d. 02-147; e. 02-218; f. 02-243; g. 02-255; h. 02-256; i. 02-286; j. 02-28; k. 02-327; l. 02-352; m. 02-415; n. 02-244.
Figure C- 12. Type 13, 13-A and 14 Buttons: a. 04-051; b. 04-069; c. 04-079; d. 04-028; e. 04-038a; f. 04-042; g. 04-057; h. 04-085; i. 04-086; j. 03-255.
Figure C-13. Type 1 and 1-A Shoe Buckles: a. 03-202; 03-224; 03-491; b. 03-348; c. 03-520.
Figure C-14. Type 2 and 3 Buckles: a. 03-056; b. 03-146; c. 03-231; d. 03-046.
Figure C- 15. Quarter Strap 04-007.
Figure C-16. Quarter Strap 04-010.
Figure C-17. Quarter Strap 04-029.
Figure C-18. Quarter Straps: a. 04-032b; b. 04-035.
Figure C-19. Quarter Straps: a. 04-070; b. 04-077.
Figure C-20. Quarter Strap 04-082.
Figure C-21. Quarters 04-084.
Figure C-22. Vamp and Toe Reinforcement: a. 04-019; b. 04-010b.
Figure C-23. Inner Sole 04-003.
Figure C-24. Inner and Outer Soles 04-005.
Figure C-25. Inner and Outer Soles 04-024.
Figure C- 26. Inner Sole 04-035.
Figure C- 27. Inner and Outer Soles 04-045.
Figure C-28. Inner Sole 04-055.
Figure C-29. Inner Sole 04-060.
Figure C- 30. Outer Sole 04-068.
Figure C- 31. Arch Supports: a. 04-003a; b. 04-045; c. 04-055; d. 04-072.
Figure C-32. Heel Welt and Lifts: a. 04-024; b. 04-032a; c. 04-059; d. 04-062; e. 04-064.
Figure C-33. Shoe 04-013.
Figure C-34. Shoe 04-026.
Figure C-35. Shoe 04-038.
Figure C-36. Shoe 04-044.
Figure C-37. Shoe 04-049.
Figure C-38. Shoe 04-080.
Figure C-39. Keg Lid 02-073, 02-141a,b.
Figure C-40. Cask Lid 02-122.
Figure C-41. Keg Stave 02-142.
Figure C-42. Cask Lid 02-214, 02-242.
Figure C-43. Cask Lid 02-304.
Figure C-44. Cask Lid 02-306a,b; 02-308a,b.
Figure C-45. Withy, Plug, and Bung: a. 02-146; b. 02-294; c. 02-358.
Figure C-47. Mess Tags and Mess Kid Stave: a. 02-303; b. 02-219; c. 02-290; d. 02-203.
Figure C-48. Spoons: a. 03-007; b. 03-078.
Figure C-49. Ladle 02-136.
Figure C- 50. Pewter Plate 03-080, 03-376.
Figure C-51. Fishing Weights: a. 03-362; b. 03-518; c. 03-533; d. 03-228b; e. 03-442.
Figure C-52. Bottle Finishes: a. 05-007; b. 05-101; c. 05-129; d. 05-134.
Figure C-53. Bottle Necks: a. 05-010; b. 05-042; c. 05-083; d. 05-115; e. 05-159.
Figure C-54. Wine Bottle 05-043.
Figure C-55. Case Bottle Base 05-068, 05-105.
Figure C-56. Bottle Bases: a. 05-070; b. 05-072; c. 05-184.
Figure C-57. Wine Stem 05-006, 05-012, 05-146.
Figure C-58. Bottle Stoppers: a. 06-016, b. 06-040; c. 06-133; d. 06-148a-c; e. 06-161.
Figure C-59. Storage Jar 05-004, 05-005, 05-016.
Figure C-60. Ceramics: a. 05-062; b. 05-064; c. 05-066; d. 05-073; e. 05-135; f. 05-149; g. 05-164; h. 05-183; i. 05-208, 05-213.
Figure C-61. Smoking Pipes: a. 05-025; b. 05-052.
Figure C-62. Gaming Counters: a. 02-066; b. 02-110a; c. 02-138; d. 02-187; e. 02-188; f. 02-232a; g. 02-232b; h. 02-398a; i. 02-398b; j. 02-398c; k. 02-414; l. 02-132; m. 02-181; n. 02-220; o. 02-232c; p. 02-232d; q. 02-232e; r. 02-101b; s. 02-104.
Figure C-63. Jew's Harp 03-091; Brush 02-208; Comb 02-325.
Figure C-64. Razors: a. 03-193; b. 03-288.
Figure C-65. Medicine Bottle 05-019.
Figure C-66. Coins: a. 03-048; b. 03-223; c. 03-307; d. 03-341; e. 03-287.
Figure C-67. Personal Possessions: a. 03-064; b. 03-132; c. 03-045; d. 03-228.
VITA
Gail Erwin

Permanent Address: 4945 Ithaca St. Metairie, Louisiana, 70006.


Archaeological Research Experience:


1991 - Archaeological Investigations of the North Beach Wreck, Lake Champlain, Vermont. Staff Archaeologist.

1990 - Archaeological Excavation of Port Royal, Jamaica. INA, Jamaican National Trust. Staff Archaeologist.


1987 - Archeological Research of Paleoindian material from Southeastern Louisiana. University of New Orleans. Laboratory Research Assistant.