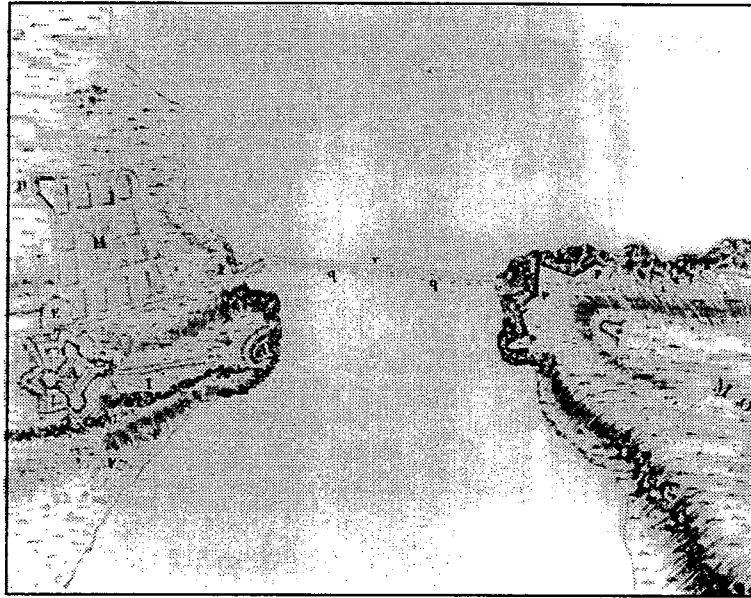


## THE GREAT BRIDGE

"From Ticonderoga to Independant Point"



**Lake Champlain  
Basin Program**

May 1995

Prepared by Arthur Cohn

for  
Lake Champlain Management Conference

This demonstration report is the fourth in a series of reports prepared under the Lake Champlain Basin Program. Those in print are listed below.

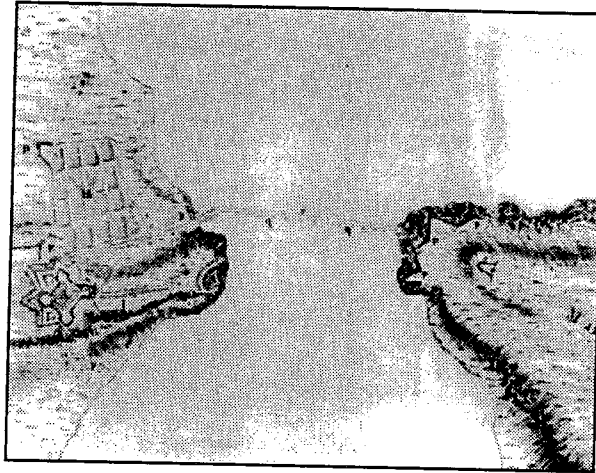
***Lake Champlain Basin Program Demonstration Reports***

1. Case Study of the Town of Champlain, Yellow Wood Associates, October 1993.
2. (A) Demonstration of Local Economic/Other Community Impacts, Community Case Studies for Economic Plan Elements. The City of Vergennes, Vermont. Economic and Financial Consulting Associates, Inc. October 1993.  
(B) Demonstration of Local Economic/Other Community Impacts. Community Case Studies for Economic Plan Elements. Appendix. The City of Vergennes, Vermont. Economic and Financial Consulting Associates, Inc. October 1993.
3. The Archeology of the Farm Project. Improving Cultural Resource Protection on Agricultural Lands: A Vermont Example. Jack Rossen. May 1994.
4. (A) The 1992 Fort Ticonderoga-Mount Independence Submerged Cultural Resource Survey. Executive Summary. Arthur Cohn. May 1995.  
(B) The 1992 Mount Independence Phase One Underwater Archaeological Survey. Kevin Crisman. May 1995.  
(C) The Great Bridge "From Ticonderoga to Independant Point". Arthur Cohn. May 1995  
(D) Geophysical Reconnaissance in the Mount Independence Area: Larrabee's Point to Chipman Point. Patricia Manley, Roger Flood, Todd Hannahs. May 1995.  
(E) Ticonderoga's Floating Drawbridge; 1871-1920. Peter Barranco, Jr. May, 1995.  
(F) Bottom Morphology and Boundary Currents of Southern Lake Champlain. May 1995. Hollistir Hodson.

This report was funded and prepared under the authority of the Lake Champlain Special Designation Act of 1990, P.L.101-596, through the U.S.Environmental Protection Agency (EPA grant #EPA X 001840-01). Publication of this report does not signify that the contents necessarily reflect the views of the State of New York and Vermont, the Lake Champlain Basin Program, or the U.S.Environmental Protection Agency.

# THE GREAT BRIDGE

“From Ticonderoga to Independant Point”\*



The cover illustration is a detail of the Wintersmith Map showing the “Great Bridge” built by American forces during the winter of 1777.

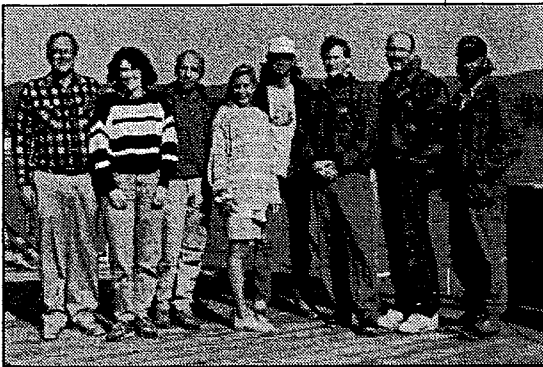
Courtesy of the Fort Ticonderoga Museum.

\* From Jeduthan Baldwin’s Journal, March 1, 1777.



## Acknowledgments:

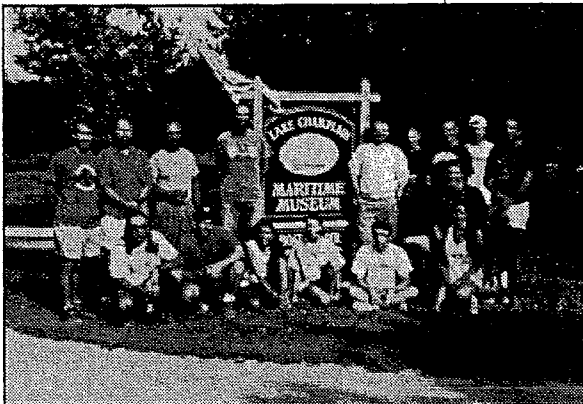
I would like to extend my sincerest thanks to my fellow principal investigators Patricia Manley, geologist; Kevin Crisman, archaeologist; Peter Barranco, historian-navigator; and Fred Fayette, captain. No task was too difficult and no day was too long-this dedicated and capable group made the results of this project possible.



The 1992 survey team:  
Peter Barranco, Patricia Manley,  
Fred Fayette, Kelly Kryc, Todd Hannahs,  
Jonathan Eddy, Ron Plouffe, Art Cohn.

I would also like to extend my thanks to the staff of the Lake Champlain Maritime Museum for their tireless assistance throughout the project. I would also like to recognize Middlebury College, the Institute of Nautical Archaeology at Texas A&M University, the University of Vermont, and SUNY Stonybrook for their assistance in implementing this project and the Vermont Division for Historic Preservation and the New York Office of Parks, Recreation and Historic Preservation for their collaboration.

Many thanks to the Fort Ticonderoga Museum and its Thompson-Pell Research Center for providing access to its extraordinary collection of research materials. A sincere thanks to the Vermont State Police, Teachout's Lakehouse and the Shoreham Ferry for providing invaluable logistical support throughout the project. A very special thanks to J. Robert Maguire who provided much assistance in the planning of this project.



The 1993 archaeological field-school.  
Front row, from left Scott Mulholland,  
Dave Robinson, Elizabeth Keenan,  
Elizabeth R. Baldwin, Scott McLaughlin,  
Science Kilner, Peter Hitchcock,  
Standing from left, Alan Flanigan,  
John Bratten, Art Cohn, Joe Cozzi,  
Kevin Crisman, Pat Beck, Nathan Wells,  
Eric Emery, Steve Paris.

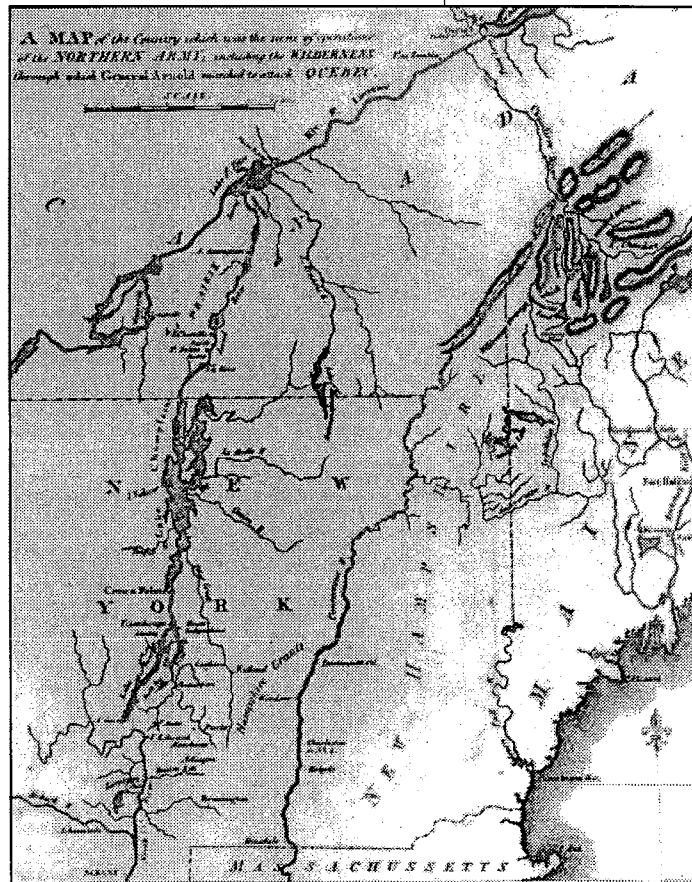
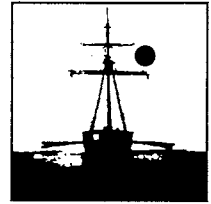
I would also like to thank the Lake Champlain Management Conference for their support of this initiative and the Environmental Protection Agency for project funding. The Vermont and New York Citizen Advisory Committees for their support and the Cultural Resources Working Group, particularly Giovanna Peebles, for reviewing the draft report and providing valuable suggestions. I would also like to thank the Lake Champlain Basin Program and its staff, particularly Lisa Borre for her steady support at each stage of this project.

*Arthur B. Cohn*

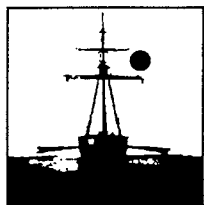
*Lake Champlain Maritime Museum*

## Introduction

**E**than Allen and the Green Mountain Boys seized Fort Ticonderoga on May 10, 1775, an act that was the first rebel offensive in the American Revolutionary War. The military post they captured had been constructed some 20 years earlier by the French to control the portage route from Lake George and to prevent British armies from traveling up Lake Champlain into French Canada. As the campaign of 1776 in the northern theater was about to begin, the fort's south facing cannon orientation-which made perfect sense in the French and Indian War-proved to be Ticonderoga's basic weakness to a threat from the north. This limitation led the rebels to plan a new fortification on the "Eastern Point" directly across the lake from Ticonderoga. The decision to build this fortification also led to the construction of a bridge connecting the new fortification with Ticonderoga and a chain-boom spanning the lake to slow enemy shipping and protect the bridge.



*"A Map of the Northern Army". This map depicts the area where much of the action took place in the Northern Theater during the years 1775-1777. Courtesy of the University of Vermont.*

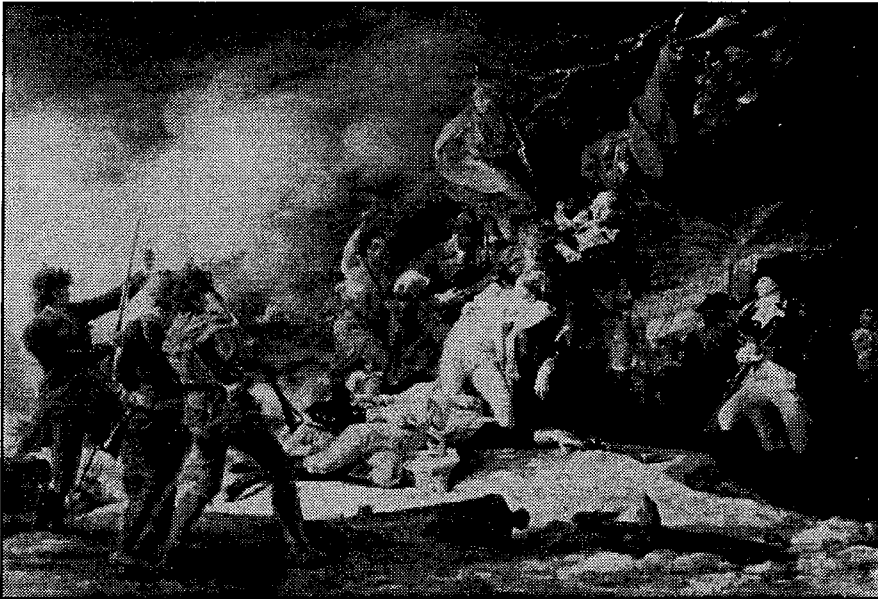


## The Northern Theater 1775-1776

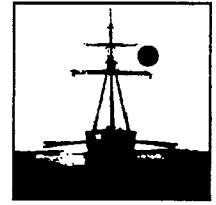
After successfully taking Lake Champlain's military posts and large vessels in 1775, both Benedict Arnold and Ethan Allen were shocked by a Congressional plan to abandon the lake in favor of Lake George. In letters to Congress both men begged for a reconsideration of this ill-advised decision. Arnold argued "that Ticonderoga is the Key of this extensive Country, & if abandoned leaves a very extensive Frontier Open to the Ravages of the Enemy." [1] Allen, in a letter of remarkably similar sentiment, strenuously suggests "it is my humble opinion that the more vigorous the Colonies push the war against the Kings Troops in Canada, the more friends we shall find in that Country." [2] It is not clear whether these letters alone helped forge the emerging policy, but in June of 1775, the Continental Congress "Resolved, That if General [Philip] Schuyler finds it practicable, and that it will not be disagreeable to the Canadians, he do immediately take possession of St. Johns, Montreal, and any other parts of the country, and pursue any other measures in Canada, which may have a tendency to promote the peace and security of the Colonies." [3] The invasion of Canada had begun.

The "Campaign for the Conquest of Canada" [4] is one of the great stories of the American Revolution. Due to ill health, General Schuyler was replaced by General Richard Montgomery. Montgomery's army staged its advance out of the Lake Champlain forts and was transported into Canada by vessels captured in May from the British. [5] While Montgomery was laying siege to St. Johns and capturing Chambly, a second force under Benedict Arnold struggled through the Maine and Canadian wilderness in an attempt to surprise the British fortress at Quebec. [Figure 1] After weeks of near starvation Arnold's force emerged from the woods and took station before Quebec. [6] They were joined in early November by General Montgomery who had succeeded in his task of taking all the British posts on the Richelieu river, followed by the city of Montreal. Montgomery and Arnold were operating under a difficult timetable, for on New Year's Day, the enlistment period for many of their troops would expire. They resolved upon a bold plan: a nighttime assault against Quebec on New Year's eve. The attack took place during a blinding blizzard; during its early moments, General Montgomery was killed and Arnold wounded. [Figure 2] The tide of events, which had been so favorable to the American's cause since May, had now turned disastrous.

With survival more important than laying siege, the remaining American force at Quebec endured severe hardship during the remainder of the winter. Reports back to Congress of the failed attack brought confusion, concern and reinforce-

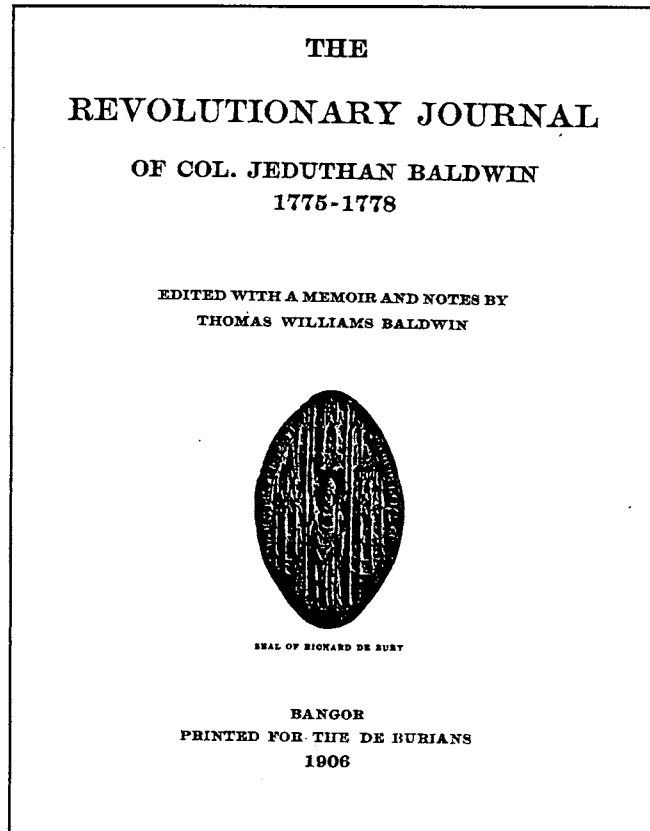
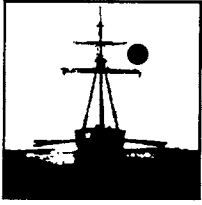


*The Death of Gen. Montgomery in the Attack on Quebec, Canada.* by John Trumbull. Courtesy of the Yale Art Gallery.



ments. They also raised, at least in the mind of General Charles Lee, who was then stationed at New York City, the possibility of the need to abandon Canada and establish defensive barriers against a British advance into the Colonies. One of these strategies was to construct a chain-boom across the Richelieu River at Sorrel to prevent the passage of British shipping southward into Lake Champlain. To that end bar iron which could be forged into chain links was ordered "both at Mt. Hope in northern New Jersey and at the blast furnace operated by Robert Livingston Jr. at Ancram, 40 miles northeast of Poughkeepsie." Ancram was New York's first ironworks. Most of its iron was smelted from unusually pure concentrations of hematite imported by horse and muleback from "Ore Hill" at Salisbury, Connecticut.[7]

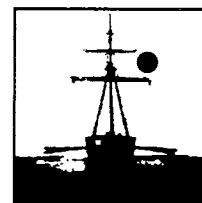
The situation in Canada went from bad to worse. During the winter of 1775-1776 the troops suffered from shortages of everything including waning support from the once enthusiastic Canadians. The most tragic setback was the outbreak of smallpox among the soldiers. With sickness and confusion dominating the army, its commanders searched for a strategy that would permit another attempt on Quebec. American hopes came to an abrupt end in May when a convoy of British ships entered the St. Lawrence River and dropped anchor before Quebec. On board the vessels was an army of some 10,000 British and German troops with all the supplies needed to engage in a fresh campaign. The American forces began an unplanned and disorganized retreat from Canada.



**The Revolutionary War Journal of Jeduthan Baldwin.**  
Title page. Courtesy of J. Robert Maguire.

Confusion and suffering characterized the retreat as the beleaguered Americans tried to hold positions. They soon realized, however, that they must leave Canada and attempt to hold the line on Lake Champlain. Meanwhile, without knowing the immediate circumstances of the army in Canada, Congress was still directing reinforcements to advance north over a frozen Lake Champlain. One of the officers sent north was Col. Jeduthan Baldwin, a 44-year-old Massachusetts born engineer who had already seen action at Boston and New York. Through Col. Baldwin's journal a picture of the tragic retreat is painted as he arrives at St. Johns in May "where the news of the retreat of our army was confirmed." [8] Baldwin advanced to Chambly where he was "In company with Genl. Thomson [Thompson] & and the Comtt. from the Continentall Congress, who made me welcom to this place, & advised me to take the Small pox..." [9] Baldwin came down with smallpox and from his sick bed recorded the steady decline in American fortunes and suggests, "I think our affairs look dark, matters don't go right..." [10] He regained his health only to assist with the final evacuations from Canada, which in the midst of chaos had become a more orderly withdrawal.





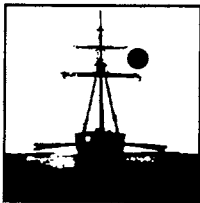
On June 16th Col. Baldwin recorded, "Cleard the fort of all the Stores at Chamblee got Baggage away. I was ordered to the head of the rapids to forward the Intrenching tools & then to St. trace [Therese] half way between Chambalee & St. Johns, where I had the most Savere Fateague in Loading the Battoes with the Stores and Baggage...the vast No [number] of Men sick & in the most distressing condition with the Small pox is not to be discribed." [11] On June 18 he confirmed, "this Morning the Genl. calld a Genl Council, which advised to abandon St. Johns, dismantle the fort and carry off all Stores of every kind. we immediately sent off all the Battoes to the Oil of Noix [Isle Aux Noix] with the sick & with Stores, & the Battoes returned before night for more & by 6 o'clock Every article was in the Battoes, the most of which went of [off] & then we set fire to all the buildings on both sides of the river burnt & Distroyed St. Johns & then I came off in the last Battoe with Genl. Arnold." [12]

Jeduthan Baldwin's journal is not unique in recording the spectacle of the American rout which finally slowed to a controlled retreat. But Baldwin's journal is selected to portray this important event in American history because he was to become a principal player in the events unfolding on Lake Champlain. He was appointed chief engineer on Lake Champlain and was the man responsible for building the new fortifications at Mt. Independence, the new batteries and entrenchments at Fort Ticonderoga, and the "Great Bridge" which joined them together. [Figure 3]

## Back on Lake Champlain— June 1776.

**T**he retreating army tumbled out of their bateaux at Crown Point and waited there for their commanders to make decisions concerning the future defensive strategy. The British forces had marched into one end of St. Johns as the last American bateau containing Arnold and Baldwin pushed off from the other end of the town. The large sailing vessels the American forces possessed from the 1775 campaign, described by General Gates derisively as "floating wagons" were still sufficient to stop the British advance. The Americans were temporary masters of Lake Champlain, and a naval shipbuilding race would now determine the fate of the up-coming campaign and the Colonies.

During the late spring and early summer of 1776, the American generals engaged in a debate over where their defensive line on the lake should be established. After considerable disagreement, it was decided to use Crown Point



only as an advance post and fix the main line of defense at Fort Ticonderoga. Baldwin recorded on July 7th:

"Rec'd orders to go to Ticondaroga with Som Carpenters & to cary all my Baggage, I collected all the Intrenching tools togeather.

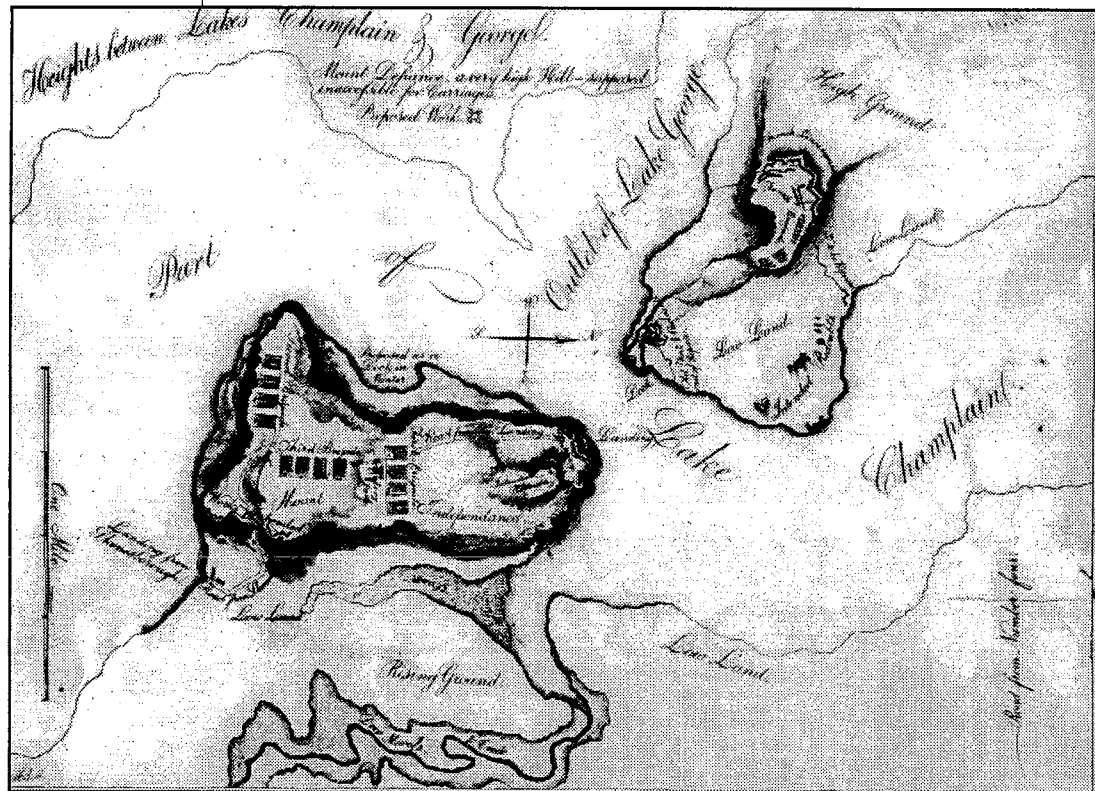
[July] 8 went to Ticonderoga, with Genl. Schulyer & Genl. Gates, Vied the grounds on the East Side ye Lake with Col. Trumbull [Trumbull] on one Hill...

[July] 9 Viewd the Grounds on the east [side] with Genl. Schuyler and Genl. Gates, round the peninsula, found Water by digging on top of the hill

[July] 10 Went over [East side] & Marked out a road from the North point to the top of the Hill with col. wain [Wayne] & col. Trumbull. Genl. Sullivan Reconoited the Hill with me... [13]

With apparent consensus among the general officers that this eastern point of land, also known as "Rattle Snake Hill," [14] was the proper addition to the existing fortifications at Ticonderoga, Baldwin reported on July 11: "Went over to the point with 200 Men to Clear a road, dig well, &c." [15] [Figure 4]

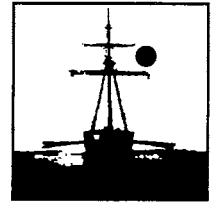
**Ticonderoga & its Dependencies, August 1776.**  
From The Autobiography of John Trumbull.

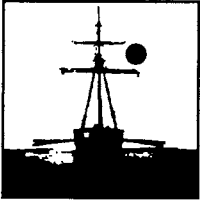


Another journalist, American soldier Bayze Wells, who, like Baldwin, had just retreated from Canada, gives another perspective on the establishment of the new fortification. Having helped transport the sick from Crown Point to a hospital at Lake George, "I Returnd to Crownpoint on the 15th [July] tarried thare untill 17th then ordered to ticonderoga tarried thare untill 23rd then ordered to our New incampment Across the Lake over against sd Ti no name for it as Yet this incampment was a howling Wilderness when we Began to Clear it was on the 18th of instant July Cleard it in three Days." [16]

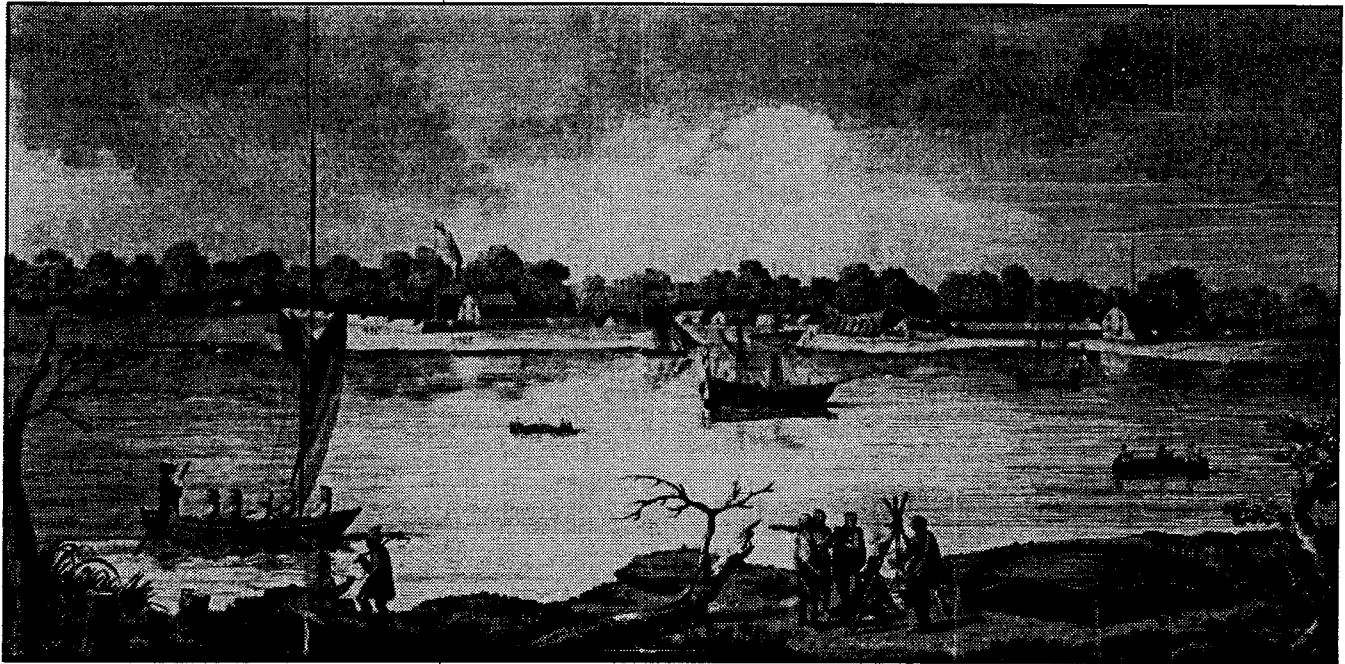
The work of carving a new military post out of the "wilderness" and correcting Ticonderoga's poor orientation with north-facing gun batteries continued. Meanwhile, a vigorous effort was launched to supplement the naval fleet which separated the two armies. If the Americans could maintain their naval superiority it would relegate their fort-building activities to merely a good strategic exercise. A shipyard was established at Skenesboro at the extreme southern end of Lake Champlain and civilian shipwrights from the coast were recruited to march to Skenesboro with their tools. The recruitment was assisted by the offer of high wages and an enlistment bonus. In order to provide the leadership necessary to organize this shipbuilding effort General Gates, the commander of northern forces on Lake Champlain, selected Benedict Arnold. Arnold, now healed from the wounds he suffered at Quebec, traveled to Skenesboro where he directed the shipwrights in building a flotilla of gondolas and row galleys. In August, after an incident in which commodore of the lake fleet Jacobus Wynkoop actually fired across the bows of vessels in his own fleet, Arnold had him arrested. Arnold replaced Wynkoop and took command of the fleet. In late August, commodore Benedict Arnold sailed his fleet into the northern lake to discourage the British from a southward invasion.

The retreating Americans never had a chance to deploy their chain-boom on the Richelieu River, but the rapids at Chambly admirably served the same purpose, effectively blocking the direct passage of warships from the St. Lawrence River into Lake Champlain. While the Americans were furiously working at Skenesboro, British naval forces were engaged in shipbuilding efforts of their own on the Richelieu River. Officers from Royal Naval vessels stationed in the St. Lawrence River were directed to provide the necessary maritime skills to prepare a fleet to contest American control of Lake Champlain. The conventional option of simply building warships at St. John's presented a serious time problem. Even though a corps of gunboats had been brought from Europe dissembled in the hulls of transports, to cut, shape and piece together standing timber into new, larger vessels would cost the British much or all of the 1776 campaigning season. British planners undertook an ingenious solution. Existing





vessels of appropriate size were taken apart at the northern end of the Chambly rapids and transported overland to be re-built at St. Johns. [Figure 5] The race to launch and outfit the most effective fighting fleet on Lake Champlain had begun. [17]



*A View of St. John's..., Courtesy of Special Collections at the University of Vermont.*

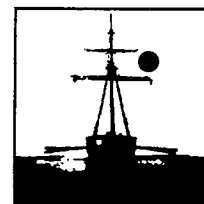
As Arnold patrolled the northern lake seemingly oblivious to the effective shipbuilding strategy adopted by the British, fortification of the land installations at Fort Ticonderoga and the "Eastern Point" continued. Engineer Baldwin was engaged almost daily in laying out new batteries; on the 23rd of July, for example, he "Laid out the park for the artillery on Rattlesnake Hill." On the 24th he "Dind with Genl. Gates & in the afternoon we went round the old French lines with Col. De Haws, which our people were at work Very fast." [18] On July 28, a profound event took place at this northern outpost, the public reading of the Continental Congress' Declaration of Independence. It was greeted with enthusiasm and three cheers by the troops and the next day the eastern point (aka Rattlesnake Hill) was renamed "Mount Independence." [19]

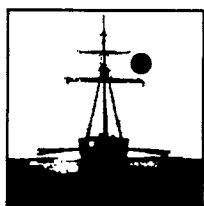
Work on the Mount proceeded well, even surviving a brief bout of Chief Engineer Baldwin's depression. During that time, Baldwin wrote General Sullivan to request a discharge, saying, "I am heartily tired of this Retreating, Raged Starved, lousey, thevish, Pocky Army in this unhealthy Country." [20] Fortunately

for the American cause, this frustration, triggered by the theft of his personal belongings, was not acted upon. Baldwin's journal traces the fortification building; on August 3, he "laid out the ground for the Laboratory & Store near the [artillery] park on Mount Independence." [21] Col. Baldwin had almost total day to day responsibility for the construction of defensive positions and fitting out the naval vessels once they arrived from Skenesboro. Baldwin describes the dimensions of his responsibility: "I paid Esqu [William] Gilliland 212 Dollars for Carpenters tools as there is no Quartermaster Genl. at present with this army, I have that duty to do in part, & I have the intire direction of all the House & Ship Carpenters, the Smiths, Armourers, Roap makers, the Wheel & Carriage makers, Miners Turners, Coalyers, sawyers & Shingle makers which are all together 286, besides the direction of all the fateaguing parties, so that I have my hands & mind constantly employed night & Day except when I am a Sleep & then sometimes I dream." [22] The quality of his work was apparently appreciated by the general command as he reported on August 11, "went over to Independent point with Genl. Gates & Arnold to view the works. they exprest entire satisfaction." [23]

Work continued on getting the Mount ready. On August 14th Baldwin "Laid out a redoubt" on the 15th he "Raised the Laboratory;" and on the 17th he "Laid out a wharf at the South side of Independant point & ordered a large store house to be built & also 2 guard houses." [24] The journal shows he was also laying out new redoubts on the Ticonderoga shoreline, one of which was to become known as the Jersey battery. This battery was north of the fort and covered the approach from that portion of the lake. Baldwin's daily journal is filled with observations about the fleet and the state of health in the region. The movement of so many people through the Champlain Valley probably provided an excellent means of transmitting germs and viruses. It was reported to Baldwin "that 3/4 of all the Inhabitants in this country are Sick, such a time has not been known before." [25]

The activity and tone of Baldwin's journal entries remain reasonably consistent until October 13. On that date, Baldwin's entry was made just as the army had received word that Benedict Arnold and the fleet had engaged the British fleet at Valcour Island. Baldwin's entry, his longest yet, gives the reader an immediate sense of the drama and the concern of the army as reports of the naval engagement came back to Ticonderoga-Mount Independence. The final lines of this entry confirm the obvious; the front line of defense had now shifted from the naval force to the land installations which Baldwin had been laboring so hard to complete at Ticonderoga and Mount Independence.



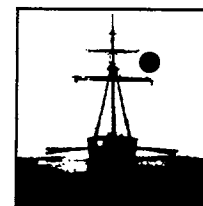
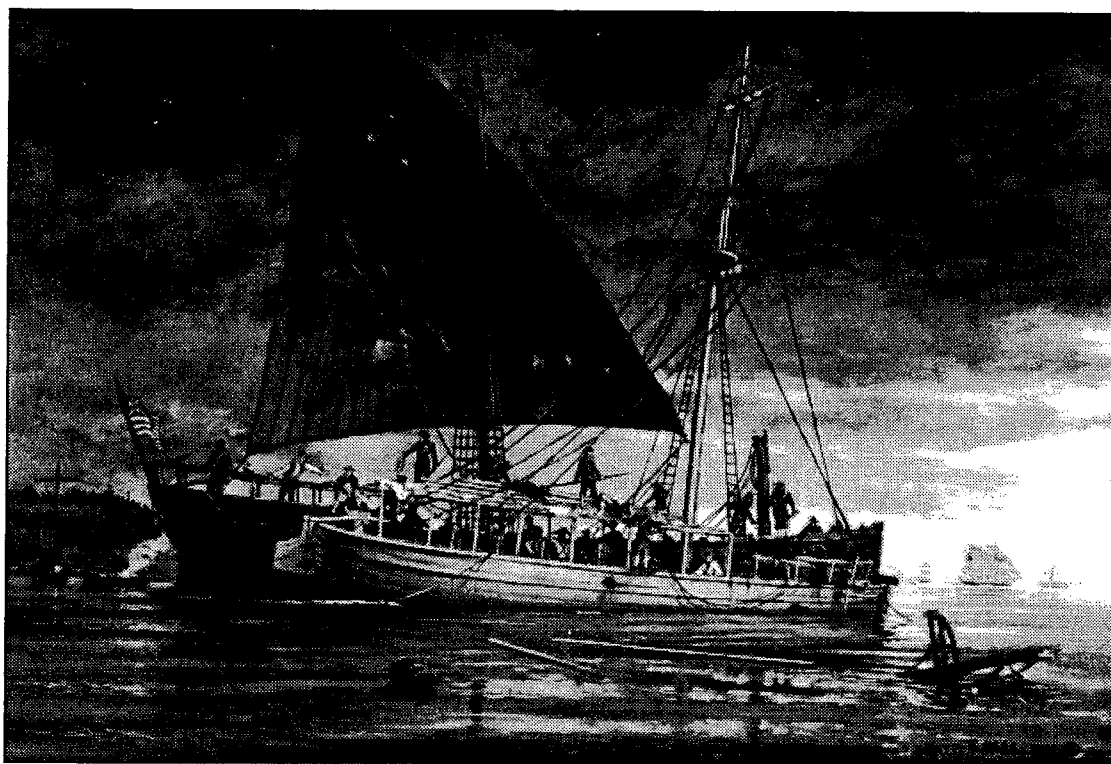


this morning a Messenger came from the fleet about ten o'clock with a letter from Genl. Arnold informing that he had with his fleet been engaged with the Enemies fleet 2 Day that we had lost a large Schooner [*Royal Savage*] run aground & burnt by the enemy a Gundola [*Philadelphia*] Stript & Sunk by our men in the Bay of Bellcour [Valcour] our other shiping much damaged & that we had about 60 men killed & wounded, but that we had got the better of the enemy, but our fleet were determined to retreat to Crown point, we had this day frequent information that our fleet was in a Shattered Condition. About 3 o'clock our Schooner [*Liberty*] came in Sight, Soon after a sloop [*Revenge*] & then another schooner [*Enterprise*], & then a Row Galley [*Trumbull*] & after a gundalow [*New York*] & they were followed by the Inhabitants from Crown point & from Pantan, they were followed by Col. Hartlys Regt., part by water & part by land, bringing all the Horses, Cattle & so forth. at Sunset the Enemys fleet, 13 Sail anchored off about four miles from Crown point & made Signal for landing. all the boats came up in order to take the men in the boats, when the last accounts left Crown point. All the buildings at & about Crown point were burnt by our people. some of the Inhabitants ran some 5, some 7 or 8 miles in the woods with women & children in the greatest distress, leaving all there Housel, stough, Cloathing &c to the enemy, or to the flames. a Mellancholly Sight that was seen at Ticonderoga, but we may Expect a more Mallancholly Seen to morrow or soon. god prepair us for it and grant us a compleat Victory over our Enemy. [26]

The naval contest and loss of the fleet brought Arnold both praise and criticism, but it was now clear to all concerned that the fortifications at Ticonderoga and Mt. Independence would be next in the line of British advance. Motivated by an imminent British assault on their positions, the pace of the preparation changed to reflect the threat: "mounting all the Cannon we had carriages for & all the Carpenters & Smiths making new ones, our men repairing the works & making preparation to receive the Enemy," [27]

In the midst of this preparation, Baldwin's journal provides new insight into what happened to the crew of the gunboat *Philadelphia* after it sank on October 11. Due to the presence of Joseph Bettys, the *Philadelphia*'s mate on board the galley *Washington* during the October 13 battle and upon its surrender, it has been our belief that the *Philadelphia* survivors had been picked up by the *Washington*. Baldwin's entry on October 15 confirms this rescue, plus adding new insight. He recorded, "this day we heard nothing from the Enemy. Capt. Rew [Rue] came in through the woods with 16 men, they left Genl. Waterbury Just before he struck. went into a battoe & went on Shore." [28] Rue had been captain of the *Philadelphia*. [Figure 6]

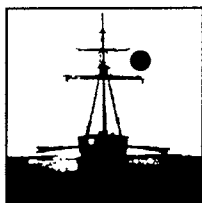
A few men may have been straggling into the American lines from the fleet, but by the end of October literally thousands of men, mostly New England militia, were beginning to arrive. These militia units were responding to urgent requests



**The Philadelphia Sinking..., By Ernie Haas.**  
 Courtesy of the Lake Champlain Maritime Museum.

sent from General Gates to supplement the posts which expected to be attacked. By the time this build up was completed the American forces at Fort Ticonderoga and Mt. Independence numbered more than 12,000 troops. But Jeduthan Baldwin was not done with his work and was about to extend his fortification building to the lake itself. On October 17 Baldwin's entry recorded: "Mounting Cannon, Making Carriages &c. Began to make a log across the Lake or Chain to prevent the shipping coming past the Jarsey Redoubt." [29] This entry marks the beginning of an effort to prevent the now-dominant British fleet from passing the forts and attacking the American positions from the rear.

The establishment of a chain-boom would not have been possible had not the chain for the boom already been on the site. During the American retreat from Canada, the chain which had been sent north in May to block the Richelieu river was transported back to Ticonderoga. The "Secret Committee" for designing obstructions to the Hudson River requested that General Schuyler send back the chain to the Hudson. Schuyler wrote the Committee that he would pass their request to Gates and send the chain back "*If it can be spared*." [Schuyler's emphasis] He dampened their expectations by adding "Before I left Tyconderoga, we had it in Contemplation to Draw it across that part of Lake



Champlain which Divides Tyconderoga from the Camp we occupy on the East shore opposite to it. I would not wish you, therefore, to make to great a Dependence upon Receiving it.” [30]

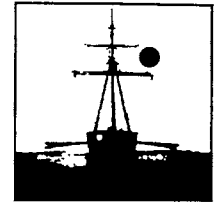
While Arnold ruled the lake there was little incentive to deploy the barrier, which would have effectively blocked friend as well as foe. With the Americans enjoying naval superiority, Baldwin could concentrate on the monumental task of carving a new fortification out of the Eastern Point wilderness as well as building new batteries on the Ticonderoga shoreline. The results of the Battle of Valcour Island changed all that. The British were now masters of the lake and believed to be massing at Crown Point in anticipation of continuing their southward push. The boom location was chosen to force enemy shipping to pull up in front of the Jersey and other batteries recently constructed on Ticonderoga’s northern shoreline. It was quickly a sound plan, and with Baldwin’s skill it was quickly executed.

While the chain-boom was intended to present a barrier to shipping, a second prong of the defensive strategy focused on building a bridge across the lake to make it easier for troops to be shifted between the two installations. On October 18 Baldwin related his second plan to span the waterway: “a Very Rainey uncomfortable wet Day. I visited all the works & Redoubts & cut down part of the great bridge.” [31] On October 20 Baldwin, “took the distance acrossst the Lake from the Jersey Battery & at ye point.” [32] That same evening Baldwin, “Supt. with Genl. Gates, proposed making a bridge a cross to independent Point, it was aproved of by the Genl.” [33] The original manuscript document recording Baldwin’s sounding and distances are located in the Gate’s Papers. [34]

On October 22, after reports that Britain’s Indian allies had been lurking about the American installations, Baldwin noted, “began to put ye Boom together.” [35] The next day Baldwin pointed to the assistance the Americans had from the forces of nature: “it is remarkable the wind has been out of the South, so that the Enemy could not come with there Vessels from Crown Point Since they came there to fight us at this place.” [36] On the 25th Baldwin reported: “finish the boom acrossst & building a bridge.” [37] The completion of the boom is confirmed in a variety of sources. In a letter written on October 25, a soldier stationed at the Jersey battery provides an idea of its fire power and also observed the deployment of the boom saying, “We take command of a post called the Jersey battery, mounting eight guns, one of thirty-two, two of eighteen, three of twelve, and two of nine, nearly opposite to which is a boom across the lake.” [38]



On the same date the above letter was written, another letter was penned by Col. Arthur St. Clair, a Pennsylvania officer destined in 1777 to become profoundly connected to Ticonderoga and its dependencies. The letter, written to an unknown correspondent (possibly a delegate in Congress) provides a clear summary of the situation at hand,



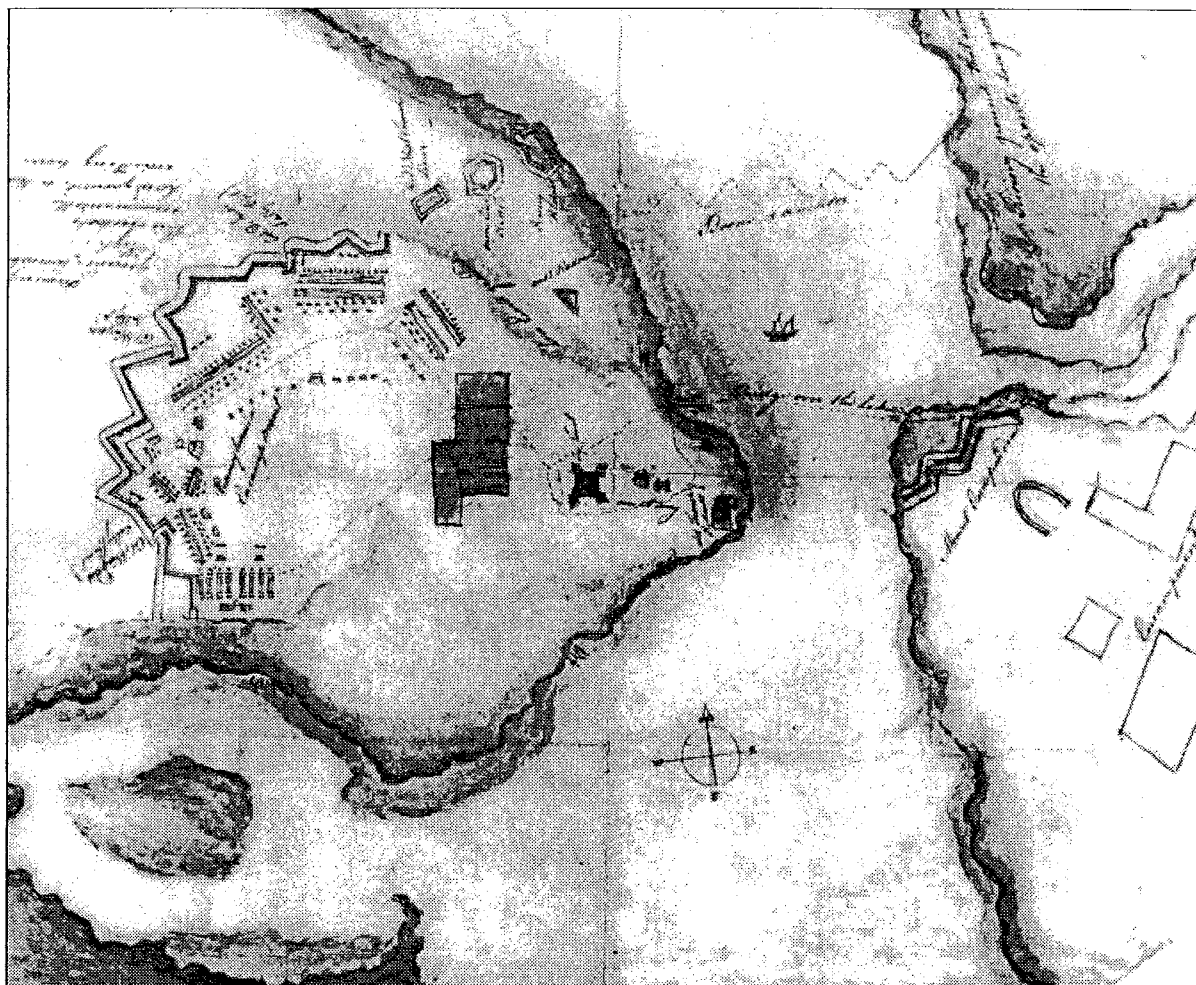
Mr. Carleton has not made us a visit which supprises me very much. His passing the Lake and defeating our fleet was to little purpose if he rests there [at Crown Point], at any rate he gives us the time to be prepared, and we shall be well reinforced, as some of the Militia are already come in, and great Numbers on the way. He may possibly be waiting to hear of some decisive stroke by Mr. Howe [on the Hudson River], by which to regulate his Motions. I hope in that he will be disappointed... [39]

What follows in St. Clair's letter is perhaps the clearest description of the purpose of the boom and the expectations for its success.

When Mr. Carleton does come on we expect his March to be both by Land and Water, to guard against his penetrating with his vessels part of a boom was laid last Night across the River [Lake], and will be compleated to day, and is defended by two Batteries and the Remains of the Fleet. I scarce expect that it will resist the shock of a heavy vessell, should they have a brisk Gale, but it will retard them, as the Channel is not very Wide, the vessels are still to be subdued when the Boom is broken, but I expect a better effect from it yet for I have no doubt of the Enemies being acquainted that a Boom is laid, I think they will not know exactly its strength, they will not attempt it all. [40]

With the boom finished, Baldwin's work continued on the bridge and on October 29 he recorded: "finished the bridge across the Lake to Independant point so that men could pass." [41] The bridge was a narrow floating structure composed of floating logs. One man described "it as a curious affair...composed of Large logs laid the Water fastened to each other with Iron & retained in place by Anchors." [42] It served the immediate need of providing a connection between the two posts and, if they were attacked, allowed for the deployment of troops between them in a more efficient manner. The map by John Trumbull, Figure 7, is believed to be illustrating this bridge and boom.

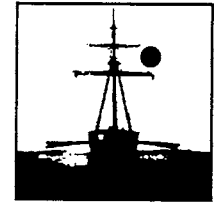
On October 28 the wind shifted and several British boats made their appearance. The American posts were alarmed and 12,500 men mustered to defend their positions. As the British advanced to within range of the northern batteries several shots were fired by the Americans to annoy them. All of the troops in the American camp expected that the attack had begun. It was with some shock and perhaps even a touch of disappointment, that the British ships withdrew. The news was received from American scouts that the British had abandoned their positions and returned to Canada. The campaign of 1776 was at a close.



Fortifications and disposition of troops at Fort Ticonderoga, [October] 1776. by Col. John Trumbull. The map is believed to have been drawn in October, 1776 and depicts the boom and first bridge. Courtesy of Hall Park McCullough House.

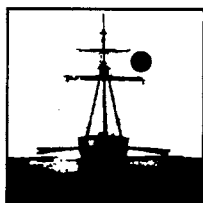
In this writer's opinion, there are two principal reasons why this campaign ended in the way it did. First, the British necessity of preparing a substantial fleet to meet Arnold, although executed with all dispatch, caused the advance to be delayed from mid-June through mid-October. After the British bested Arnold and arrived at Crown Point, the wind held them to that place while the Americans prepared to meet them. By the time the wind shifted from out of the south to north, on or about October 28, it was turning cold and shortly would turn much colder; "General Winter [could] not be very far off." [43] The British general staff probably concluded that this was not a good time to be pushing farther away from their supply lines and farther still from the comforts of Canada.

An additional factor is American success at preparing their defensive capabilities at Fort Ticonderoga and Mt. Independence during the time that the British had been engaged in building a superior fleet. Baldwin's journal effectively chronicles the devastation of the retreat from Canada and the trauma and sickness among the army which was only reversed when they staked out the ground on the Eastern Point. During the next three months the tireless effort by Baldwin, Gates and those under their command transformed the wilderness of Mount Independence into a formidable defensive position with three major tiers of cannon batteries. They strengthened the old French lines and built new redoubts on the Ticonderoga shore. When the British probed these combined defenses in late October of 1776 their appearance, combined with the number of troops manning the battlements, must have given the British good reason to reconsider an all out assault or a prolonged seige.



The British decision not to advance at that time was probably the right decision. General Schuyler's opinion, expressed in a letter written to General Washington on November 3, was that "I do not apprehend that Gen. Carleton will attempt our lines. It is to be wished that he did; as it is almost certain, if he does, that he will experience a repulse." [44] Thus the British returned to Canada, perhaps finding comfort in their achievement of wresting control of Lake Champlain from Arnold, even though they had failed to capitalize on that success by pushing the Americans out of their strong fortifications.

The British withdrawal did not signal an immediate end to the threat of attack. Although the British fleet had carried their forces north, while the lake remained open, it could easily transport them back. For several weeks the militia units remained at their posts, continuing to refine the defenses and render the fortification inhabitable for winter. The militia were a mixed blessing. They certainly enhanced the defensive capability of the fortifications during the British probe, but their commitment to providing other assistance was minimal. One officer complained, "The militia that has been here won't do the least thing for me, nor can I make them do it." [45] By the end of November, the threat from the British was deemed sufficiently small and the militia and some regular troops were sent away. General Schuyler planned to reduce the combined forces at Mt. Independence and Fort Ticonderoga to 2500 men for the winter. General Gates chose Colonel Anthony Wayne to take command of the posts upon his departure.



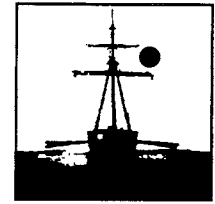
## The Winter of 1776-'77

As the camps began to re-configure for winter use, both the bridge which had effectively allowed troops to cross the lake and the boom which provided a defense against British ships gave way. In a letter to General Gates, who had left the lake on November 18, it was reported from Ticonderoga on December 15 that "Yesterday the violence of the wind parted the bridge to Mount Independence and this day the lake froze across strong enough to walk over. The boom was carried away soon after you left the garrison." [46]. The two lake structures had accomplished their mission; with the lake ready to freeze over, the bridge and boom were made unnecessary. Jeduthan Baldwin made no attempt to fix them, and in fact he appears to have been so preoccupied with building winter quarters that the loss of the boom was not even mentioned in his journal. Baldwin was also preparing to leave the post. He was engaged in settling accounts and "Drawing plans & Writing letters to inform what will be necessary in my department next year for an army of 10,000 Men." [47]

While Baldwin was making these final preparations to leave, an advanced scout reported on December 2, the appearance of a fully rigged British warship advancing southward. Baldwin noted on December 3, "in the fore part of this day we were preparing to receive the Enemy but at Evning the Ship came up to Ti and brought pertatoes and Indian corn from Onion [Winooski] River to sell, but it is only a battoe with 3 blankets & a bedtick for Sail that Loomd up at a distance but it gave great surprise to many." [48] The alarm thus proved false and Col. Balwin left the post on December 4 for a brief visit to his home in Massachusetts. On the way he recorded each nights lodging, noting on December 8, stopped "to General Schuylers & Lodgd at Stillwater." [49]

General Schuyler commanded the Northern Department and he and others were already looking ahead to the next season's campaign. With one British army in possession of New York City and another one perched just north of Lake Champlain, one of the American's prime objectives was to create marine obstructions along their likely invasion route. After two British vessels ascended part way up the Hudson River in July of 1776, a "Secret Committee" had been established to address the issue of protecting the Hudson. The committee was charged with executing "such Measures as to them shall appear most Effectual for Obstructing the Channel of Hudson's River, or annoying the Enemy's Ships in their Navigation up the said River." [50] General Schuyler's headquarters were located at Albany (the northern end of navigation on the Hudson), and he was keenly aware of these efforts. Benedict Arnold also got involved in the develop-

ment of a plan to obstruct the Hudson River. While returning from Lake Champlain in December he also stopped in Albany where upon learning of efforts to block the Hudson, he wrote to General Schuyler: "A letter from the Committee of Safety of this State [New York], was handed me Yesterday by Genl. Gates, Wherein they requested your Advice and Asistance in securing the River. I have taken the Liberty of enclosing You a draft of a Boom and Chain; also a fire raft and Run Buoy. Perhaps these hints may be of some service to you." [51]

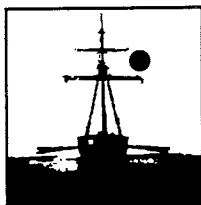


Indeed, Arnold's suggestions and the visit from engineer Baldwin did reinforce General Schuyler's thinking on the strategic corridor to the north and the possibilities of securing it. On December 30 Schuyler wrote to John Hancock in Congress and related his evolving thoughts on the defense of Lake Champlain and Lake George. Schuyler contemplated the possibility that a strong British assault might be successful in gaining possession of Fort Ticonderoga while the American's still remained in possession of Mount Independence. To counter this scenario Schuyler wanted to build "five or six stout galleys" on Lake George to prevent its use as a possible invasion route into the Colonies. Continuing to discuss his plan, Schuyler proposed "to begin the necessary Work of obstructing the Navigation of Lake Champlain between Tyconderoga and Mount Independence." He was optimistic about building obstructions: "I hope to execute [them] so effectively as not to leave the possibility for any kind of craft to pass whilst we keep possession of the latter place, [Mt. Independence]" [52]

It was a bold plan which would require a great effort by a large force of workers. The work force would need a leader of proven ability and knowledge of the region. There was only one logical choice for the task of superintending this ambitious construction project and on February 13 General Schuyler wrote to Jeduthan Baldwin detailing the work at hand.

The honorable Continental Congress by a Resolution of the 28th of December last have ordered "That a Fort be constructed at Mount Independence; that the Navigation of the Lake near that place be obstructed by Cassoons to be sunk in the Water at small Distances from one another and joined together by Stringepieces, so as at the same time to serve for a Bridge between the Fortification on the East & West Sides,..." [53]

The Congressional resolution also ordered the construction of obstructions for Lake George and concludes "That there be a general Hospital erected at Mount Independence." The obstructions for Lake George were never built but with this communication to Baldwin the "Great Bridge" and hospital at Mount Independence were initiated. There has been much speculation about just what kind of a bridge was contemplated by the original planners. As it was actually built, the



bridge consisted of 22 massive timber "cassoons" or caissons, approximately 24' square, connected by 12'-14' wide floating sections. The floating bridge deployed in the fall of '76 required no caissons, and it seems as if the caissons represented a tremendous amount of extra work if the original intention was simply to create a floating bridge. General Schuyler's letter to Baldwin reveals a different original intention for the bridge, one that was never realized.

You are to proceed to Tyconderoga and as I conceive the Obstruction of the Lake will be much easier and cheaper executed while the Lake continues frozen than at any other Time you will first execute that work- The Cassoons should be so far above the Water as that Bridge may not be under Water when the Lake is at the highest and to prevent Bateaus from passing underneath when the Lake is at the lowest a Boom ought to be laid on the Water on each Side of the Bridge. [54]

To build structures adequate to carry out the above instructions, the caissons in the deeper portion of the channel needed to be at least 30-foot tall structures to reach the required "high water" height. [Figure 8] This clearly explains why the Americans went to such a great effort to create what was never more than a floating bridge. Had historical events unfolded differently, and had the Americans kept possession of Lake Champlain for a longer time, Schuyler's fixed bridge might have been completed.

Jeduthan Baldwin had already gotten word to return to the northern posts prior to receiving these specific instructions. On February 5th, the Colonel recorded in his journal, "at Home. Recd a letter from Genl. Schuyler by Mr. Wait." On February 8th Baldwin left his home at Brookfield and headed back to frozen Lake Champlain. He reached Albany on the 12th and dined with General Schuyler on the 13th when he must have received his specific instructions and discussed the future building activity. Baldwin arrived at Ticonderoga on February 24th and the next day "went over to Mount Independence, Din'd and Supt with Col. Waine [Wayne]."[55]

Colonel Baldwin wasted no time in getting his projects underway. On the 26th he "Visited the workman," and "Requested of Col. Wain that men might be ordered to Saw bords with Whipsaws & that a large party might be ordered to Cut Timber for the great Bridge &c." [56] Work on the "Great Bridge" had officially begun.

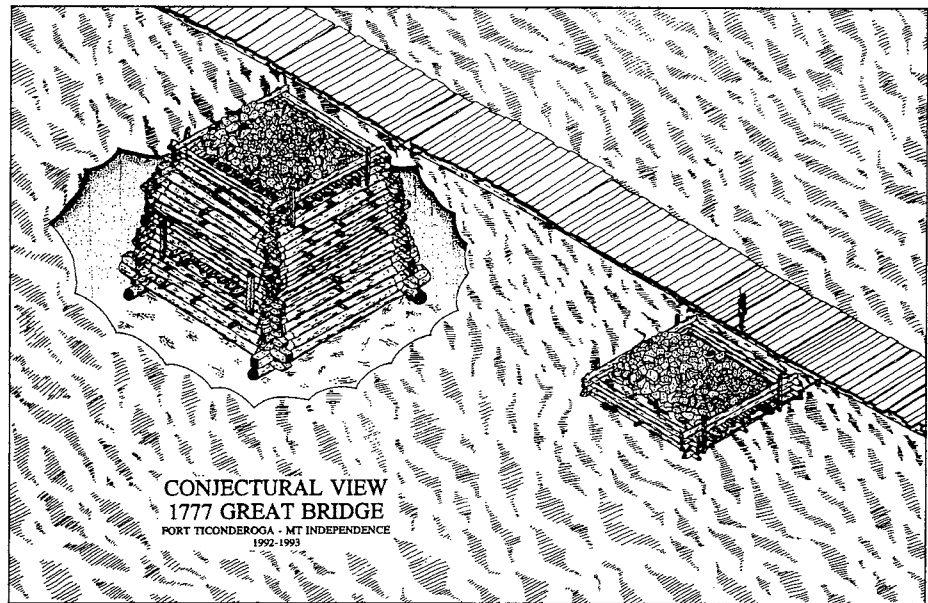
While the committee working on obstructing the Hudson River may have been attempting to keep their actions secret, here on Lake Champlain the British were soon aware of what the Americans were attempting to do. In mid-March, British scouts were sent into the region to reconnoiter and to capture anyone who might help shed light on American activities. Captain Mackay was the most

effective agent engaged in this task and was successful in capturing several persons who reported on the American's new plans. In a deposition given on March 21, Samuel Adams, a resident of Ticonderoga at Lake George, gave accurate details about the state of the American fortifications and troop strength. He also reported, "They are making a Bridge of large Logs across the River [Lake] to hinder the Vessels from coming up, to secure the Communication with the Colonies, and to be able to make their retreat to Mount Independant." [57] After providing this information, Adams was released to return home. Just why Mackay let Adams go is not entirely clear, but he may have intended to periodically call upon Adams for updates about what was going on. The degree of detail Mr. Adams provided leads one to question where his sympathies actually lay, but the source of his information was certainly reliable. On March 9, Colonel Baldwin recorded in his diary, "dined with Mr. Adams and on the 16th stopped there for tea." [58]

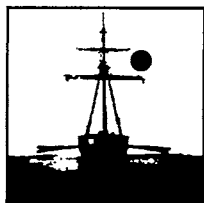
Information about the early construction on the "Great Bridge" was corroborated by several other victims of Captain Mackay's efficient raids. Caught in the sweep was Captain Baldwin [no relation to the Colonel] of a company of Albany Rangers, along with Sergeants Joseph Graves and Joseph Williams of his command. They were taken on March 19 at Lake George while enroute from Ticonderoga to Albany. Captain Baldwin provided information that, "They were sinking Piers of the New Bridge. It is laid across the River [Lake] from the Old Storehouse on Tyconderoga Side to the Point of Mount Independant." [59] Joseph Graves added "That the New Bridge is building fast, and the Piers of it Sinking, and that they are endeavoring to finish it before the Ice breaks up." [60]

Colonel Baldwin's journal entry for March 22nd confirms this incident saying,

Rode out to ye Mills & to Mr. Adams. at evening he came in after being four Days



Conjectural view of the floating "Great Bridge" and its caissons.  
Drawn by J. Cozzi.



with the Enemy, he and 2 others were at Sabbath day point with 13 horses on ye west side of the Lake and were Taken by Capt. McKoy with about 18 Cocknewago Indians, about 3 o'clock afternoon five miles north of Sabbath day point. soon after he was taken Capt. Baldwin came along with about 25 Men from Ticonderoga going to Fort George on the Ice. the Indians consealed themselves in ye Woods until 3 o'clock at night. Capt. Baldwin with his men passed by to Sabbath Day point where they made a fire Ley down & went to sleep, when the Indians attacked them Killed 4 & took 20 which they carried off but Mr. Adams being well acquainted with Capt. McKoy he pleaded he was only an inhabitant did not belong to the army obtained Leave to return after marching 30 [miles?]. [61]

## Building the Great Bridge

Just what techniques engineer Baldwin utilized to build the caissons is not presently known. While his journal provides a brief daily account of his work, details of construction are largely absent. What we do know is that Baldwin's journal unceremoniously announces the beginning of the project saying;

"March 1 began to build the Great Bridge, from Ticonderoga to Independant point.

2 at work at the Bridge

3 at the bridge...

4 Rode with Col. Wayne up the Creek

5 at the bridge

6 at ye Bridge

7 ye Bridge

8 Smiths [blacksmiths] came up, a fine day at ye Bridge...

9 Sunk 10 Cassoons & put down many of the posts...

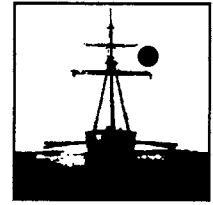
10 geting down Cassoons, the Ice began to fail.

11 workt at ye Bridge, rode up East Creek. [62]

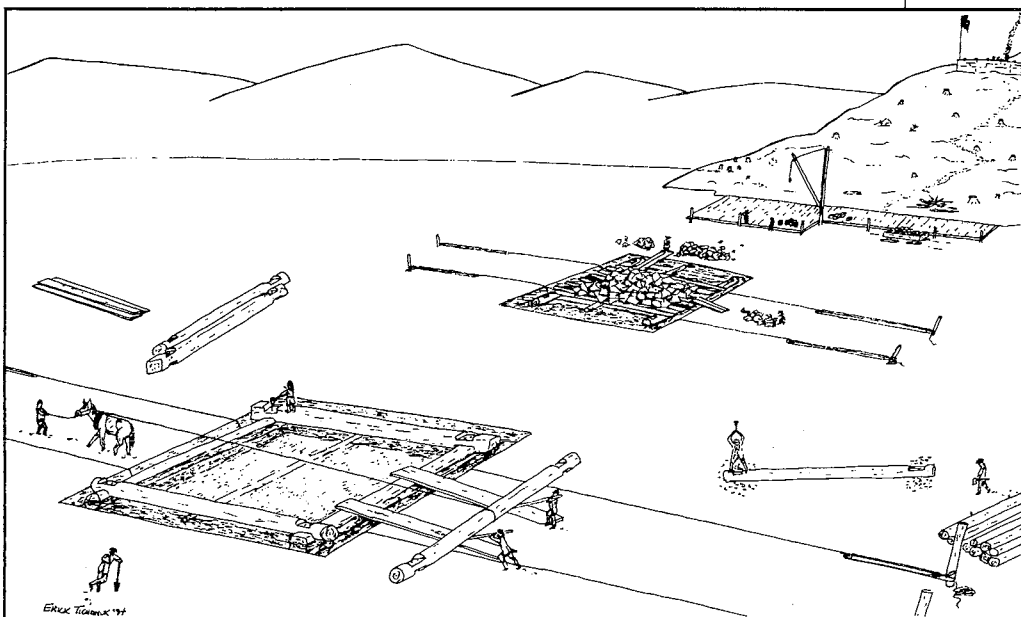
Just how Baldwin built and placed multiple 30 foot-wooden towers from the ice to the lake bottom is an engineering puzzle. Did he assemble a quantity of logs and ballast stone for the structure and then begin construction? Did he build them full height on the ice and then drop them to the lake bottom? Could the "posts" referred to on March 9 have been placed around a caissons location to allow it to be built up one tier at a time at ice level while controlling its lowering by block and tackle secured to the posts? Perhaps further research coupled with the archaeological remains will add to our understanding of what was for that time a truly incredible engineering feat.



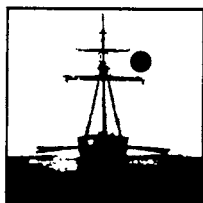
In Figure 9, a conjectural view is provided of our current thinking on the techniques utilized to carry out such an ambitious building project. It suggests that each caisson was assembled one tier at a time at ice level. Ropes drawn under the structure and secured to "posts" would provide a controlled descent, while each new tier of pine logs would sink the previous one. When approximately 14 feet of structure was assembled, a floor was installed to place quarried stone for ballast. The process continued until the structure's lower portion was on the lake bottom and its top at the water's surface. At the level of the water's surface, another floor was placed across the caisson and more stone ballast was added while the final tiers were completed.



Not all engaged in the work on the Great Bridge did so cheerfully. Winter conditions at the two Lake Champlain fortifications were severe. In an excellent master's thesis recently completed by Donald Wickman, life and conditions at these outposts has been well captured. [63] But besides Baldwin's brief journal entries there are few direct observations of work on the bridge and boom. One interesting narrative reflecting on this effort was published in an 1866 "Reminiscence of the American Revolution". We are told by the narrator, the son of a civilian New York farmer, that during the winter of 1777 he, his father and several other men from the greater Albany region had contracts with the army to transport supplies from Bennington to the frontier forts on Lake Champlain. The supplies were transported over the frozen waterways by the use of horses and sleighs.



Conjectural view of construction of the Great Bridge caissons on the ice, March, 1777. Drawn by Erick Tichonuk.



On our second trip we had scarcely unloaded our sleighs when Colonel Hay...informed us we must stay and commence dragging timber for the bridge which was about to be constructed by order of congress between Ti and Mount Independence. The object was to strengthen the posts, and the bridge was a floating structure stretching over between them, and was protected by a boom thrown across the lake below. Above, large caissons were sunk to obstruct navigation. [64]

The teamsters protested that they could not assist at the bridge and still fulfill their freight contracts before the ice broke up, and, in direct circumvention of orders they fled the post. They returned home, picked up their new loads and once again appeared at the forts where Col. Hay confronted them with charges that "the public interests have suffered severely" from their actions. After a discussion about what the teamsters described as competing responsibilities, Col. Hay suggested "Give me your word that the sleighs in your company shall remain to assist us for a few days, and I am satisfied." With their contract for delivery of supplies completed,

My father did not hesitate to give the required promise, as he was always willing to aid the service, and he well knew the necessity of completing the works of defense, then in a state of preparation, to resist the approaching enemy.

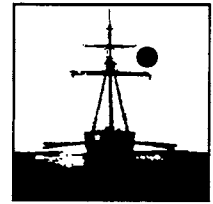
The great bridge was not yet finished, and on the morrow and three successive days our whole party was assiduously employed in drawing timber. It was a bridge of communication, built of wood, which was supported by twenty-two sunken pieces of large timber at nearly equal distances. The spaces between them were filled by separate floats, each fifty feet long and twelve wide, strongly fastened by chains and bolts, and affixed to the sunken piers. In front of this was a boom made of large round pieces of timber, secured by riveted bolts and double chains of inch and a half iron. It was a strong work. [65]

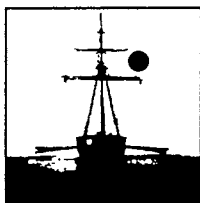
With a change in weather the teamsters were dismissed and allowed to go home after agreeing to sell the army three of their horse teams. On March 13th Baldwin recorded, "began to cut timber for the hospital, the Sleyemen went off work." and on the 14th "The Ice very Roten, left working at the bridge, went over ye Mount." [66] It is hard to comprehend how difficult the work must have been for these poorly equipped men working on the ice in the middle of winter. And yet for Baldwin the bridge was just one of several complex projects he had to superintend simultaneously. At the same time he was struggling to complete the bridge, he was also engaged in building a 250-foot long hospital, a new fort for Mount Independence, and a crane to effectively raise supplies from the lake. But by March 21st, the intrepid engineer reported he was taking an interim step to make the bridge serviceable and "puting ye foot Bridge in order

to cross the Lake." Schuyler's plan of building a bridge suspended on top of the caissons and above high water would have to come later.

As work continued to complete the bridge, Baldwin's observations reflect some of the difficulties the men experienced in the task. On March 26 "one peer of the Grt Bridge fell to pieces" and the next day "the Bottom of another Peer fell out." [67] Perhaps the cause was the soft and unstable lake bottom on which the caissons sat. For a time after these entries the bridge fades into the background as the other projects require Baldwin's attention, but on April 21 he noted that "one of the piers of the Bridge turnd over." [68] This may have occurred as the ice was breaking up and moving north, or because the buoyancy of the pine logs was not sufficiently counterbalanced by the stone ballast. There is but one entry in Baldwin's journal during this period concerning the other channel obstruction project, a note that on April 12 that he had "got the Boom a cross the Lake." [69]

For the next month Baldwin's journal is filled with reports of his other activities at the posts including the comings and goings of officers. Noticeably absent are entries concerning the lake structures which were presumably in place and performing their respective functions; that is until May 25th. On this date Baldwin recorded, "the boom & Bridge in a heavy gale of wind gave way & with some difficulty they were brought back in place." On the 29th he wrote, "work at ye Bridge Anchoring of ye Boom & getting Logs for it." [70] Meanwhile, the entry on May 28 reported an advanced scout had sighted a party of the enemy on the lake in the vicinity of Split Rock. The British campaign into the rebelling colonies had begun.





## The Campaign of 1777

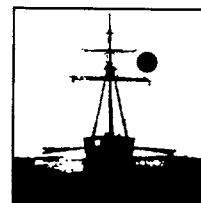
It was not possible for the Americans to know that June of 1777 was the last month they would retain possession of Lake Champlain during the war. Work continued urgently, enhancing the posts to get them ready for the anticipated British assault. On June 12, General Arthur St. Clair, who had served here the previous season as a colonel, returned to Lake Champlain as the commander of both posts. On June 14 Baldwin recorded, "went with Genl. St. Clair over & round Mount Independence. movd the floating bridge to the loer side of the peers." [71] This entry confirms that the floating bridge was in fact placed along the side of the caissons and not between them as some accounts seem to suggest. The reference also suggests the bridge was originally placed on the south side of the caissons and then moved to the northern side. A letter written from Mount Independence on June 19th confirms that "The army is diligently employed in Publick works building a Bridge across the Lake." [72] Earlier in the month, Baldwin went to Crown Point and "measured the width across to Chimney point 400 yards & the Chaniel in the deepest place 56 feet water for about 100 yards wide & then grows shallower gradually on both sides." Was another bridge and boom contemplated at this crossing?

In June the level of preparation increased as intelligence confirmed the size of the British forces in Canada and their intention to push south past Ticonderoga and Mount Independence. General Schuyler made an inspection tour and offered recommendations for improving their defenses. By the end of June the garrison was receiving almost daily reports of the enemy advancing up the lake towards their positions. July saw the British setting up batteries and testing the American advance positions. The confrontation that Jeduthan Baldwin had labored so long and hard to prepare for was at hand. One British officer's journal indicates part of the strategy employed was to test the American defenses: "About the middle of the day [July 5], two of our Gun Boats were order'd to proceed towards the Enemies Works 'till fired upon, in order to form a judgment of the number of Guns bearing on the Water. It was found impracticable to force their Boom with our Shipping." [73]

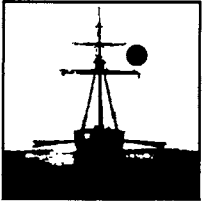
Unfortunately for the Americans, the British quickly seized upon a strategy which simply avoided all the newly constructed batteries, bridges and booms. They observed the high hill just south of Ticonderoga, known as "Sugar Loaf Hill" and "Mt Defiance," had been left unfortified. This defensive oversight had been strongly protested against by Jonathan Trumbull in 1776. He had attempted to persuade the general staff of the vulnerability to their main posts if this position were left undefended and Trumbull even executed an experimental

firing of a cannon across the lake to demonstrate the point. The demonstration showed that Mount Defiance was within cannon range of the American positions but it was then argued that its summit was inaccessible. Trumbull attempted to rebut this erroneous presumption by climbing to the summit with General Arnold and Colonel Wayne. "The ascent *was* difficult and laborious, but not impracticable, and when we looked down upon the outlet of Lake George, it was obvious to all, that there would be no difficulty in driving up a loaded carriage." [74] Despite these demonstrations and protests, Mount Defiance was never fortified by the Americans. [Figure 10]

The British force which appeared before Ticonderoga and Mount Independence was made up of British regulars, German mercenaries, Canadians and Indians. On July 4, Baldwin's journal animatedly reported that they were "putting up the Block house, moving som cannon, laying [cannon] platforms & preparing for the Siege, the enemy Numerous & bold." On the 5th "The Enemy appeared on the Mount [Defiance] above on the S.W. opening a Battery..." [75] Trumbull's ominous prediction had come true. General St. Clair gathered his senior officers around him and all agreed that defense of the extended positions with only 2000 effective troops available was not possible and a retreat was ordered. It was a nighttime retreat designed to mask their intention from the enemy. As one portion of the army traveled by water towards Skenesboro, the remainder crossed the Great Bridge to Mount Independence and marched along the military road towards Castleton. This was the last time the "Great Bridge" would be utilized in its intended way.



Detail from  
*Ticonderoga & its Dependencies, August 1776*, by Col. John Trumbull showing the relationship between Mt. Defiance and the American fortifications.



## The Retreat and Descriptions of the Great Bridge

There are a number of accurate contemporary descriptions of the Great Bridge and boom which crossed Lake Champlain. A Hessian surgeon, recording in his journal the events of early July, wrote on the 4th: "From Ticonderoga to Fort Independence, a communicating bridge has been built and the passage underneath [north of] this has been blocked for large ships by means of large joined beams." July 6th, "The frigates *Royal George* and *Inflexible*, the warships *Carleton*, *Maria*, *Washington* and the armed batteaux weighed anchor but could not get through the passage that was blocked by beams. Carpenters and laborers opened it as quickly as possible..." [76] Writing several days later, another Hessian officer, Du Roi the Elder, described the bridge in great detail and reveals great admiration for his adversaries;

"They call this mountain on account of its location and their own intentions 'Mount Independence.' The whole was well done and showed no lack of clever engineers among the rebels.

A bridge of more than 350 feet long, was built from Ticonderoga to Mount Independence, which served not alone for the purpose of communication between the two forts, but also to block completely the passage and entrance for ships to South Bay, a piece of work which should be noted for curiosity's sake, and which does honor to human mind and power. It is only to be regretted that the work was commenced for fighting purposes. It therefore, will hardly be completed as it deserves. It may be compared to the work of the colossus in the fables of the heathen." [77]

Obviously fascinated with the bridge and the commitment which made it possible, this journalist next goes into a very detailed description,

The width of the water between Ticonderoga and Mount Independence is, as mentioned before, more than 700 feet, and the depth in the middle 25 feet, which diminishes very little towards the banks, thus allowing even big vessels heavily loaded, to pass. The current is so strong that a pontoon bridge, or any other kind of floating bridge, could not resist it for any length of time, not taking into consideration an occasional strong wind. For supporting and strengthening the bridge 23 caissons (as the rebels called them), filled with stone, had been put into the water in a straight line across. These caissons are made of tree trunks 3-4 feet in diameter and 20-25 feet long, put together in squares. In the beginning they were kept in place by anchors. After they had been built above the water, they were filled with quarry stone, of which there is an abundance. This would sink them and keep them in place under water.

If you take into consideration the depth of water, you can get an idea of the amount of work involved. [78]

In a profound observation on the political and philosophical implications of this work, the journalist concluded “It is well worth mentioning this fact [the cost in lives to build the Great Bridge], as such perseverance is seldom found in history, except in a republic, where a general participation in a common cause would inspire and hold it. It is rarely, if ever, found in monarchies.” [79]

[Figure 11]

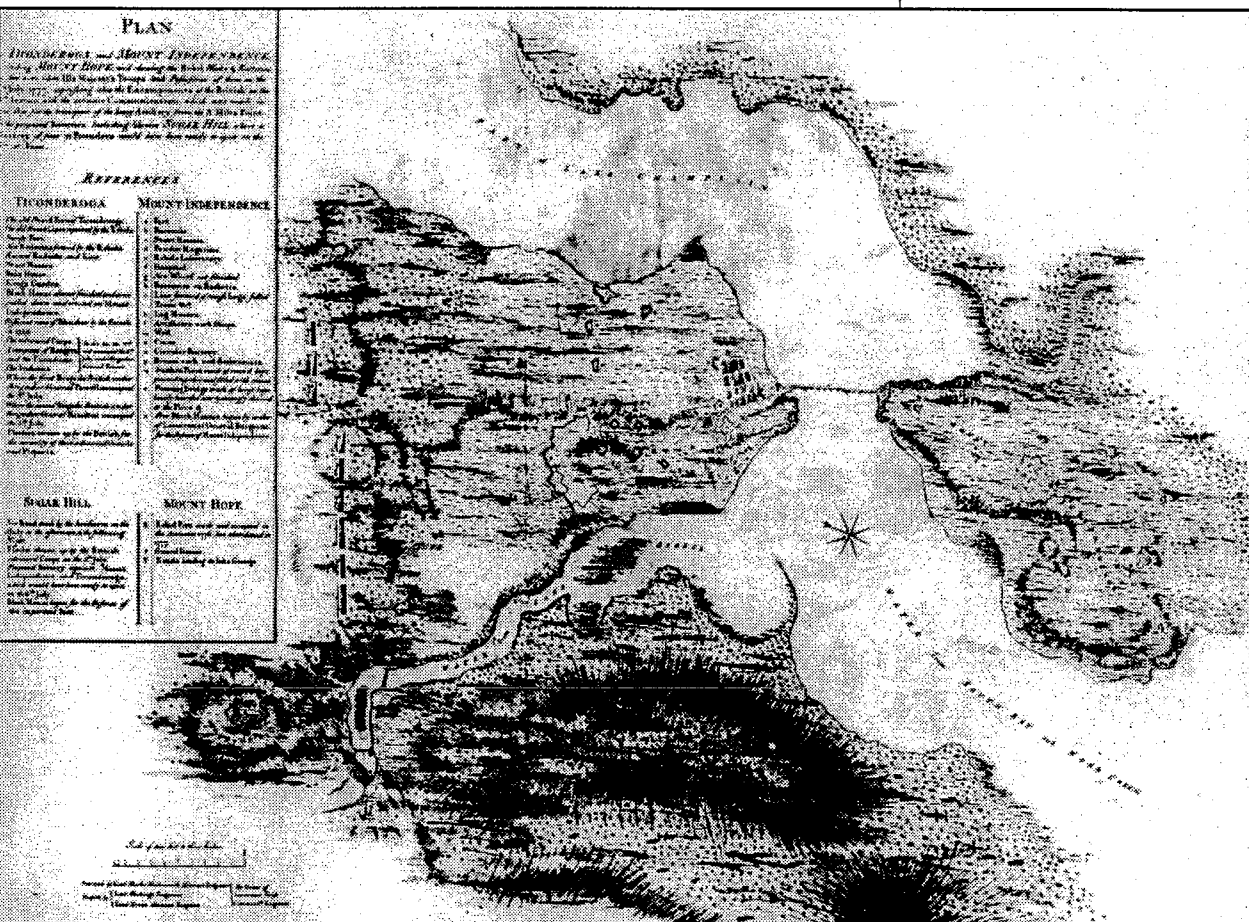
With somewhat less appreciation for the American effort, Burgoyne described passing the obstructions and pursuing the fleeing rebels saying “The gun-boats were instantly moved forward, and the boom and one of the intermediate floats [of the bridge] were cut with great dexterity and dispatch, and Commodore Lutwidge, with the officers and seaman in his department, partaking the general animation, a passage was formed in half an hour for the frigates also, through impediments which the enemy had been laboring to construct since last autumn.” [80]

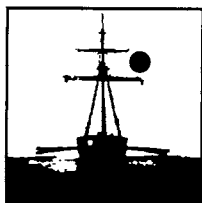
**Plan of Ticonderoga and Mount Independence including Mount Hope, and showing the Rebel Works & Batteries as they were when His Majesty's Troops took Possession of them on the 6th July 1777**

*Surveyed by Lieut. Charles Wintersmith,  
Assistant Engineer. Copied by Lieut.  
Hockings, Engineer, and Lieutenant  
Terrot, Assistant Engineer. By order of  
Lieutenant Twiss, Commanding Engineer.*

**Courtesy of the Fort Ticonderoga Museum.**

There are three known contemporary Wintersmith maps. The one reproduced here is from the Fort Ticonderoga Museum and provides the best detail of the bridge construction. A second map is at John Carter Brown Library at Brown University and a third at the Bailey/Howe Library of the University of Vermont.



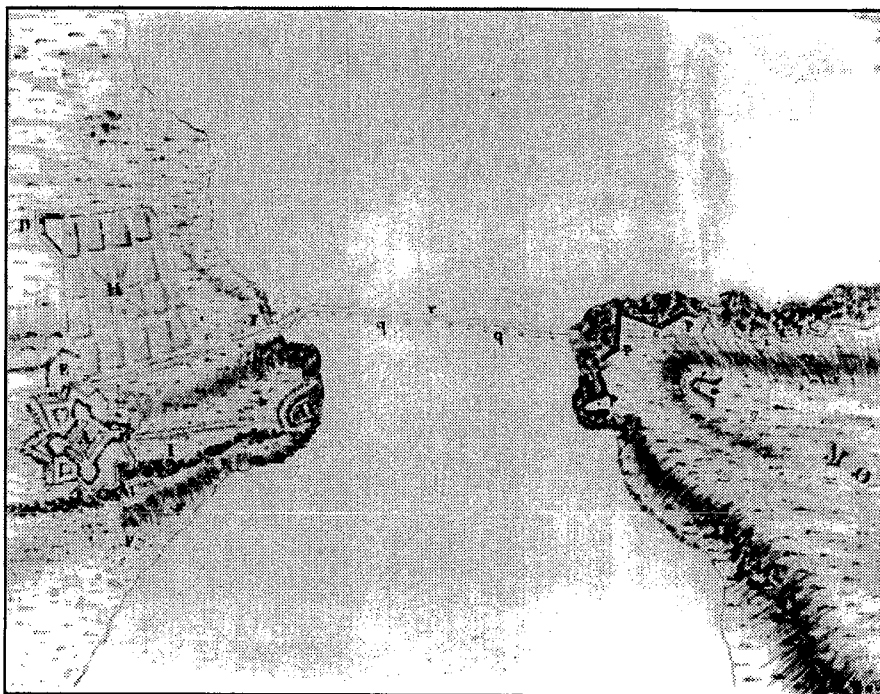


When comparing several published descriptions of the Great Bridge and boom the similarity of the words chosen is remarkable. Is it possible that a description written by General Burgoyne to Lord Germain shortly after taking the posts, and later published in Burgoyne's "A State of the Expedition from Canada" may be the source for later journalists who utilized this account to refresh their own recollections? Burgoyne wrote,

The great bridge of communication, through which a way was opened, was supported by twenty-two sunken piers of large timber, a nearly equal distances; the space between was made of separate floats, each about fifty feet long, and twelve feet wide, strongly fastened together by riveted bolts and double chains, made of iron an inch and a half square.[81] [Figure 12]

British Sergeant Lamb published his account in 1809 observing,

This bridge was supported by twenty-two piers of timber, the spaces between these piers were filled with separate floats, fifty feet long, and thirteen feet wide, strongly fastened together with iron chains. It was likewise defended, on the Lake Champlain side by a boom composed of very large pieces of timber, fastened together by rivitted bolts and double chains. This bridge, on which the Americans had bestowed so much Labour for ten months, and which was deemed by them to be impregnable, was cut through in less time by British seaman, than it would have cost them, to have described its structure.[82]



This is a close-up detail of the Great Bridge taken from the Fort Ticonderoga Museum Wintersmith map. Courtesy of the Fort Ticonderoga Museum.

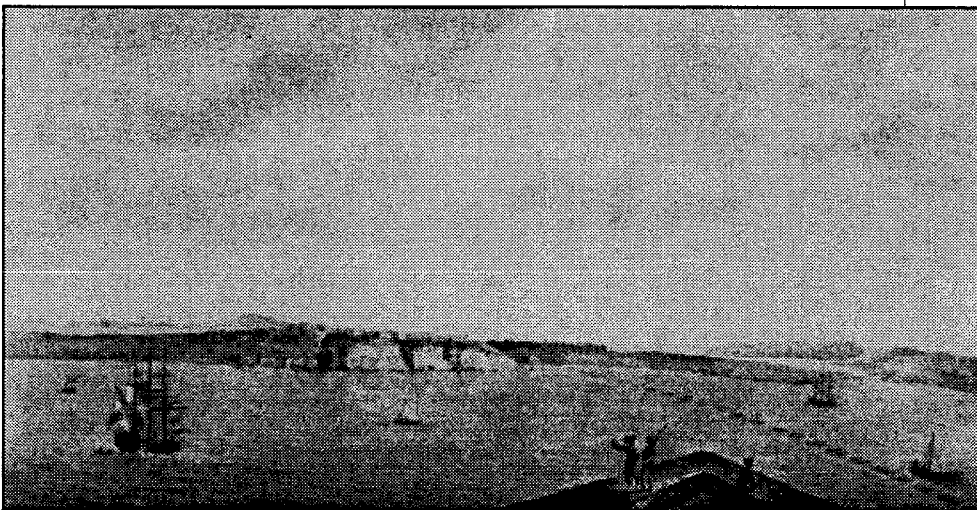
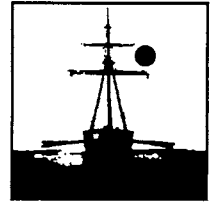


British Lieutenant Digby's Journal recorded,

The enemy with their usual industry, had joined those two posts by a bridge of communication thrown over the inlet. This was like many other of their performances, a great and most laborious work. The bridge was supported on 12 [22] sunken piers of very large timber planted at nearly equal distances; and spaces between these were filled with separate floats, each about 50 feet long & 12 feet wide strongly fastened together with chains and rivets, and as effectually attached to the sunken pillars on the Lake Champlain side of the bridge. It was defended by a boom composed of very large pieces of timber fastened together by riveted bolts, and double chains made of iron an inch and an half square. Thus not only a communication was maintained between these two posts, but all access by water from the northern side was totally cut off. [83]

Dr. James Thacher, who was with the American army at these posts during the campaign, described the obstructions in his journal first published in 1823,

The communication between these two places is maintained by a floating bridge; it is supported on twenty-two sunken piers of very large timber, the spaces between these are filled with separate floats, each about fifty feet long and twelve wide, strongly fastened together with iron chains and rivits. A boom consisting of large pieces of timber well secured together by riveted bolts, is placed on the north side of the bridge, and by the side of this is placed a double iron chain, the links of which are one and a half inch square. The construction of the bridge, boom and chain, of 400 yards in length, has proved a most laborious undertaking, and the expense must have been immense. It is however supposed to be admirably adapted to the double purpose of a communication, and an impenetrable barrier to any vessels that might attempt to pass our works. [84] Figure 12]



*A View of Ticonderoga taken from the Sand Redoubt showing the Piers for a Bridge constructed by the Americans in the year 1777 intended to form a communication with Ticonderoga and Mount Independence. By Henry Rudyard. Courtesy National Archives of Canada, C 40336.*



Thacher describes scene at the posts on July 5th recalling with “astonishment that we find the enemy have taken possession of an eminence called Sugar Loaf Hill or Mount Defiance, which, from its height and proximity, completely overlooks and commands all our works at Ticonderoga and Mount Independence.” [85] Thacher’s journal then paints a dramatic picture of the American retreat;

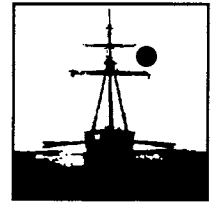
[July] 14th-By reason of an extraordinary and unexpected event, the course of my Journal has been interrupted for several days. At about 12 o’clock, in the night of the 5th instant, I was urgently called from sleep, and informed our army was in motion, and was instantly to abandon Ticonderoga and Mount Independence. I could scarcely believe that my informant was in earnest, but the confusion and bustle soon convinced me that it was really true, ...It was enjoined on me to immediately collect the sick and wounded, and as much of the hospital stores as possible, and assist in embarking them on board the batteaux and boats at the shore. Having with all possible dispatch completed our embarkation, at 3 o’clock in the morning of the 6th, we commenced our voyage up the South bay to Skenesborough, about 30 miles...At 3 o’clock in the afternoon, we reached our destined port at Skenesborough, being the head of navigation for our gallies, Here we were unsuspecting of danger, but behold! Burgoyne himself was at our heels. In less than two hours we were struck with surprise and consternation by a discharge of cannon from the enemies fleet, our gallies and batteaux lying at the wharf. By uncommon efforts and industry they had broken through the bridge, boom and chain, which cost our people such immense labor, and had almost overtaken us on the lake. [86]

## Historical Implications to the 1992 Survey and the Submerged Artifact Collection

As Thacher’s journal so well captures, the Americans became aware that with the British battery on Mt. Defiance they had no hope of resistance. As Thacher retreated over the lake the remainder of the army crossed the bridge and headed southeast towards Castleton. Is it plausible that as a component of this retreat the Americans might have disabled and thrown the cannon and other military material into the lake which was located during the 1992 underwater survey?

The historical record seems to suggest that the Americans were unprepared for the successful British venture on Mt. Defiance, and that until that occurrence they were preparing themselves to defend against a direct attack on their positions. The senior officer’s decision to abandon the posts was made during

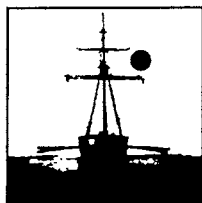
the day of July 5th, but kept secret from the rank and file for fear of creating a general panic. Therefore the actual time to disable guns, haul off supplies and throw material into the lake would have been limited to a very few hours during the night of the retreat. It is hard to imagine men in that position, having been ordered to retreat in silence, stopping to knock trunnions off cannon and throwing material silently into the lake.



After the American success at Saratoga, a Court Martial was convened to try General St. Clair and to enquire into the July loss of the Lake Champlain fortifications. Through the court-martial's written record, more details of the weeks immediately preceding the retreat and the retreat itself are clarified. Colonel Jeduthan Baldwin was one of the witnesses called and through his testimony it is confirmed "...we continued at these works both at Mount Independence and Ticonderoga until the day we came away, besides a considerable reinforcement to the party at work upon the bridge...there was a regiment of militia constantly on duty in the woods, under my direction, providing timber for the bridge." [87] During the questioning General St. Clair asked Colonel Baldwin, "Was the boom that was laid below the bridge in the Lake fixed in such a manner, that it would have been able to resist the shock of a vessel?" He replied, "The anchors were chiefly lost from it, the cables having been broken by the ice. I rather think it would not have stopped their heavy vessels, though it might their smaller ones." [88]

Colonel Baldwin was also asked to testify about the retreat itself. "On the 5th of July, 1777, about nine o'clock in the evening, General St. Clair sent for me, and told me that he had determined to abandon the place that night." [89] After loading all the carpenters' and smiths' tools into boats, Baldwin rode over from Ticonderoga to the Mount, where St. Clair asked him to help get stores from the magazine loaded.

"I soon got a large party of men, went over to the magazine[on Mt. Independence], and rolled the barrels from it to the landing (I believe about 100 large barrels of powder.) I then went to the landing, [author believes this is the landing on the south end of the Mount] where I found the men in great confusion, contending with the boats. The wind was high, and it was bad loading them; the men very cross, and hard to be prevailed with to do their duty. About sun-rise the army was past and the boats put off. There remained only a few barrels of powder and rum, with a small matter of baggage on shore, and there were only two batteaus that lay at a little distance. I promised Captain Nichols, that if he could get these boats with his carpenters, and carry off what remained at the landing, I would give him a barrel of rum when he got to Skenesborough; he immediately brought them in, got all on board (except about eight old tents that were not worth carrying and a howitzer that we run into the Lake and left..." [90]



The above account does suggest that at least one cannon was dumped into the lake during the retreat. Testimony from Captain Winslow sheds some additional light:

"General St. Clair's question. Were not orders given to spike up all the cannon that could not be removed?

[answer] There were.

General St. Clair's question. Was that done?

[answer] It was. You advised with me about knocking the trunnions off, but being fearful it would make too much noise and alarm the enemy, as they were so near, it was omitted." [91]

By various accounts the estimate of the Americans loss of cannon was "128 pieces of cannon" or "140 cannons in Ticonderoga and Independence." [92] While the specific number may not be known, the loss was high and most cannon were apparently left mounted in their emplacements.

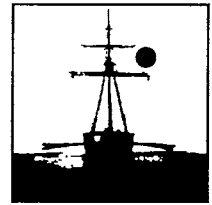
After clearing the road from Skenesboro to Fort Edward, Burgoyne continued his campaign south into the Hudson Valley. He left a force behind at Ticonderoga and Mount Independence to guard the rear of the main army. In the aftermath of the American retreat and British occupation of the lake forts, the Wintersmith maps and the Rudyerd views, [figures 11 and 13], were executed. The British and German troops in occupation of the Lake Champlain posts were put under the command of General James Hamilton who was succeeded in August by General Henry Watson Powell. They were successfully attacked by an American force under Colonel John Brown in September, when a diversionary attack on Mount Independence covered the real objective of recapturing Ticonderoga. After taking over 100 British soldiers prisoners, the Americans withdrew, leaving the remaining British troops in this vulnerable position. In October, when word arrived of Burgoyne's defeat and surrender at Saratoga, General Powell evaluated his options and realized he had no choice but to abandon the lake posts and return to Canada. Evidence suggests that it was during this British withdrawal to Canada in the fall of 1777 that many cannon and war materials were thrown into the lake. It is this British-disposed-of artifact collection which was located during the 1992 survey.

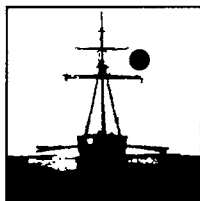
## The Invasion of 1780

In the fall of 1780, the British were again actively utilizing Lake Champlain to stage an attack on American positions in the Hudson-Mohawk Valley. The invasion party was led by Major Christopher Carleton, and they traveled in gunboats and bateau while being supported by Royal Navy Captain William Chambers in command of the *Maria*. Several other vessels from the British fleet were also involved, the *Carleton*, the *Lee* and the *Liberty*, the latter two having been captured from the Americans in 1776 and 1777 respectively. In one account, British Lt. John Enys described coming up the lake from Canada in a gunboat and stopping at Crown Point. Here, one party of men marched overland to their target, while Enys noted "the remainder of the day was employed in Making up our packs and preparing everything for our March, taking twelve day provisions with us, and in the Evening everything being ready we proceeded towards Teconderoga, Our Boats all in a line each boat following the leader. In this situation my boat got upon one of the Piers of the Bridge at teconderoga [sic] which had been burnt down to the Waters Edge when our people left that place...[93] This account suggests that when the British withdrew in 1777, the bridge caissons were among the structures destroyed because they could have been useful to the enemy. The burning of the tops of the twenty-two caissons was apparently intended to prevent them ever again being utilized to support a bridge.

Another insightful account comes from Captain William Chamber's logbook. Chambers was the naval officer in command of the British fleet on Lake Champlain, and in his log he recorded on October 10, 1780, "at 9, passed through the Bridge at Ticonderoga..." [94] The bridge caissons, burned to the waterline, must have been an important landmark for any astute mariner. The row of obstructions, fifty feet apart demanded vigilance and respect when passing to avoid the very problem Lt. Enys reported above. On the 11th, Chambers noted, "In reconnoitering the situation of the Vessels, I thought the other [northerly] side of the Bridge the most proper for the Vessels and boats, for should the Enemy take possession of Mt. Independent, they could greatly annoy the vessels in passing the Bridge. I immediately shifted the position of the Vessels to a quarter of a mile below the Bridge." [95]

Chambers' next day's entry provides a compelling explanation for the presence of the cannon and other material located during our 1992 survey. "I landed the officer and troops serving as Marines on Board the Vessels on Mount Independent. I then took a Boat, dragged and searched to see if I could find any guns, which had been thrown from the Fort, when evacuated by Genl. Powell, but to





no purpose. Were a number of Guns lying on shore, but all rendered useless; at sunset, the troops all embarked on Board the Vessels.”[96]

A letter from Captain Chambers to Governor Haldimand on October 27th added even more substance to the theory that the cannon’s presence in the lake was due to the actions of General Powell in the fall of 1777. After thanking the Governor for his complimentary words on assisting Major Carleton’s latest raid, Chambers’ discussion turned to Mt. Independence and a 32 pound cannon specifically, and other cannons generally.

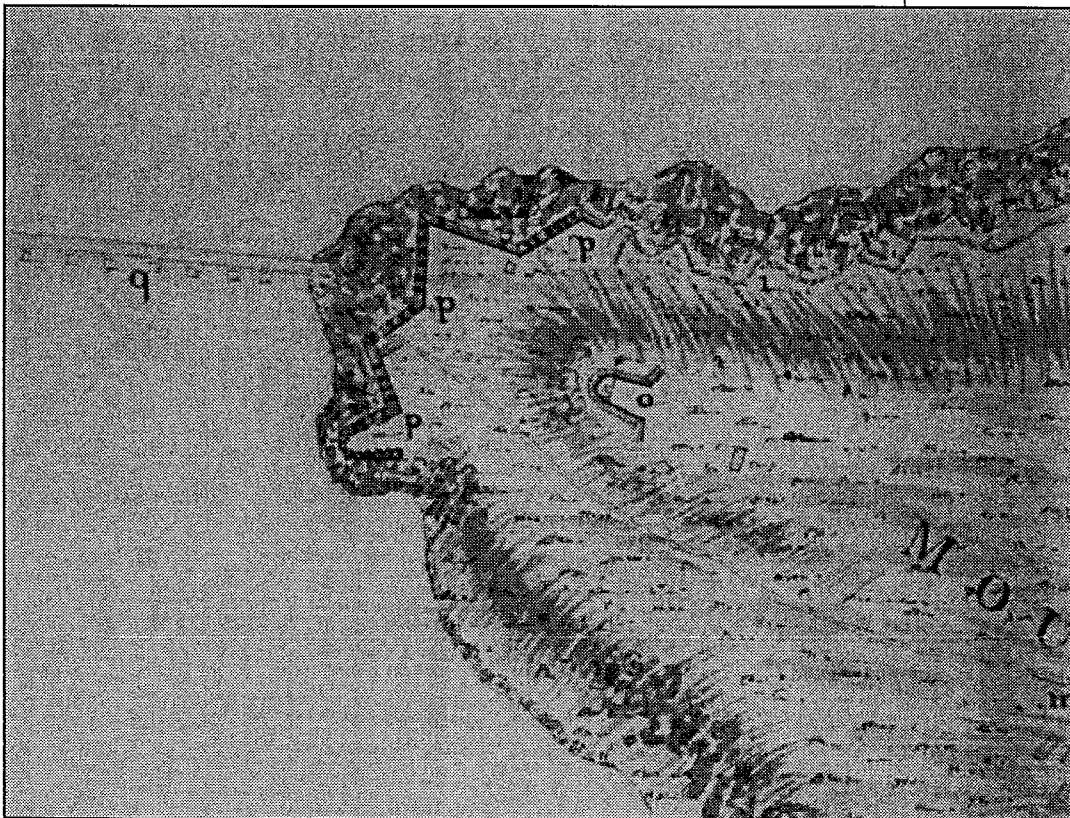
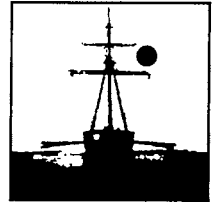
In your letter, you say that you will naturally endeavor to weigh the 32 pounder sunk by Genl. Powell; if your Excellency will please to look into the Journal I sent you, you will there see that I did embrace that opportunity, but, to no purpose, during the time we lay at Ticonderoga. I went myself and took Boats of the other Vessels and searched all around Mount Independant for Guns; one of the 53rd Regt that was at Mount Independence, the time it was evacuated, shewed me where a large Gun in the carriage was thrown into the water.

There was the Mark down the Rocks, but where the Gun fell, if thrown off as mentioned, there is near three fathoms of water; the water is so foul, that you cannot see the bottom more than three feet, and it is mostly soft Mud, so that a Gun of that weight, would soon bury itself. I dragged and searched for it for many hours & am convinced if the Rebels have not got it before this time, they never will. ...as to the old Guns that remain at Ticonderoga and Crown Point, they are all rendered useless, having their trunnions off and drove into the muzzles of them.”[97]

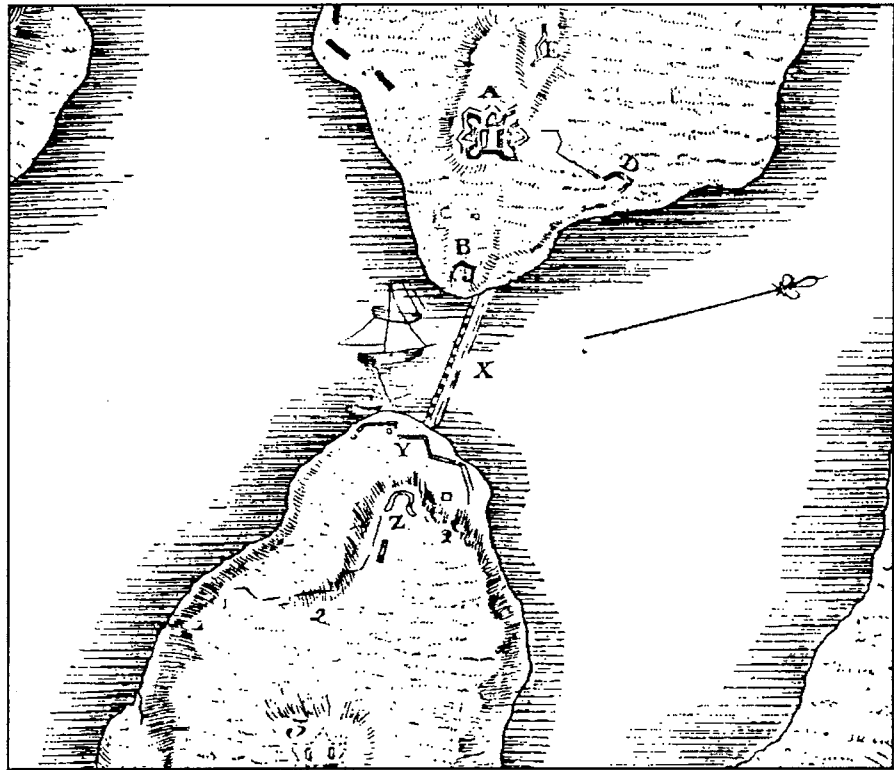
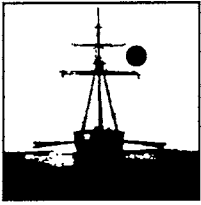
The above discussion clearly indicates that General Powell had the time and the inclination to destroy and discard a number of guns at the forts. It further appears that knocking off the trunnions was the preferred method for disabling the cannon, and that a 32-pounder was believed to have been one of the guns pushed into the lake. The 32-pounder mentioned by Chambers could quite possibly still lie under the lake bottom. It is possible that a large iron target deeply buried under the mud might still be in-place, unlocated during our 1992 survey. A number of areas just off the Mount did produce magnetometer targets of iron in environments approximating those described by Chambers. But as noted by Chambers, the visibility is near zero, the bottom is soft mud, and a large quantity of modern garbage inhibits the search in these areas.

While the 32-pounder remains a missing object, the descriptions in Chambers’ logbook and letter indicate the probable origin of the 12-pounder that was located in 1992. When the British evacuation in the fall is contrasted against the

circumstances of the American evacuation in July, the British removal would clearly seem to be the likeliest source of artifacts. The American retreat had to be executed in an almost unbelievably rapid time frame and required the utmost stealth so as not to prematurely alert the British to their intentions. The British would have had the time and circumstances to permit them to disable cannons and throw them and other war material into the lake to neutralize their military value. The 12-pounder was, we presume, wheeled down from the shore battery located just above Mount Independence's northern landing. The archaeological evidence suggests the cannon was rolled out on a dock and the trunnion was broken off just before the dumping. The trunnion was tossed into the water just south of the dock and the cannon was dumped shortly thereafter. A close-up look at one of the Wintersmith maps illustrates the northern end of Mount Independence showing the bridge and shore battery. [Figure 14] A map published with the Arthur St. Clair courtmartial proceedings illustrates similar features, but appears to show a vessel at a dock in the approximate location where the cannon was found. [Figure15]



Detail of the Mount Independence northern landing from the University of Vermont's Wintersmith map. Courtesy of the University of Vermont.



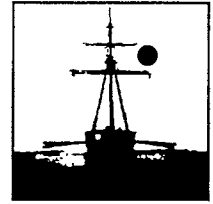
Detail from a map attached to *Proceedings of a General Court Martial...of Major General St. Clair*, published in *Collections of the New-York Historical Society for the Year 1880*.

## After the War—Glimpses of The Mount Independence-Ticonderoga Bridge

After the hostilities ended, in the early 1780's settlers began to return to the Champlain Valley. The wilderness region was now dotted with ruined military posts and farmsteads, which had barely had the time to take root before the war forced their abandonment. One of the early post-war settlers to the region was Peter Saily, who traveled to the lake with an eye to purchase land. He had been drawn to the Champlain Valley on the representations of William Gilliland, one of the first pre-war settlers on the New York side of the lake around Willsboro. Saily travelled to the lake via Lake George and when he arrived at Ticonderoga observed, "The English were beaten in an attack upon the French camp of General Montcalm. Fort Independence is directly across. The American's in the late war built a bridge across the lake which separate mount Independence from Ticonderoga. We saw its remains." [98] Military ruins were, and still are, significant cultural features on the landscape which



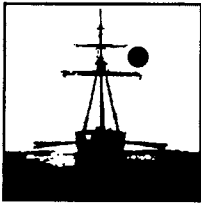
draw much attention. It appears even after several years of natural deterioration by winter's ice, the piers to the Great Bridge were still visible in the low water of July. Peter Saily, in a more personal observation wrote "In general I have never in my life seen anything which approaches in beauty the borders of Lake Champlain, although they are uninhabited" [99]. Following his visit Mr. Saily purchased land and became one of the prominent citizens of the town of Plattsburgh. [Figure 16]



After the war Mount Independence apparently contained a large quantity of military material which the frugal Vermont Legislature took notice of and offered for sale. In the Laws of 1785, the Legislature passed the following Act: "Whereas there are a number of Cannon, Mortars, Morter Beds, Bumbshells, Carriage Wheels of Cast Iron in and about Mount Independence which are public property, which are rendered unfit for service and may be of service in making bar iron." [100] It was directed that Colonel John Strong be made the trustee to take charge of the material and sell it to the highest bidder "after having advertised the sale thereof two weeks in the Bennington papers." [101] Shortly after, an ad was published for two successive weeks in the Bennington Vermont Gazette, stating that "John Strong, for sale in Orwell at the house of Shadrach Hathaway," 'A quantity of broken Cannon; mortars...lying on an about Mount Independence.' "[102]



*Ticonderoga from Mount Independence*, by John Howland Pell (1830-1882). This circa 1860 oil on canvas painting shows the masonry remains of the Mount Independence shore battery, now being captured as a backdrop in a gentler time. Courtesy of the Fort Ticonderoga Museum



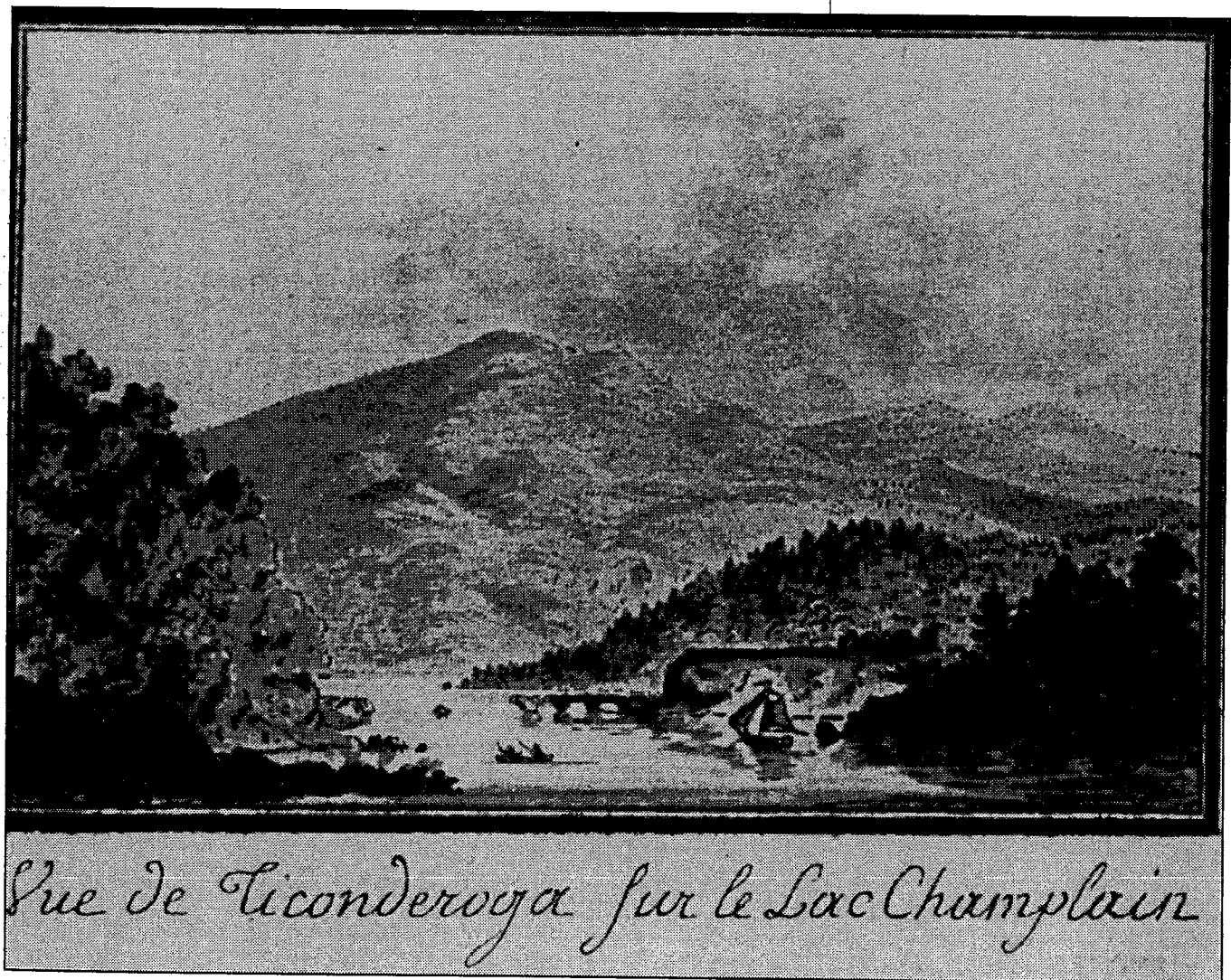
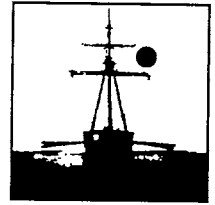
The legislation contained some interesting additional provisions dealing with cannons which "have been found in the lake below low water mark" in which case "they shall be considered the property of him who has taken them up." [103] The statute goes on to clarify however, that persons who removed cannon "not below the low water mark" shall presumably forfeit the piece, but "they shall be paid a reasonable compensation for their service out of the avails of said cannon." [104] It is likely that the Act was stimulated by the actions of the enterprising citizens of the region and their effectiveness at recovering a valuable "recyclable" resource.

Matthew Lyon, a colorful figure of the period, established an iron works at Fairhaven, Vermont during the summer of 1785. [105] It is likely that many of the cannons were taken there to be melted down into bar iron. One particular account adds to our information about the origin of the cannon found in the 1992 survey. While detailing the perils inherent in working with disabled cannon, the account relates that "After the revolutionary war, about five hundred cannon were lying about the fortress, [Mt. Independence] lines &c., many of them as left by the English, with their trunnions knocked off. A twenty-four pounder was taken to the forge at Fairhaven, some years ago, and discharged by the heat, after lying loaded for above twenty years, and a considerable time at the bottom of the lake." [106] While the figure of five hundred cannon left at Mt. Independence is an exaggeration, the story of the exploding cannon is one that is still ingrained in regional folklore.

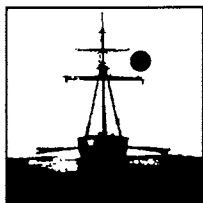
Recycling the collection of military iron ordinance scattered around Mount Independence helped ease the transition of this once strategic military post to its new non-combatant function. With the close of the war and re-settlement of the region increasing each year, the Mount's military grounds were quietly converted into animal pasture. That is not to say that the region lost its military charm; travelers were frequently attracted to the ruins at the Mount or Ticonderoga to reflect on past military events. One travel guide published in 1830 makes particular note of the "Great Bridge," pointing out, "A bridge once connected Ticonderoga with Mount Defiance [they meant Mt. Independence], the buttresses of which are still remaining, to the great annoyance of the navigators of the lake; the steamboat passes to the south of them." [107]

The landings on the Vermont and New York shore were to gain a new importance as commercial landings for goods and travelers. The Ticonderoga landing in particular was utilized as a means to view the old fortifications as well as a transportation junction point between Champlain and Lake George. An illustration by French artist, Charles Fevret de Saint-Memin entitled "Vue de

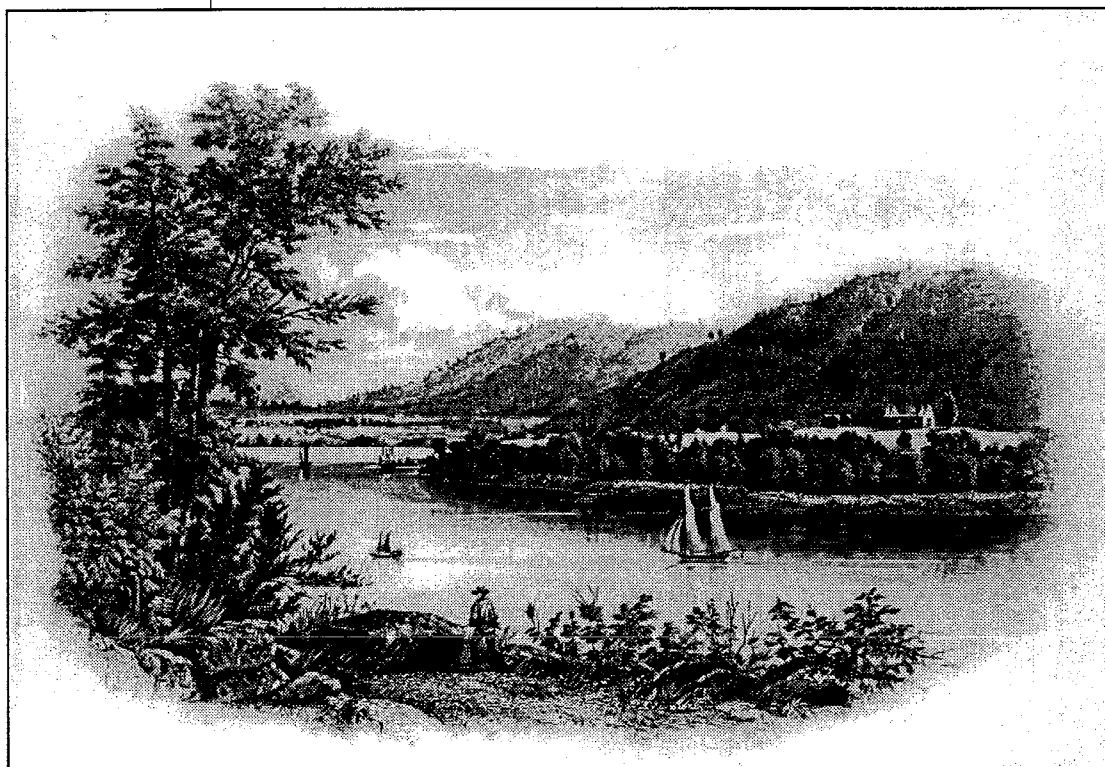
"Ticonderoga sur le Lac Champlain" is believed to have been executed in the early 1790's. [Figure 17] The painting suggests that at least a portion of the "Great Bridge" was for a time adapted to a new purpose; serving as the foundation for a pier which stretched out past the abandoned military hulks into deep water to afford a dock landing for the new passenger sailing vessels on the lake. This view, and that of the Ticonderoga edition of the Wintersmith map, seem to suggest that the dock coming off the Ticonderoga shore was built on top of the caissons until it passed the obstructing hulks of military vessels left from the French and Indian War.



*Vue de Ticonderoga sur le Lac Champlain*, (c. 1794-96) by C. B. Fevret de Saint-Memin (1770-1852). This view illustrates what is believed to be the commercial adaptation of the military bridge structure on the Ticonderoga [west] side of the lake. In the collection of the Corcoran Gallery of Art, gift of William Wilson Corcoran.

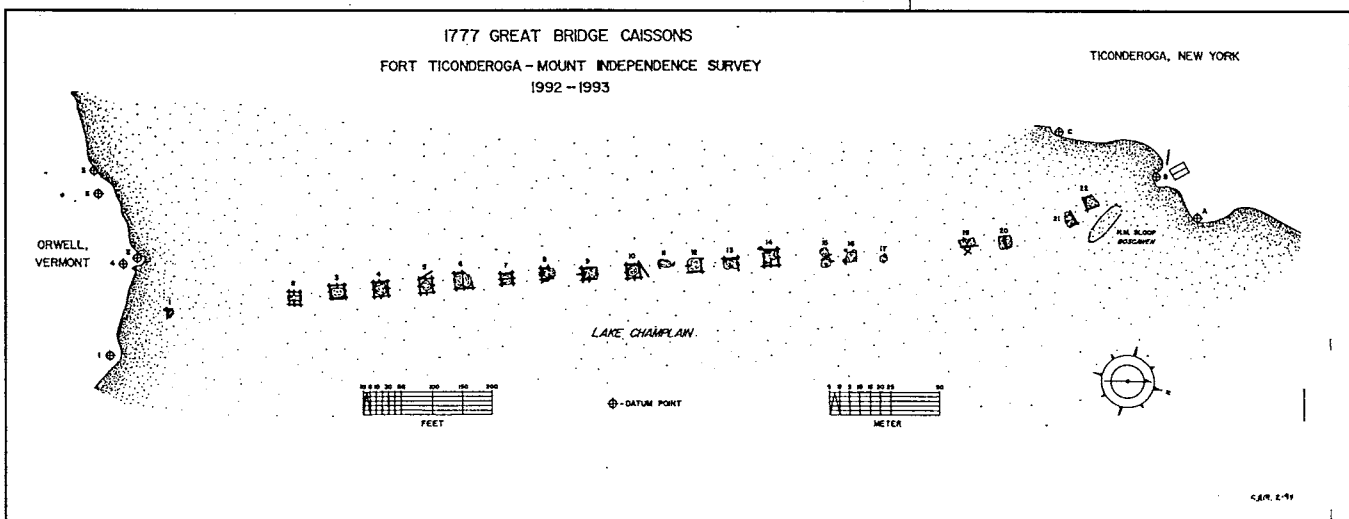
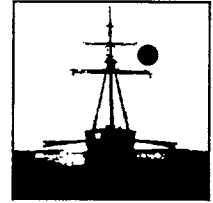


As the decades passed the volume of lake traffic increased dramatically with ever-larger steamboats joining the ranks of the more numerous sailing vessels. A recently located document provides an intriguing insight into the travel arrangements and the infrastructure required to support them. The "Articles of Agreement" dated October 15, 1840 had three "parties" of interest, Jahazial Sherman and Washington Putnam "Directors of the Lake George Steam Boat Association," A.W. Hyde of Castleton, who ran a stage connection between lakes George and Champlain, and Duncan C. Pell and Harry C. Low, who controlled the Ticonderoga landing. The agreement discusses fares, competition and access to the historic fort grounds and on one point obligates Pell and Low, "the said parties of the third part...that they will erect a good and sufficient Wharf near the present Wharf for the better accommodation of the Lake Champlain Steamboats & their passengers landing at Ticonderoga Point." [108] After exchanging a succession of additional promises, the document revisits the previous provision relating to the Ticonderoga Wharf and modifies it by offering an alternative; "It is also the understanding of the parties that the removing of the obstructions, sunken Piers &c. in the Lake near the present Wharf shall be instead of the building a new wharf." [Figure 18]

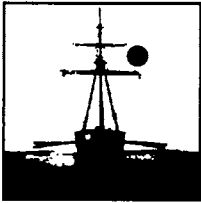


*Ruins of Fort Ticonderoga. Lake Champlain.* This circa. 1856 image, is believed to have been sketched from Larrabee's Point, Vermont. In addition to commercial sail boats and a ferry, it shows a steamboat at the new dock at Ticonderoga Landing. Courtesy of the New York State Archives, Albany, New York.

This last provision may provide an explanation for one of the archaeological findings documented during the 1992 survey. One of the survey objectives was to locate each caisson, perform a preliminary analysis of its condition and plot it on a master site plan. It had been observed both with sonar and empirical observation that a steamboat landing had been constructed just south of the line of caissons. The tops of these rock-filled timber cribs can be seen during low water and are quite hazardous to today's boaters. As can be seen on the detail from the master survey map [Figure19] caisson #18 appears to be missing. It was noted at the time of the survey that caisson #18 would have been located on the rising bottom contour in approximately 12 feet of water. This caisson, because of water depth and its location relative to the steamboat landing, would certainly have presented a potential obstruction to mariners approaching and leaving the dock. It is our opinion that this caisson was intentionally removed as a hazard to navigation. It might have happened in accordance with the 1840 agreement.

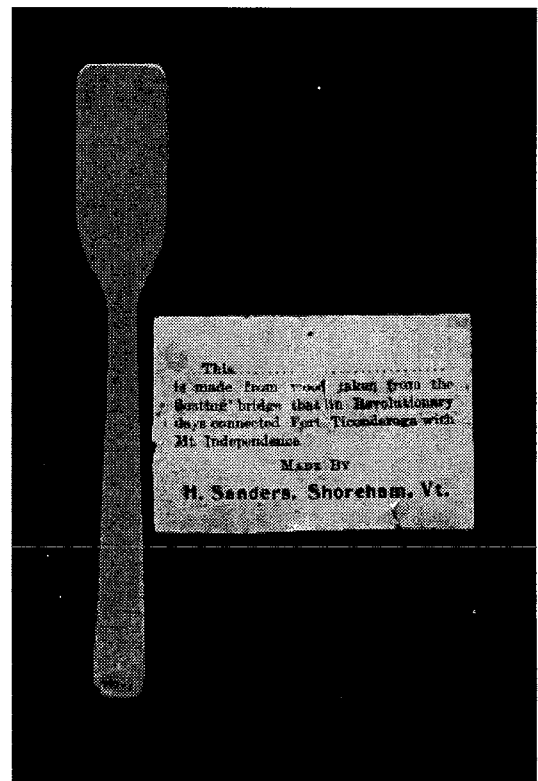


This survey map shows the precise location of the remaining "Great Bridge" caissons. Note that number 18 is missing and believed to have been removed to prevent steamboats from striking it on their approach to the new dock.



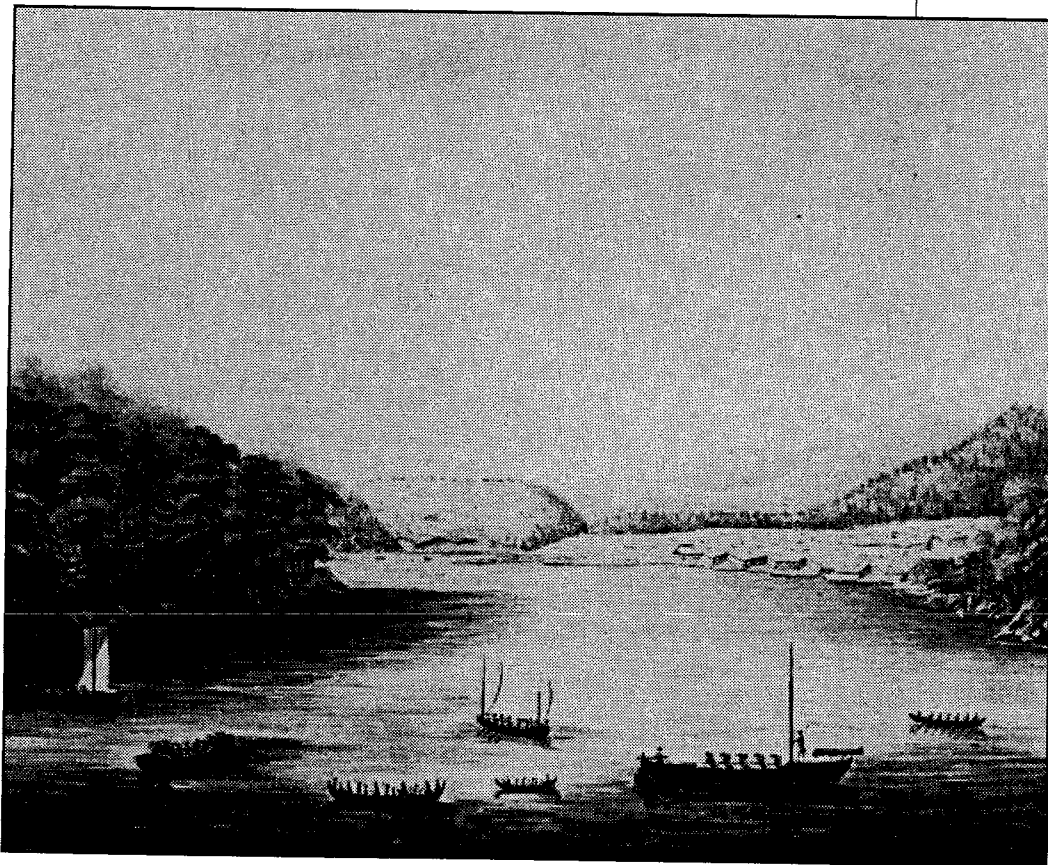
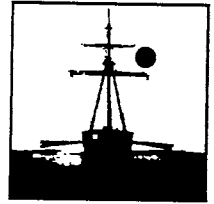
Presumably, winter ice and human activity neutralized the navigational threat of the remaining bridge caissons and the record is relatively silent until the early part of this century. An article in the *Essex County Republican* reported a new interaction between man and bridge caissons; "In 1906, a hundred and thirty-one years after the huge trees had been cut and laid side by side in a float bridge across Lake Champlain from Carillon to Mount Independence, a boat lying in shore waiting a tug swung round and a hawser slipped over its side and caught firmly beneath the water. After much strenuous pulling it came up and with it part of the crib that supported the west end of the bridge...Portions of it floated south and were secured by people living near a sawmill on the shore." [109] From these logs, Mr. William Shepard, "an invalid for many years," fashioned canes, paper cutters, key pegs and spoons for sale to the public. [Figure 20]

It has been said that history has a way of repeating itself, and the 1992 project may have been instigated, in part, by this same phenomenon. Several of the bridge caissons had been located and documented during a cultural resource survey in 1983. [110] Several years later it was noticed that several caisson timbers had apparently broken free of their submerged structures and were



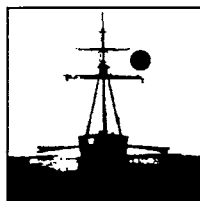
This wooden spoon is believed to have been carved from "Great Bridge" caisson timbers which were accidentally raised in 1906. Lake Champlain Maritime Museum collection, gift of William Murphy.

observed floating on the lake or washed up on the shore. These observations raised a level of concern for the current stability of the submerged bridge caissons and was one of the reasons for the 1992 survey. One primary objective was to examine the condition of the caissons and evaluate if something was causing their deterioration. This issue was discussed in a Technical Advisory Committee meeting of the Lake Champlain Basin Program. The discussion brought a very interesting response. Larry Nashett, a fisheries researcher with the New York Department of Environmental Conservation, responded that "While doing a fisheries research project in 1983 or 1984, using the State of New York's research vessel, they got their huge trawling net stuck off Mount Independence. They went back and forth and tried to loosen their net (15'-20' wide) and suddenly there was a huge air bubble popping off their stern and 4 or 5 large, square timbers came floating to the surface; they dragged them to the shore to get them out of the traffic lanes." [111] This incident may well explain the recent appearance of the caisson timbers located around the shoreline.



*A View of Ticonderoga from the Middle of the Channel in Lake Champlain. This view by James Hunter, shows the chain-boom in the foreground with shore batteries to support it on the west [Ticonderoga] side and the Mount Independence shore batteries beyond. Courtesy of Parks Canada, C1525.*



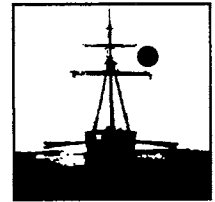


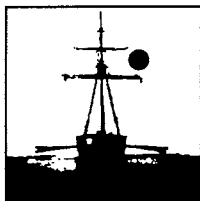
Much less is currently known about the chain and log boom which obstructed the lake north of the Great Bridge. During preparation for the 1992 survey we learned that several links of a large chain had been located several years previously on the Larrabee's Point peninsula in the approximate location the boom had been positioned by historic maps. [figure 21] A fragment of the chain had been sent to a testing laboratory for analysis and the results indicated, "The chain link was an example of iron made in the New England Region prior to 1845. The excessive slag present in the microstructure and the poor quality of the forge weld would indicate either a low quality product manufactured in the 1840's or more likely the state of the art capability for iron production prior to 1820." [112] During the 1992 survey, an attempt was made to locate the remains of the chain using an iron detecting proton magnetometer. After a vigorous effort no chain was located. We theorize that although not specifically mentioned in the 1785 legislative Act, that the chain was removed from the lake and recycled at that time.



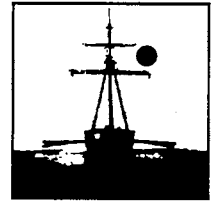
## Endnotes

- 1] Naval Documents of the American Revolution, Volume I, William Bell Clark, Editor, US Government Printing Office, Washington, D.C. 1964. p.561
- 2] NDAR, Vol. I, p.564.
- 3] NDAR, Vol. I, p. 763.
- 4] Campaign for the Conquest of Canada in 1776, Charles Henry Jones, Porter & Coates, Philadelphia, Pa. 1882
- 5] During capture of Lake Champlain in May 1775, the American Rebels captured Philip Skenes schooner at Skenesboro and christened it *Liberty*, the "King's Sloop" at St. Johns and named it *Enterprise*. With seizure of the only large vessels in possession of the rebels, Arnold writes they are "Masters of the Lake".
- 6] Novelist and historian Kenneth Roberts wrote Arundel, a novel which portrays this period in history. He later published March to Quebec, a collection of primary source journals about this event.
- 7] Chaining the Hudson, Lincoln Diamant, Carol Publishing Group, New York City, New York, 1989. p. 92.
- "Connecticut's Cannon", Charles Rufus Harte, Reprinted from the 58th Annual Meeting of the Connecticut Society of Engineers, at Hartford, Conn., March 17, 1942. p.7.
- 8] The Revolutionary Journal of Col. Jeduthan Baldwin 1775-1778, Bangor, Printed for the DeBurians, 1906. Reprinted 1971 by Arno Press, Inc. p.42.
- 9] Baldwin, p. 42. The Committee from the Continental Congress was sent north to observe the conditions in Canada and report back to Congress with recommendations. It included Benjamin Franklin and Charles Carroll. Intentional inoculation was a very controversial issue with some commanders in favor of it to minimize the ravages of the disease while others expressly forbidding self-infliction.

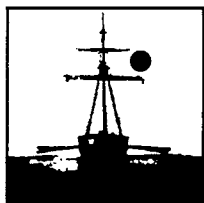




- 10] Baldwin, p.51
- 11] Baldwin, p.55
- 12] Baldwin, p.56
- 13] Baldwin, p. 58-59
- 14] "Diary of Jabez Gould July 9th 1776 to October 11, 1776". Manuscript in the Thompson-Pell Research Center at Fort Ticonderoga, Ticonderoga, N.Y.
- 15] Baldwin, p. 59
- 16] Journal of Bayze Wells of Farmington May 1775-February 1777, Connecticut Historical Society Collections, Vol, 7, 1899. p.240-296; p.267
- [17] NDAR-V, 1184
- [18] Baldwin, p.61
- [19] Baldwin p. 63. Baldwin writes in his entry on July 29, "went over to point Independancy with the working parties."
- [20] Baldwin, p. 60
- 21] Baldwin, p.64
- 22] Baldwin p. 62-63
- 23] Baldwin, p.66.
- 24] Baldwin, p. 70.
- 25] Baldwin, p. 76
- 26] Baldwin, p. 80-81
- 27] Baldwin, p. 81
- 28] Baldwin, p. 81



- 29] Baldwin, p. 82
- 30] Chaining the Hudson, p. 94
- 31] Baldwin, p.82
- 32] Baldwin, p.82
- 33] Baldwin, p. 82
- 34] The Gates Papers, Reel #2, Folio 970-971, New York Historical Society, New York, New York.
- 35] Baldwin, p. 83
- 36] Baldwin, p. 83
- 37] Baldwin, p. 83
- 38] John Noble Cumming (2nd NJ) to Dr. Nathaniel Scudder, October 25, 1776. Bulletin of the Fort Ticonderoga Museum. Vol. V (January 1939), pp. 19-20.
- 39] Letter, Col. Arthur St. Clair to Unknown, From Ft. Ticonderoga, October 25, 1776, Manuscript at the Thompson-Pell Research Center at Fort Ticonderoga, Ticonderoga, N.Y.
- 40] St. Clair letter
- 41] Baldwin, p.84
- 42] Donald Wickman, Built With Spirit, Destroyed in Darkness: The American Occupation of Mt. Independence 1776-1777, Masters Thesis, University of Vermont, October 1993. Citing footnote in Chapter 1, #138.
- 43] St.Clair letter
- 44] Letter, General Philip Schuyler to General George Washington, from Albany, New York, November 3, 1776. Peter Force, American Archives s 5 v 2 p 498.
- 45] Letter, Col. Wynkoop to General Gates, from Skenesboro, November 6, 1776. Peter Force, American Archives, s 5 v 3 c 549. Although this letter was



written from Skenesboro, it seems to summarize the difficulty of getting the militia to do fatigue duty in general while in service at the Lake Champlain posts.

46] Portion of a Letter from George Measam to General Gates. The Bulletin of the Fort Ticonderoga Museum, vol. V., no.1 (January 1939), pp.34-35.

47] Baldwin, p.87

48] Baldwin, p.88

49] Baldwin, p.88

50] Chaining the Hudson, p.43

51] Letter, General Arnold to General Philip Schuyler, Albany, New York, December, 1776. Schuyler Papers, Box 31 No. 52 [4].

52] NDAR, Vol VII, p. 627

53] NDAR, Vol VII p. 1190

54] Ibid.

55] Baldwin, p. 92, Anthony Wayne was the officer in charge of Mount Independence and Fort Ticonderoga during the winter of 1776-77.

56] Baldwin, p.93-94

57] Haldimand Papers, Additional Manuscripts (MG 21). No. 21743 (B 83) General Orders by Sir Guy Carleton and General Haldimand. 1776-1783. PAC Microfilm Reel A-671.

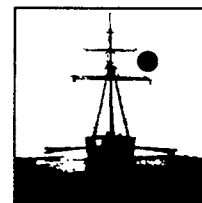
58] Baldwin, p. 94

59] Haldimand Papers, ibid

60] Haldimand Papers, ibid

61] Baldwin, p. 95-96

62] Baldwin, p. 94



63] Wickman, *ibid*

64] The Sexagenary or Reminiscences of the American Revolution, J. Munsell, Albany, New York, 1866.

65] The Sexagenary, *ibid*

66] Baldwin, p. 95

67] Baldwin, p. 96

68] Baldwin, p. 99

69] Baldwin, p. 97

70] Baldwin, p. 103

71] Baldwin, p. 105

72] Letter Jabez Colton to Rev. Dr. Stephen Williams at Longmeadow, June 19, 1777. Manuscript at the Thompson-Pell Research Center at Fort Ticonderoga, Ticonderoga, N.Y.

73] James M. Hadden, Hadden's Journal and Orderly Books, Books for Libraries Press, Freeport, New York, first published in 1880, reprinted in 1970. p. 84.

74] John Trumbull, Autobiography, Reminiscences and Letters of John Trumbull, B.L. Hamlen, New Haven, Conn., 1841. p.30-34.

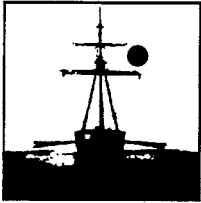
75] Baldwin, p. 109

76] Helga Doblin, An Eyewitness Account of the American Revolution and New England Life; the Journal of J.F. Wasmus, German Company Surgeon, 1776-1783. Greenwood Press, Westport, Conn., 1990. p. 59.

77] Charlotte S.J. Epping, Journal of Du Roi the Elder, University of Pennsylvania, D. Appleton & Co., New York, 1911. p.96-97.

78] *ibid* p. 97

79] *ibid* p.98



- 80] John Burgoyne, A State of the Expedition from Canada, Reprinted by Arno Press and the New York Times, 1969. Appendix XXX.
- 81] Ibid.
- 82] R. Lamb, An Original and Authentic Journal of Occurrences During the Late American War, Wilkinson & Courtney, Dublin, 1809. p. 140.
- 83] James Phinney Baxter, The British Invasion From the North...With the Journal of Lieut. William Digby, Joel Munsell's Sons, Albany, New York, 1887. p. 215.
- 84] James Thacher, M.D., A Military Journal During the American Revolution from 1775-1783, Cottons & Barnard, Boston, 1827. p.81
- 85] Thacher, p83
- 86] Thacher p.84
- 87] Proceedings of a Court Martial for the Trail of Major General St. Clair, Collections of the New York Historical Society for the Year 1880, New York, 1881. p.90.
- 88] ibid, p.91
- 89] ibid, p.88
- 90] ibid, p. 88-89
- 91] ibid, p.94
- 92] Burgoyne's account says 128 pieces of cannon while Wasmus puts the number at 140.
- 93] Elizabeth Cometti, Editor, The American Journals of Lt. John Enys, Adirondack Museum-Syracuse University Press, 1976. p. 37.
- 94] Public Archives Canada, Ottawa, Haldimand Papers B 141, 302 , Log of Captain Chambers Cruise Oct, 1780.
- 95] Ibid

96] Ibid

97] Letter from Captain Chambers on Board the *Maria*, to Governor Haldimand. Public Archives Canada, Ottawa, Haldimand Papers B 141, 298.

98] George S. Bixby, "Peter Saily, (1754-1826) A Pioneer of the Champlain Valley", New York State Library History Bulletin 12, University of the State of New York, Albany, New York 1919. p.65

99] Ibid, p.66

100] John A. Williams, Editor, Laws of Vermont, State Papers of Vermont, Vol. Fourteen, 1966. p.32

101] Ibid, p.32

102] Vermont Gazette, Bennington Vermont, Nov 7, 1785, p4., column 4, repeated Nov.14, p.3, Column 4.

103] Williams, 1785 Act.

104] Williams, 1785 Act.

105] Andrew N. Adams, A History of the Town of Fairhaven, Vermont, Leonard & Phelps, Fairhaven, Vermont, 1870. p141

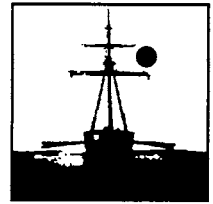
106] Robert Sears, A Pictorial History of the United States, Robert Sears, New York, 1853. p47.

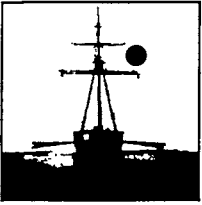
107] The Northern Traveler, and the Northern Tour, J.&J. Harper, New York, 1830. p.184; also Sears, A Pictorial History of the United States, ibid.

108] "Lake George Steam Boat Association, Articles of Agreement with A.W. Hyde & Others", October 15, 1840. Clark/Field Family Papers, 1-12, University of Vermont, Special Collections.

109] Essex County Republican, November 10, 1907.

110] Fischer, R. Montgomery, editor, A Report on the Nautical Archaeology of Lake Champlain, Results of the 1993 Field Season; Champlain Maritime Society, 1985. p.41-45.





111] Correspondence, Giovanna Peebles, Vermont State Archaeologist to Art Cohn, October 20, 1993.

112] Letter, Norman Feige to Ed Forsander, October 7, 1982.