

**THE IDENTITY AND CONSTRUCTION OF WRECK BAKER:
A WAR OF 1812 ERA ROYAL NAVY FRIGATE**

A Thesis

by

DANIEL ROBERT WALKER

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

MASTER OF ARTS

August 2007

Major Subject: Anthropology

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Approved by:

Chair of Committee,	Kevin J. Crisman
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ABSTRACT

The Identity and Construction of Wreck Baker:
a War of 1812 Era Royal Navy Frigate. (August 2007)

Daniel Robert Walker, B.A., McMaster University

Chair of Advisory Committee: Dr. Kevin J. Crisman

The aim of this research is to determine the identity of a wooden ship located at the bottom of a shallow bay near Kingston, Ontario. The wreck, designated 'Wreck Baker', underwent an archaeological survey, directed by the author, in 2000. Using the archaeological information gathered in conjunction with historical research at the National Archives of Canada and in secondary sources, Wreck Baker will be identified as *Princess Charlotte*.

On Christmas Day 1814 the frigate HMS *Psyche* splashed into the ice cold waters of Lake Ontario to take part in a war that had ended one day earlier with the signing of the Treaty of Ghent. The *Psyche's* launch was the fourth of the year, following the frigates HMS *Princess Charlotte*, and HMS *Prince Regent*, and the First Rate HMS *St. Lawrence*. Three of these four ships now rest at the bottom of Lake Ontario. Two of the wrecks have been identified as *St. Lawrence* and *Prince Regent*, the largest ships built by the Royal Navy at Kingston. The size and construction of the third wreck provide important clues to its identity. This wreck, called both Wreck Baker and Deadman Bay II by previous investigators, is located, along with *Prince Regent* (Wreck Able, Deadman Bay I) on the bottom of Deadman Bay at the north-east corner of Lake

Ontario, near Kingston, Ontario.

In the summer of 2000 an archaeological survey was undertaken with the aim of recording and understanding the unique construction of Wreck Baker to conclusively determine whether it was *Princess Charlotte* or *Psyche*. Understanding the construction of Wreck Baker required dives into Lake Ontario and the National Archives of Canada. The work in Lake Ontario provided insight into how the ship was built and the archival work provided the historical context that explains the ship's novel construction. Wreck Baker's archaeologically recorded shape, length, and construction were compared with the ships in the historical record leading to the identification of Wreck Baker as *Princess Charlotte*.

DEDICATION

This work is dedicated to my wife Jennifer M. Walker whose love and patience have been greatly appreciated.

ACKNOWLEDGEMENTS

There are many people without whom this project could never have been completed and to whom I would like to extend my heartfelt gratitude. To Jonathan Moore, who suggested the project, thank you for your encouragement and guidance as well as access to your extensive archival research. This project would never have happened without you. A thank you must be extended to Adam Kane who's prior archaeological experience and professionalism during the first week of work in Deadman Bay were invaluable in getting the project off the ground and heading the right direction. To Amy Borgens I extend my deepest thanks for making yourself available for the duration of the field work. Your attention to detail and artistic ability continue to amaze me.

I would also like to thank the members of my committee for their patience and encouragement. In particular I would like to thank Kevin Crisman who got this project off the ground with his support and has greatly assisted in producing this final report. I owe him a great debt of thanks for his continued encouragement (as well as an apology for all the editing).

Last but not least I would like to thank my friends and family for their continued encouragement. While all have at times lost hope in ever seeing its end all have stood behind me during this effort. In particular I would like to thank my grandfather, John Barker, who paid for me to participate in my first underwater excavation, my parents, Tony and Janet Walker, who encouraged me to undertake my studies at Texas A&M,

and finally, most of all, my deepest gratitude must be extended to my wife, Jennifer, who's patience and support have made this research possible.

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1 INTRODUCTION

On Christmas Day, 1814, the frigate HMS *Psyche* splashed into the ice cold waters of Lake Ontario to take part in a war that had ended one day earlier with the signing of the Treaty of Ghent. The *Psyche's* launch was the fourth of the year following the frigates HMS *Princess Charlotte*, and HMS *Prince Regent*, launched together on April 14, and the first rate HMS *St. Lawrence* launched on September 10th. Three of the four ships launched during 1814 now rest at the bottom of Lake Ontario. Two of these wrecks have been identified as *St. Lawrence* and *Prince Regent*, the largest ships built by the Royal Navy at Kingston. The third wreck, based on its size, must be either the frigate *Princess Charlotte* or *Psyche*. This wreck, called both Wreck Baker and Deadman Bay II by previous investigators, is located, along with *Prince Regent* (Wreck Able, Deadman Bay I) on the bottom of Deadman Bay at the north-east corner of Lake Ontario, near Kingston, Ontario (figure 1).

During the war of 1812, Kingston was strategically important due both to its location near the point that Lake Ontario empties into the St. Lawrence River and to the presence of a shipyard that, after the successful American action against York (now Toronto, Ontario), became the focus British ship building efforts on the Great Lakes. Many ships were built, launched and based in Kingston during the war as the British and American navies on Lake Ontario became embroiled in a naval arms race that escalated wildly during the three sailing seasons encompassed by the War of 1812.

This thesis follows the style of *The American Neptune*.

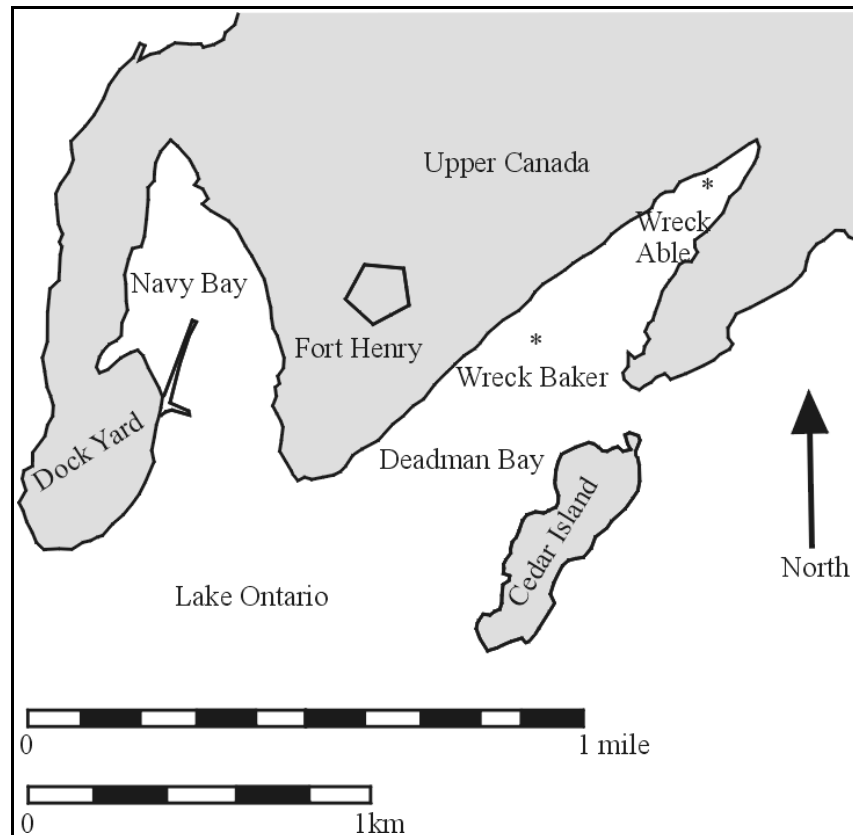


Figure 1. Location of the wrecks Able and Baker in Deadman Bay. (Drawing by Daniel Walker).

With the low population density of North America, and particularly of Upper Canada, there were a limited numbers of troops available and few targets worth attacking. This created a situation where mobility was the key to success. Mobility at this time, when there were few good roads and great distances between population centers, meant control of the waterways, and the most important waterway essential to the security of Upper Canada was Lake Ontario (figure 2). While some attention was given to Lake Erie once the ship-building war began, the British focused their limited resources on Lake Ontario and Erie eventually fell to American forces. It was on Lake

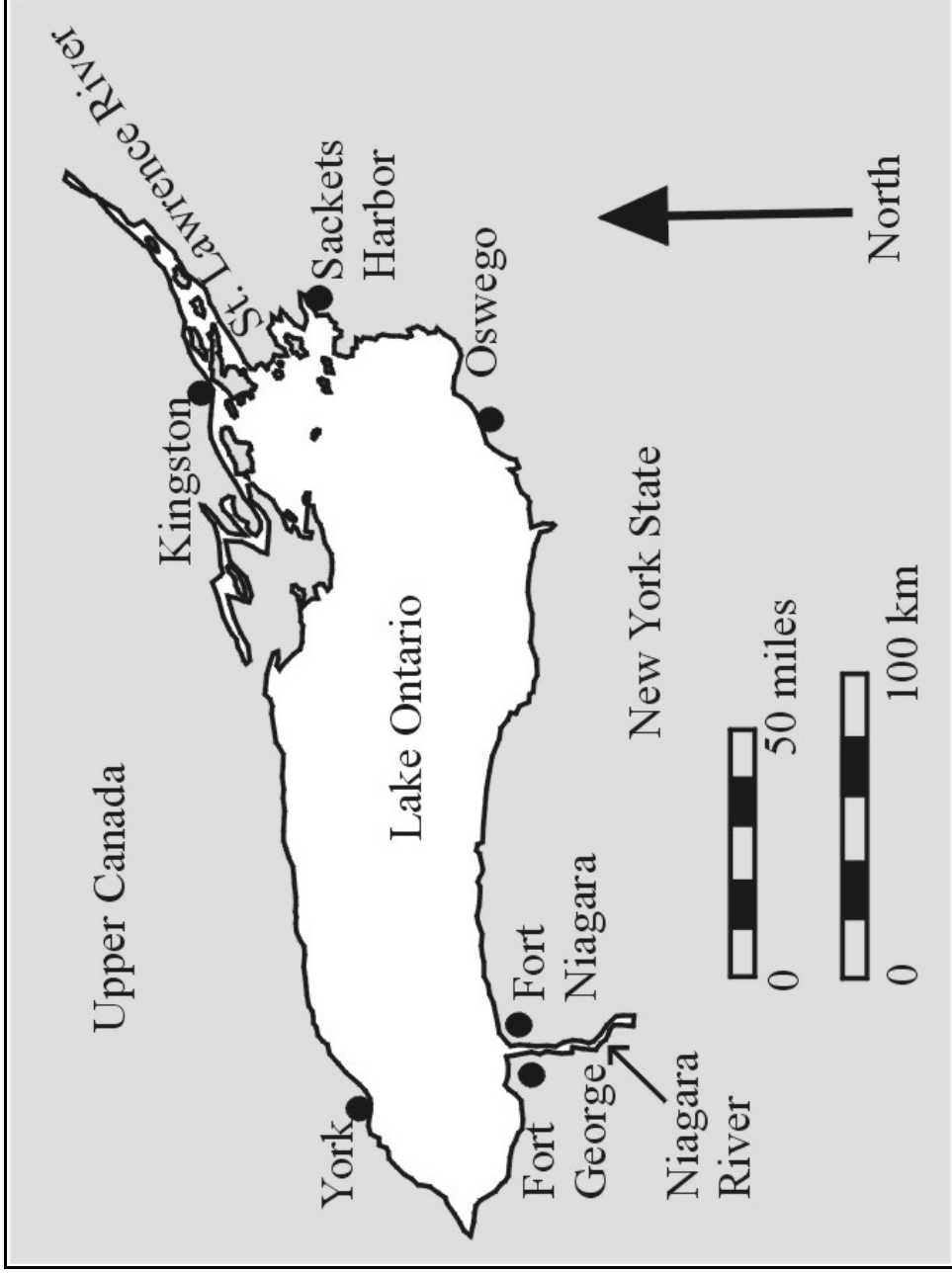


Figure 2. Map of Lake Ontario. (Drawing by Daniel Walker).

Ontario that the Royal Navy launched three frigates and a ship-of-the-line during the sailing season of 1814 and by the end of the war both the American and British yards had ships on the stocks to rival any of those sailing the oceans.

In the summer of 2000 an archaeological survey was undertaken with the aim of recording and understanding the unique construction of Wreck Baker in order to conclusively identify it. Understanding the construction of Wreck Baker required dives into both Lake Ontario and the National Archives of Canada. The work in Lake Ontario provided insight into how the ship was built and the archival work provided the historical context that explained the reasons behind the ship's novel construction. Together, the archaeological and historical records shed light on the identity of Wreck Baker.

The archaeological work revealed unique features that, along with the heavy framing, indicate the frigate design and construction were adapted to local conditions recounted in the historical record. The length of the ship, along with the presence of the larger Wreck Able in the same bay, leave only two possible identities for Wreck Baker: *Psyche* or *Princess Charlotte*. The following study of the archaeological and historical evidence proves the ship to be *Princess Charlotte*.

2 BACKGROUND HISTORY

2.1 Napoleonic Wars

During the two decades of conflict in Europe prior to the War of 1812 the British achieved naval supremacy on the Atlantic Ocean and Mediterranean Sea through victories at the battles of St. Vincent and Trafalgar over their numerically superior French and Spanish enemies. In 1797, at the battle of St. Vincent, Sir John Jervis and Horatio Nelson were able to defeat a larger Spanish force and quell any plans their enemies had for an invasion of England through Ireland. Later, at the Battle of Trafalgar in 1805, the British handed the allied Spanish and French navies an even more devastating defeat. Although the British had only 27 ships-of-the-line against the 33 French and Spanish ships-of-the-line, they managed to capture 17 enemy ships during the battle. This spoke to both the superiority of the Royal Navy over its enemies and the brilliance of Nelson who was fatally injured during the battle.

On land, France and its allies were sweeping all obstacles before them. In response to the Berlin Decree of November 21, 1806, which allowed for the seizure of British goods entering ports under Napoleon's control, the British enacted a new series of Orders in Council that declared any vessel entering a continental port without first going to the British Isles would be viewed as an enemy.¹ Through a blockade of European ports the Royal Navy attempted to keep all French vessels trapped and to prevent military supplies from reaching French forces.

In order to enforce this embargo the British searched the ships of neutral states,

such as those of the United States, for contraband heading to France, a tactic that infuriated the neutral American merchants as it restricted their trade and forced upon them the indignity of having the British board their vessels. To make matters worse many British captains used this opportunity to remove from the American vessels any man they suspected of being a British deserter.²

Blockading the ports of the French and their allies put great stress on the ships and seamen of the Royal Navy and the necessity of keeping so many ships on station resulted in a shortage of sailors. This led many Royal Navy captains to be less discriminating than they should have been in determining who they pressed into service from American merchant ships. It must be remembered, however, that during this period there were no universally recognized documents of nationality equal to modern passports and there was very little difference between the accent of an American and a British citizen.³

To further complicate matters the American and British governments had different ideas of what constituted citizenship. The British considered anyone born in Britain to be a British citizen and there was no way out of it. The United States, whose citizens included many recent immigrants, had a less strict idea of citizenship and allowed anyone who had lived in the United States for a period of five years the rights of American citizenship.⁴ The impressing of sailors on American merchantmen, while occasionally justified, was sometimes abused by British captains wanting to make up for shortfalls in crews stretched thin by the European blockade. Animosity left over from

the American Revolution also played a role in the actions of many British captains who had an American merchantman to leeward. These actions understandably increased the resentment America felt towards Britain.

Kindling was thrown on the smoldering resentment on June 22, 1807 when Captain Salusbury P. Humphreys of the HMS *Leopard* of 50 guns intercepted the 38-gun frigate *Chesapeake* and demanded that she be searched for deserters from the British squadron. The request was refused by Captain James Barron and the British frigate fired on the unprepared *Chesapeake*, forcing it to comply. *Chesapeake* struck its colors, was boarded by the British, and four seamen were taken to *Leopard*. Insult was added to the casualties (three killed and 18 injured), when the British refused to take *Chesapeake* as a prize. The British Government later apologized for the incident but the damage had been done.⁵

The American Congress responded to these actions and the British Orders in Council by passing the Embargo Act in 1807 that banned American trade with foreign nations. The Embargo Act hurt the American economy, particularly that of the New England states whose economies were heavily weighted towards trade and the fisheries. It was replaced in 1809 by the Non-Intercourse Act, which reopened trade with neutral nations and authorized the President to renew trade with Britain and/or France if they agreed to respect America's right as a neutral country to trade with whomever they pleased.⁶ Neither the British nor the French could afford to do this, as the conflict in Europe weighed more heavily upon their policy making than did the discontent of the

United States. While on paper the Berlin Decree and the Orders in Council were equally disrespectful of America's neutral status, the British Royal Navy was better positioned to enforce its will than were the French ships bottled up in port by blockade. This situation, and the underlying animosity left over from the Revolutionary War, led to many more American confrontations with Britain than with France. When the Embargo and Non-Intercourse Acts failed to resolve the situation, attitudes in America became further inflamed and the two nations moved closer to war.⁷

A further outcry went up in the United States when it was learned that on May 1, 1811 HMS *Guerriere* had impressed men from an American coastal vessel. The United States Navy frigate *President* subsequently mistook the much smaller HMS *Little Belt*, a British sloop, for the HMS *Guerriere* and took revenge for earlier British transgressions by inflicting serious damage.⁸

2.2 War of 1812

On the first of June 1812 President James Madison requested from Congress the declaration of war, which he received on June 18. The decision for war may have been influenced by the notion that, as much of its population had recently arrived from the United States, Upper Canada could be easily conquered. Madison's predecessor Thomas Jefferson voiced a common American opinion at the time when he stated that, "the acquisition of Canada this year ... will be a mere matter of marching"⁹ The declaration of war caught both sides unprepared for the conflict at hand. In January 1812, the American Congress had approved the recruitment of ten new regiments of infantry, two

of artillery, and one of light dragoons but by June the enlistment was far below expectations.¹⁰ After declaring war, Congress set the the war establishment at twenty-five regiments of infantry, four of artillery, two of dragoons, and one of riflemen, totaling 36,700 men including engineers and artificers.¹¹ At this time there were less than 10,000 enlisted men available and 4,000 of these were new recruits.¹²

The citizens of Upper and Lower Canada (figure 3) realized that the Americans, lacking the capability of launching overseas offensives, would likely concentrate their war efforts against Canada.¹³ The British, focused on Napoleon in Europe, were no better prepared for the conflict in North America than were the Americans. Upper Canada, with its capital at York, had a population of fewer than 80,000 and of the approximately 7,000 British Army regulars in North America, 5,000 were stationed in Lower Canada, leaving only about 2,000 for the defense of Upper Canada.¹⁴ The 2,000 men serving in Upper Canada had the good fortune early in the war to be led by a man who proved to be a most capable military officer, General Isaac Brock.

On July 12, 1812 Brigadier-General William Hull crossed the Detroit River and made the first American advance onto Canadian soil. He captured the village of Sandwich without resistance and issued a proclamation that demonstrated the light in which the Americans saw the citizens of Upper Canada. The proclamation stated;

Raise not your hands against your brethren, many of your fathers fought for the freedom and Independence that we now enjoy. Being children therefore of the same family with us, and heirs to the same Heritage, the arrival of an army of Friends must be hailed by you with a cordial welcome. You will be emancipated from Tyranny and oppression and restored to the dignified state of freemen.¹⁵

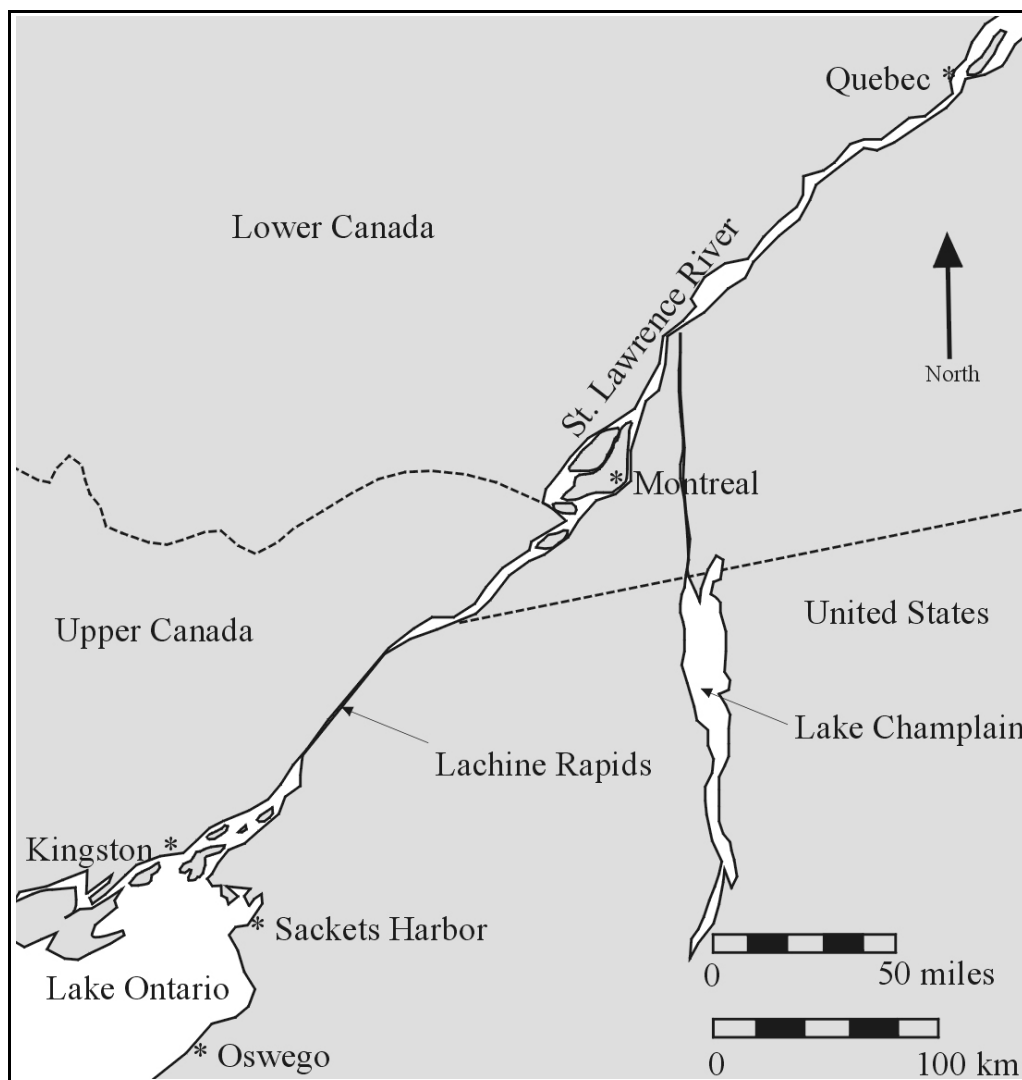


Figure 3. Upper and Lower Canada from Quebec to Kingston. (Map by Daniel Walker).

Some of the settlers did indeed welcome the Americans but only a few hundred American-born settlers returned to the United States.¹⁶ It appeared that the taking of British North America would take more than marching after all.

Both sides now had to determine how to act offensively and defensively in a largely unpopulated wilderness with few cities and a widely scattered population. There

were few points that could be attacked for great strategic gain and if these were successfully taken, holding them for long enough to have any effect would be extremely difficult amongst an antagonistic population. The Americans and the British both quickly realized that the ability to move troops and supplies quickly from location to location was the key to the war and, therefore, control of the Great Lakes was the key to success in Upper Canada.

2.3 Ship Battles

To understand the shipbuilding programs that were to take place on Lake Ontario, it is informative to examine the battles between the American and British navies on the oceans and the lessons that both sides learned from these. The tactics adopted by the United States Navy took advantage of its strengths while minimizing its weaknesses. The Americans, whose largest ships were frigates, realized that they could not hope to meet Britain in a naval battle involving ships of the line and instead adopted a strategy of attacking single warships and merchantmen. The American heavy frigates were well equipped for this task, being more heavily built, armed, and manned than British frigates. The American efforts in the Atlantic and to a smaller extent in the Pacific targeted Britain's merchant shipping and whalers. The American frigate captains with larger ships and better-trained seamen also won some impressive victories over their British counterparts.

The first decisive encounter between American and British warships occurred on August 19, 1812 when *Constitution* encountered *Guerriere*. *Constitution*, under the

command of Captain Isaac Hull U.S.N., had been harassing British shipping along the North Eastern shores of North America since leaving Boston on August 2, when a fishing vessel out of Salem reported to Captain Hull that a British frigate was in the area. Fortunately for Hull, Captain James Dacres of the frigate HMS *Guerriere* was eager to engage the American frigate. Recent history made Dacres confident that he would prevail, for the Royal Navy had enjoyed a period of naval superiority so profound that they had not lost any single ships action since 1803. This was about to dramatically change.

The two frigates spent an hour exchanging long-range shots before closing in. It was at this time that the more heavily built and armed *Constitution* showed its true value by knocking down the *Guerriere's* mizzenmast and inflicting heavy damage. *Guerriere* began to slow down and *Constitution* came about and crossed the bow of its foe, unleashing a raking fire that brought down the main yard. *Constitution* then wore and passed once again across the bow of *Guerriere*, this time becoming tangled in the fallen mizzen rigging. This mistake brought about some close fighting between the opposing crews that ended when the ships separated. As the ships parted, *Guerriere's* fore and main masts fell, leaving it a defenseless hulk.¹⁷ The loss of *Guerriere* to an American frigate sent shock waves through a Royal Navy that had come to expect easy victories.¹⁸ It would however take two more loses for the Admiralty to understand that in many ways American frigates and their crews were superior to those of the British.

In the second encounter between American and British frigates, the Royal Navy

fared no better. On October 12, 1812, Captain John Carden of HMS *Macedonian* encountered the frigate *United States* under the command of Commodore Stephen Decatur. They too began the encounter at long range, with the Americans using their long guns to great effect. Carden realized *Macedonian* was getting the worst of it and tried to close in on the American vessel but, as he had earlier given up the weather-gage, Decatur was able to retain control of the contest. After an hour and a half, *Macedonian* was forced to strike its colors. Once again an American ship and its crew had proved superior to those fighting on behalf of Great Britain. *United States* had received some damage to its masts and rigging but only received three shots to the hull. *Macedonian* in contrast had received over one hundred shots in its hull and crippling damage to the masts and rigging. The casualty lists provide further proof of the disparity, with the British suffering 104 casualties and the Americans only 11.¹⁹

Samuel Leech, a crewman aboard *Macedonian*, reported after being taken aboard *United States* that: “when we came to close action, the shot from the *United States* went ‘through and through’ our ship, while ours struck her side and fell harmlessly into the water. This is to be accounted for both by the superiority of the metal and of the ship. Her guns were heavier and her sides thicker than ours.”²⁰ The scantlings of the American frigates were equal in size to those found in the British 74’s and this, combined with the heavier metal they carried and the larger better trained crews, made them far superior to the undermanned, under trained, and more lightly built British frigates.

The British were to lose one more frigate to the United States Navy in the first

six months of the war. On December 29, 1812 the Royal Navy frigate *Java*, commanded by Captain Henry Lambert, encountered Captain William Bainbridge's frigate *Constitution*, off the coast of Brazil. This battle started better for the British, with *Java* unleashing a devastating broadside into *Constitution*. The *Java* and *Constitution* then played cat-and-mouse with each other, *Java* using its superior speed to good advantage. The battle turned when *Java* lost the end of its bowsprit and its jib boom to heavy fire from *Constitution*. *Constitution* next fired a broadside into the stern of *Java*. When the two ships closed again, *Constitution's* gunnery once more got the best of *Java*, knocking away parts of the maintop and foremasts and forcing the British to attempt a boarding during which they were cut down by American grape and musket shot. At this point the vessels pulled away from each other and the battle was all but over. The British fought on until *Java* was little more than a hulk.²¹

While the American frigate victories did little to weaken the overall strength of the Royal Navy, they had a disproportionate effect on the populations at home. The British were unused to naval defeat and considered their navy to possess the most skilled crews, and were therefore dismayed by the losses.²² In America the victories served to strengthen support for the war by showing the population that the Royal Navy was not invincible.²³ While American privateers and the Navy's heavy frigates did annoy the British, they were not sufficient to force Britain to change its attitude towards the removal of suspected deserters from American vessels. The American victories were won by ships that as well as being arguably better manned were also much more heavily

built than the Royal Navy's ships and were able to withstand attacks that would likely have crippled the ships of any other of the world's navies at this time.

The building program that produced the American super-frigates was overseen by Joshua Humphreys, who anticipated that if it were not possible to compete numerically with many of the powerful preexisting navies, the ships built by America should be superior in every way to their foreign counterparts. Humphreys therefore decided to build the United States Navy's frigates with scantlings equal to those found on Britain's 74's.²⁴

It appears that by the time shipbuilding on Lake Ontario had escalated to the level where frigates were being built at the Kingston Naval Yard, the Royal Navy in Upper Canada had learned a lesson in ship building from the United States Navy. On Lake Ontario both navies raced to build the largest, most heavily built and armed ships possible. The archaeological evidence verifies that Wreck Baker was very heavily framed for its size.

2.4 The Stage Is Set

It was on the inland waterways of North America that the United States and Royal Navies were well matched. The main theaters of operation for these navies were the Great Lakes and Lake Champlain. Both navies started the war with token forces on these waterways, forces that were rapidly expanded during the three sailing seasons encompassed by the hostilities. The British, having a small local population in Canada from which to draw a militia, and with most of their army fighting Napoleon in Europe,

were forced to consider the best means of defending a large territory from an enemy who could amass superior numbers at many points along the border. To counteract this deficiency the British, especially early in the war, relied upon control of the lakes to allow them to quickly move troops and supplies to where they were most needed.²⁵ As a result, Lake Ontario, as the key to the rest of the Great Lakes, became the site of a furious naval arms race.

On August 16, 1812 General Isaac Brock, with a small force of 300 regulars and 400 militia, accompanied by 600 Indian warriors, forced the surrender of Detroit.²⁶ With the fall of Detroit and a lack of offensive action by the American forces under the command of Major-General Henry Dearborn, the importance of controlling the Great Lakes was becoming clear to the American leaders in Washington. With this goal in mind, on September 3, 1812, the Secretary of the Navy ordered Captain Isaac Chauncey USN to take command of the naval forces on Lakes Ontario and Erie, and to make every effort towards controlling them by the fall.²⁷ Chauncey, who now acquired the courtesy title 'commodore' because he commanded a squadron of ships, had previously served at sea and during the last four years as commander of the New York Navy Yard.

In Commodore Chauncey the Americans had made an excellent choice for commander of the naval forces on the lakes. With experience of both naval command, on USS *John Adams* in 1804, and in shipbuilding, at New York, he was an ideal choice for this new command.²⁸ Chauncey immediately undertook to send 170 sailors and marines, 140 ship carpenters, as well as more than 100 cannon and other supplies to

Sackets Harbor. The supplies and men traveled up the Hudson River to the Mohawk and from there up Wood Creek to the Oswego River, which empties into Lake Ontario; they then followed the shore line eastward to Sackets Harbor (figure 4). Due to a lack of passable roads, this water route was used to transport most of the supplies received at Sackets Harbor during the war, but it was always open to British interference at its Lake Ontario terminus.²⁹

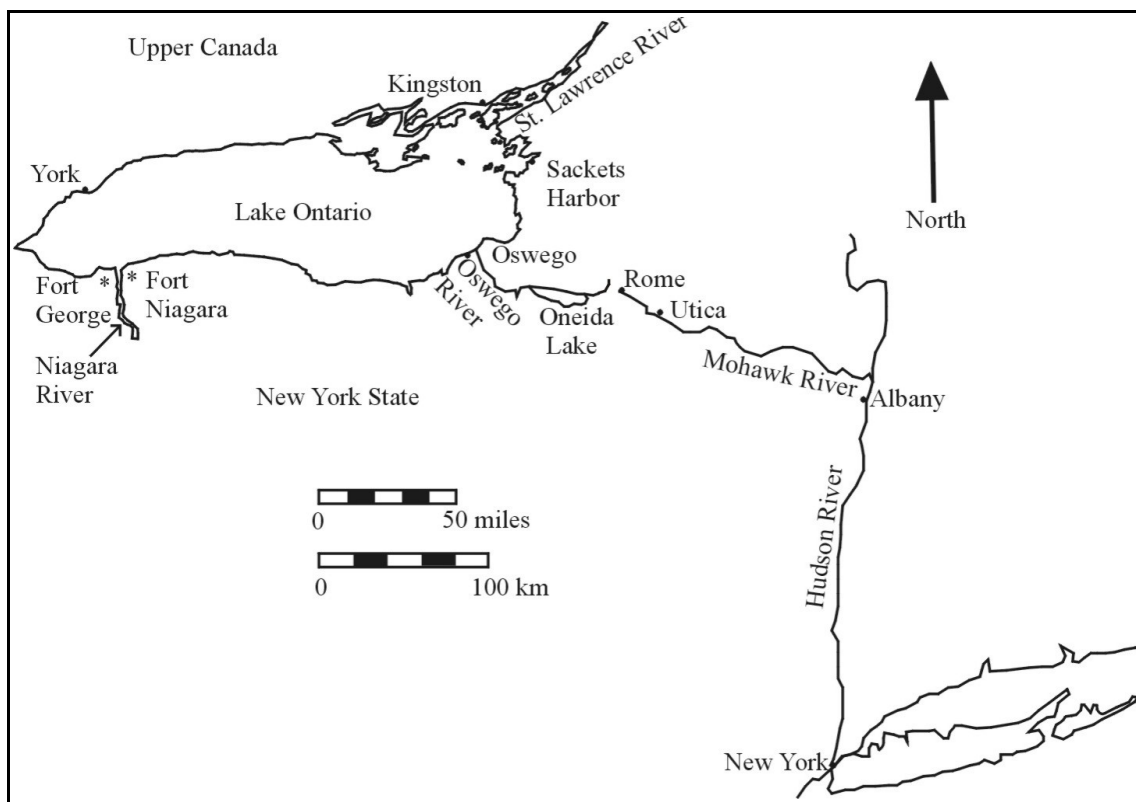


Figure 4. American supply route to Sackets Harbor. (drawing by Daniel Walker).

At the outset of the war, the American 16-gun brig *Oneida* was the most

formidable ship on Lake Ontario but the overall force of the British Provincial Marine was greater than that of the Americans. Thus, the opponents on the lake were about evenly matched, a situation that did not encourage offensive action. The Provincial Marine was overseen by the Quartermaster General's Department of the British Army lead by Sir George Prevost, Commander-in-Chief of the military and naval forces of British North America.

Prevost, born in 1767, entered the army in the 1780s, and in 1798 was appointed to the position of military governor of the island of St. Lucia in the West Indies. Three years later in 1801 he assumed the role of civil governor before moving on to a position as Governor of the island of Dominica where he honed his skills dealing with the French population. His success in this endeavor lead to his appointment to Canada in 1808. In 1811 he was appointed Governor General of the British colonies of Canada.

The stalemate on Lake Ontario, along with Prevost's unwillingness to authorize aggression against the American forces, resulted in both sides undertaking to increase their forces to the point of attaining incontestable supremacy. Both began to purchase or commandeer any suitable merchant vessels and outfit them for service with the squadrons. Chauncey also sent Henry Eckford and 140 shipwrights to Sackets Harbor to establish a shipyard and fell timber to begin ship construction as quickly as possible. During the fall and winter of 1812-13, Chauncey's squadron was increased with the launch of the 24-gun *Madison* (on November 26, 1812) and by the conversion of merchant schooners into gunboats. The plan to arm schooners was a good short-term

solution but proved problematic as the refurbished vessels were not built to carry the armament placed upon them. They proved to be poor sailers and, while they allowed Chauncey to put more guns on the lake, they had difficulty keeping station when sailing in formation.³⁰ The numerically superior American forces could not be handled with the precision of the British ships and, as the sudden sinking of the schooners *Hamilton* and *Scourge* in 1813 would show, the converted schooners were so unstable as to be at the mercy of the weather.

The British forces had a daunting task supplying their Lake Ontario shipyards and were slower to act on this front, initially entrusting defense of the lake to the poorly manned and equipped Provincial Marine, a body designed to control cross-border trade rather than coordinate the wartime defense of Upper Canada. They entered war with the United States equipped with four ships on Lake Ontario, the largest being the 20-gun *Royal George* that had been built in 1809 to counter the United States Navy's *Oneida*. The Provincial Marine initially out-gunned the U.S. forces on the lake, but this would change quickly due to the strategy of non-aggression practiced by Prevost, Chauncey's active building program, and the Provincial Marine's inability to match Chauncey's industry.

Many of the vital shipbuilding supplies needed by the Royal Navy traveled across the Atlantic from England and then up the St. Lawrence River to Montreal where the Lachine Rapids made the river impassable to large boats. In many places boatmen were forced to disembark and drag their cargo over the water using ropes. Along the last part

of the route they were vulnerable to ambush by American forces. Although the British were quick to realize the importance of controlling the Great Lakes, they failed to act early in the war to ensure continued dominance. In his book *The War of 1812* Henry Adams states that, “had he [Prevost] at once seized Sackets Harbor, as Brock seized Detroit, he would have been secure, for Sackets Harbor was the only spot from which the Americans could contest the control of Lake Ontario.”³¹

Commodore Chauncey, on assuming command, quickly made the British pay for this oversight. On Chauncey's orders his lieutenant Melancthon Woolsey traveled down to Oswego from Sackets Harbor and bought four merchant schooners that were outfitted to carry one or two 32-pounder long guns. By November 8 the newly equipped ships along with *Oneida* (mounting sixteen 24-pounder carronades) were enough to drive the British off the lake and under the shelter of the battery at Kingston for what little remained of the navigation season. The new *Madison*, a corvette armed with twenty-four 32-pounder carronades, launched on November 26, made the British position even weaker.³² The naval build up on Lake Ontario, which would continue until the end of the war, had begun.

On November 27, 1812 Governor-General Prevost made it clear that the Royal Navy must take over the Provincial Marine if superiority on Lake Ontario were to be regained.³³ The next spring the British government placed upon the Admiralty the responsibility for defending the inland waterways of Upper and Lower Canada. On March 19, 1813 Captain Sir James Lucas Yeo was named as Commodore and given

Royal Navy officers and seamen to carry out his task. Yeo had gone to sea at the age of 10 and been promoted to Post Captain at 25. He had taken part in many small ship actions and been knighted for his part in the capture of Cayenne in French Guiana. Yeo sailed for Quebec in late March with the foundation of the forces needed to man the inland navy of North America. His instructions from the Admiralty made clear the importance of coordination in these efforts with the regular army.³⁴ With the arrival of Yeo and his forces in North America, Commodore Isaac Chauncey now had a more worthy adversary than the men of the Provincial Marine he had dealt with so handily in late 1812.

2.5 The Sacking of York

With Chauncey's control of Lake Ontario in late 1812 plans were made for the conquest of Upper Canada. The United States Secretary of War John Armstrong, meeting in Albany with Commodore Chauncey and United States Army Major-General Henry Dearborn, outlined his plan for operations in 1813. Armstrong correctly saw the taking of Kingston as the key to the conquest of Upper Canada. He instructed Chauncey and Dearborn to take the heavily fortified Kingston and thereby deprive the British of both a naval base and further access to the lakes.³⁵ Once Kingston fell, York and the Niagara Peninsula at the western end of Lake Ontario could be easily conquered.

Fortunately for the British both Chauncey and Dearborn soon began to doubt their ability to capture Kingston and instead wrote to Armstrong requesting the conquest of York be made the first objective of the 1813 campaign.³⁶ This unwillingness to take

the all or nothing gamble would be an ongoing theme for both sides in their efforts to control Lake Ontario.

Chauncey and Dearborn reasoned that attacking York with its harbor and shipyard would weaken the British position on Lake Ontario, and they put forward a plan calling for the taking of York followed by an assault on the Niagara frontier.³⁷ Once those objectives were completed the entire military force could be concentrated on Kingston. Armstrong approved this new agenda and on April 27, 1813 the American forces undertook the attack on York.

The American force consisting of 1700 regulars in 15 vessels arrived off York during the afternoon of April 26. The British Army's Sir Roger Sheaffe positioned some of his men at the suspected landing spot but the American small boats were carried past by the wind and instead landed to his west. Sheaffe ordered an immediate bayonet charge in an attempt to prevent the landing but the Americans quickly overwhelmed the small force and a retreat was made toward the town. With Chauncey's shallow-drafted vessels keeping up a harassing fire of grape shot on the British, the Americans were able to take the British batteries (their attack was aided by the detonation of an open magazine that killed 20 British). At this point Sheaffe realized that withdrawal of his regulars to Kingston was the best course of action and he therefore ordered his troops to set fire to an unfinished warship on the stocks and the naval storehouse, and ordered the 'Grand Magazine' to be blown up.³⁸

The Americans, having chased off the British forces, took York and paroled the

remaining militia. During the occupation, the parliament buildings were burnt down and, while this action was unauthorized, the military buildings and Government House were deliberately set ablaze. These actions were used by the British to justify the burning of the Washington later in the war.

While the American forces were successful in taking York, the rest of their expedition came to naught as the troops were in no state to make an attempt on Fort George after being trapped in Chauncey's vessels during a gale. The squadron therefore returned to Sackets Harbor, having accomplished little of strategic value.³⁹ The British lost a shipyard and a ship nearing completion during the attack on York, but ultimately benefited from the loss as it brought home to them the folly of dividing their shipbuilding efforts between Kingston and the more poorly defended and harder to supply York. Following the attack on York, British shipbuilding efforts on Lake Ontario were concentrated at Kingston.

3 THE FRIGATE *PRINCESS CHARLOTTE*

3.1 The Shipbuilders Arrive

Upon his arrival at Kingston in May of 1813, Sir James Lucas Yeo, along with Captain Robert H. Barclay and several other newly arrived captains and officers, set out to greatly increase the readiness of the naval force at Kingston. Chauncey at this time was stationed off the mouth of the Niagara River helping the American army in its assault on Fort George. Prevost, learning that Chauncey and his squadron were at the other end of the lake, and realizing that with the launching of another, soon to be completed, corvette Chauncey would be able to drive the British off the lake, decided to make a strike at Sackets Harbor. The reasons for this strike were twofold; it would create a diversion, drawing Chauncey's attention away from the Niagara frontier; and it would destroy the dockyard and the corvette under construction.⁴⁰

On May 27, 1813, most of the troops from the garrison at Kingston were loaded onto the available ships, schooners, gunboats, and bateaux and transported across the lake to Sackets Harbor. The arrival at Sackets Harbor was complicated by adverse winds that kept the troops from making an immediate landing, trapping them in the transports until the next morning. This delay greatly diminished the chances of success by decreasing the morale and fighting spirit of the British troops and negating the element of surprise.⁴¹

The delay allowed the American militia from the surrounding areas to reinforce the small garrison at Sackets Harbor and when the attack came it was initially a hard

fight with neither side gaining a clear advantage. When the British had gained the advantage Prevost apparently spotted the dust cloud created by the retreating defenders and mistook it for reinforcements. As a result of this mistake he ordered a return to the boats and abandoned the attack.⁴²

Despite Prevost's loss of confidence the British almost succeeded in achieving one of their most important goals. John Drury, an American lieutenant left in charge of the naval yard, upon hearing an erroneous report that the British attack had been a success, set the naval yard, barracks, and the new ship on the stocks ablaze.⁴³ Fortunately for Chauncey the fire was put out before substantial harm was done to his new corvette. The British troops returned to Kingston having accomplished little of consequence against the American forces and shipbuilding program at Sackets Harbor.

On June 4, Chauncey returned to Sackets Harbor and Yeo moved up the lake with 220 regulars to help Brigadier-General John Vincent in his efforts against Major-General Dearborn. Yeo made further contributions to the British army at the west end of Lake Ontario by harassing the American supply route. During the month of June, Yeo captured several watercraft loaded with supplies for Fort Niagara and burned a storehouse after removing 600 barrels of provisions.

During this period Chauncey kept his squadron at Sackets Harbor while waiting for his new ship to be launched and outfitted.⁴⁴ This strategy by Chauncey set the tone for the naval war on Lake Ontario: each side resolutely avoided action until it achieved temporary superiority over the foe. Thus, the American naval force remained in port at

Sackets Harbor awaiting the launch of the new vessel while Yeo tried to goad Chauncey into battle. Once the new corvette *General Pike* (launched June 12, 1813) had been outfitted, Chauncey was finally able to leave port. On June 21, he embarked with his squadron to assist the armies at the western end of the lake. He had planned to attack Vincent's supply depot near Burlington but was forced to abandon the idea upon discovering that it was heavily defended. Instead, Chauncey re-occupied York where the American troops took provisions and burned storehouses.⁴⁵ Chauncey then left for the Niagara River where, on August 7, he encountered Yeo. It seemed inevitable at this point that Yeo, with his squadron of two ships, two schooners and two brigs, would enter into a decisive battle for control of the lake with Chauncey's ships. After a day of maneuvering for advantage, two of Chauncey's schooners, *Hamilton* and *Scourge*, were swamped and sunk during a sudden night time squall. With 70 sailors drowned, this disaster was to be the largest loss of life on Lake Ontario during the entire course of the war.⁴⁶

During the next few days Yeo refused to close with the Americans choosing instead to try and separate the American schooners from the rest of the force. He succeeded in this goal on August 11 by capturing two of the United States Navy's schooners but Chauncey still retained the balance of power and Yeo eventually returned to Kingston.⁴⁷

Less than one month later, Commodore Yeo was forced to leave the safety of Kingston to convoy supplies to the head of Lake Ontario. During this trip, near the

mouth of the Niagara River, on September 7, 1813, Chauncey almost forced an engagement. Yeo recognized his peril and, not wanting to engage the stronger American squadron, fled back to the safety of Kingston with Chauncey in pursuit. The two squadrons remained in close proximity for the next five days as they traveled most of the length of the lake. Yeo was successful in avoiding a full naval battle and eventually found shelter in a bay five miles (8 km) west of Kingston. The British lost 4 killed and 7 wounded in the running fight during which a lack of long guns put Yeo's ships at a disadvantage.⁴⁸

On September 28, in another running battle, Chauncey's squadron chased the British into Burlington Bay with a British loss of 5 killed and 13 wounded. Yeo's squadron was not totally impotent, however, for in this encounter they seem to have gotten the best of the Americans as Chauncey reported 27 killed and wounded along with the loss of the top gallant mast on *General Pike*.⁴⁹ Many of the American casualties were caused when a 24-pounder on *Pike's* forecastle exploded.⁵⁰ The 'Burlington Races', as this battle came to be known, was the last major encounter between the two squadrons for the duration of the navigation season. During the course of the winter both commodores turned their attention to ship building in an attempt to gain permanent control over Lake Ontario.

Henry Eckford had kept busy at Sackets Harbor, launching the schooner *Lady of the Lake*, the ship *General Pike*, and the schooner *Sylph* during the 1813 sailing season. Despite opportunities to engage in a decisive battle during the summer of 1813 little of

significance transpired with the exception of the sinking of *Hamilton* and *Scourge* and the capturing of small schooners and transports. Eckford did not let up his blistering pace of construction, and the opening of the 1814 season saw the 20-gun brigs *Jefferson* and *Jones* launched April 7 and April 13, 1814, respectively. The Americans were not finished though and launched the frigate *Superior* May 1, 1814, and then *Mohawk*, another frigate, on June 11.⁵¹ *Mohawk* was the last ship launched by Chauncey but at the end of the war Eckford had *New Orleans*, a ship of the line, nearly completed on the stocks, and New York shipwrights Adam and Noah Brown had arrived to assist in the opening of another shipyard at nearby Storr's Harbor where the ship of the line *Chippewa* was under construction.⁵²

The British were not idle during this period either. A young lieutenant named John Le Couteur with the British 104th Foot Regiment in Kingston astutely observed that, "it was a war of Carpenters as to getting the command of the lake – the Yankees being building at Sackets Harbor with that view also."⁵³ The British began the war with the ships of the Provincial Marine including the *Royal George*, *Earl of Moira*, *Prince Regent* (schooner), and the *Duke of Gloucester* (captured by Chauncey in the attack on York). Over the first winter of the war the ship *Sir George Prevost* (later *Wolfe*) was built and launched on April 28, 1813.⁵⁴ This was the largest ship in the British Squadron when built and served as James Lucas Yeo's first flagship on Lake Ontario. A smaller brig, *Lord Melville* (later *Star*), was launched in July and was the last vessel launched by the Royal Navy on the lake in 1813.⁵⁵ The shipyard's next projects would dramatically

increase the pace of the arms race on Lake Ontario. The fall and winter preceding navigation in 1814 was a period of furious activity at the Lake Ontario shipyard. The British considered construction of a brig or a transport but before the keel was laid the vessel was enlarged to be the frigate *Princess Charlotte*.⁵⁶ A second frigate was begun soon thereafter. On April 14, 1814 *Princess Charlotte* was sent down the slipway at the Kingston Navy Yard, joined later in the day by the bigger *Prince Regent*. The launching of these two frigates gave the Royal Navy uncontested control of the lake early in the 1814 sailing season.

3.2 The Builder

The launching of *Princess Charlotte* completed George Record's service as a builder in the Kingston Yard. The first evidence of George Record in British North America appears in an advertisement placed in the *Quebec Gazette* on November 29, 1810 asking for information on a portable mahogany writing desk that had been stolen from a house in Lower Town Quebec. Interestingly, the desk was reported to contain a red Morocco pocket book that indicated its owner had previously lived in Appledon, Devon, in England, a location that made sense for someone with experience in shipbuilding.⁵⁷ Appledon, also called Appleton and Appledore, is a port town in North Devon where a younger George Record could have begun to learn his craft.

On July 11, 1811 the *Quebec Gazette* announced the appointment of George Record to the post of Master Culler and Measurer of Timber, masts, spars and planks for the Port of Quebec.⁵⁸ This position indicates that by 1811 Record had a good

understanding of ships and shipbuilding, and was responsible for selecting the timbers needed for the various shipbuilding projects undertaken by the government at the Port of Quebec. Experience in this position would have given him many of the skills necessary to undertake his later work as the Assistant to the Master Builder, and later Master Builder, at the Royal Navy Dockyard in Kingston.

With the outbreak of the War of 1812, George Record began to petition for a posting with the naval forces in Upper Canada. His letter to Sir George Prevost, dated 14 January, 1813, stated that he had made an application on November 24, 1812 for such an opportunity and had been provided with letters for the Commissary and Quarter Masters at Montreal. Record had then traveled to Montreal to deliver his letters to these men and receive his posting only to discover that neither was in the city at that moment. As he wrote in his letter on January 14 neither man had yet returned and he petitioned Sir George Prevost to decide his fate.⁵⁹

Sir George Prevost, through Noah Freer, quickly responded to Record's request and on January 16, 1813 promised to provide a letter recommending him to Major General Roger Sheaffe who, as commander of the forces in Upper Canada, controlled the Provincial Marine. This letter asked that Record's request to be given a position as an officer in one of the ships or in one of the shipyards be granted. The letter also spoke to Record's apparent skills, as mention was made of Colonel Edward Baynes approval of George Record as useful to the public service.⁶⁰ The letter to Sheaffe was written the same day.

The bearer hereof, Mr. Geo: Record, having made an offer of his services to the Comm. of the Forces, I am directed to furnish him with this letter to you, and to signify his Excellency's Desire that this Gentleman may be employed in the District of Upper Canada under your Command, as an officer on board of one of the Armed vessels on the Lakes or in such a situation, in one of the shipyards, as his abilities upon Exam & Trial may entitle him to.⁶¹

On February 14, George Record was appointed the assistant to Daniel Allen the Master Builder at the shipyard in Kingston.⁶² Here he was immediately put to work building *Sir George Prevost*, a 22-gun ship designed by Thomas Plunckett, as well as designing and building another smaller schooner.

Within a month of his arrival at Kingston the wheels were already being set in motion for George Record to receive more responsibility. On March 11, 1813 the artificers complained about promised provisions not having been provided to them and nearly everyone refused to work. An officer and 40 troops were mobilized from the nearby garrison and surrounded the artificers, after which most of them returned to their duties. Master Shipbuilder Allen was called upon to point out the ringleaders but refused. Captain J.B. Irwin believed Allen to be sympathetic with the mutinous behavior of his artificers and, beyond that, Irwin believed Allen was damned by his American birth. Irwin therefore suggested that Allen be removed from his position and from Kingston as well. Irwin also highly recommended George Record to take Allen's place.

I have therefore to suggest Sir that Mr. Allen be removed from the yard & his place filled by the Assistant Builder, Mr. Record than whom I know not a more capable man, both in the theory and practice in his profession.⁶³

By March 18 this report had reached Prevost, who concurred and officially appointed George Record to the post of Master Builder at the Kingston shipyard.⁶⁴ On April 25, 1813 *Sir George Prevost*, measuring 101 feet 9 inches (31.01 meters) by 30 feet 6 inches (9.30 meters), was launched. Once outfitted and manned, this ship, renamed *Wolfe* and the last ship to be launch by the Provincial Marine, forced Chauncey into the protective confines Sackets Harbor to await the launch of his new ships. Within days of *Wolfe's* launch, Royal Navy Commander Robert Barclay arrived at Kingston and responsibility for the naval forces on the Great Lakes was assumed by the Royal Navy under the overall command of Captain James Lucas Yeo.

George Record had little time to rest, as he was also building a schooner laid down in March. Much smaller than *Wolfe*, this vessel was redesigned prior to the arrival of the Royal Navy as a brig, allowing it to carry heavier guns. Launched as *Lord Melville* in July 1813, the brig measured 71 feet 7 inches (21.82 meters) on deck with a breadth of 24 feet 8 inches (7.52m), and was pierced for 14 guns.

Master Builder George Record was not to get a break as the building war between the shipyards at Kingston and Sackets Harbor began to gain momentum. Reports of additional ship construction being undertaken by Commodore Chauncey spurred Sir James Lucas Yeo to order another ship built at Kingston. On July 23, 1813 Yeo proposed that the Kingston shipyard lay down a large ship with a gun deck 160 feet (48.77 meters) long and moulded beam of 42 feet (12.80 meters) that would become *Prince Regent*. While this proposal seemed to meet with approval nothing occurred until

the fall. In July George Record launched the brig *Lord Melville*, the first ship he is given credit for both designing and building. He was then put to work building gunboats until we hear of him again on September 18, 1813, this time appealing to leave the service as he claimed of being ill-treated by the officers in charge of the dockyard who he felt were interfering with his ability to do his job.⁶⁵ This problem, however, seems to have been only temporary as he was still in his position as Master Ship Builder when work began on *Prince Regent* and *Princess Charlotte*.

On September 21, 1813, only three days after requesting permission to be relieved of his position, George Record sent a letter to Noah Freer requesting artificers to build a transport requested by Yeo. Record also used the letter to recommend that a brig be built instead, as he reasoned that the brig could be used as either a transport or a ship-of-war, and be quickly brought to completion once its final role was determined.⁶⁶ On October 8, 1813 a letter from Sir James Lucas Yeo to Sir George Prevost further increased the scope of this project by recommending that he approve a request to build a ship-of-war. The letter stated that Record had informed him that *Royal George* was in a weak and defective state and that the cost to build a larger ship in place of the brig was negligible, especially when compared with the cost to repair *Royal George*.⁶⁷ Yeo further reinforced the idea of constructing another warship when he wrote on October 8, 1813;

The enemy I have no doubt (if they do not succeed in their designs on Upper Canada this year) will build another ship capable of carrying heavy metal, if they

do, I have only to assure your excellency that had I any number of Brigs that they would not be of the smallest service against ships mounting such Metal. I therefore much wish your excellency would order her to be built by the following dimensions

Length 110 feet, Breadth Moulded 36 feet, Depth of Hold 10 feet⁶⁸

George Record's request was approved in a letter from Commander Richard O'Connor, the commissioner at the Kingston naval yard, on October 14, 1813.⁶⁹ A letter dated the next day confirmed that the brig Record was to build was now to be laid down as a ship with the dimensions mentioned in James Lucas Yeo's letter of October 8. The October 14 letter also describes discord within the shipyard. The artificers working under contract for John Goudie building New Ship 1, *Prince Regent*, were getting paid considerably more than those under Mr. Record and, therefore, the artificers working on New Ship 2, *Princess Charlotte* were unhappy and threatening labor unrest. This problem arose because, while both John Goudie's and George Record's men worked under government contracts, Goudie's men were apparently getting higher pay and doing less work than Record's. To correct this disparity the government suggested that the wages of Goudie's men be reduced.⁷⁰

By October 22, 1813, Sir James Lucas Yeo wrote that in his opinion the discord within the shipyard was so bad that it was having an affect on the completion of the ships under construction at Kingston. He went on to recommend that either both ships be completed by one builder or that Goudie be persuaded to enter into a contract for completing his ship under which he would be responsible for paying his artificers out of the proceeds allotted by the contract. It was believed that this would both ease the

tension amongst the artificers and make it financially advantageous for Goudie to expedite the completion of the contract.⁷¹

By the end of October the artificers at Kingston, aware of the importance of their work and the disparity between their wages and those earned by the artificers on Lake Champlain, once again expressed a reluctance to perform their duties. In an effort to bring some stability to the shipyard the government entered into a private contract with George Record for the construction of New Ship 2. In order to ensure timely delivery a 1000 pound penalty was stipulated if the ship was not completed by May 1, 1814.⁷²

In late November 1813 work on the two frigates was proceeding quickly and news arrived that construction supplies were ready to be brought up to Kingston on a fleet of bateaux.⁷³ This progress continued through December when the frigates were far enough along for it to be stated that:

...it affords me infinite pleasure to have the honor of transmitting for your excellency's information the accompanying report of the forward state of the ships building and to acquaint you the *Prince Regent* promises to be as fine and formidable a Frigate as any sailing on the Atlantic, The *Princess Charlotte* (late *Vittoria*) has likewise every appearance of being a most desirable vessel in size equal to our small Frigates but in force superior from the heavy metal she is intended to carry.⁷⁴

Work continued on the frigates throughout the winter but their dominance of the lake appeared to be in jeopardy as news arrived that Commodore Chauncey was constructing four new vessels at Sackets Harbor.⁷⁵

The information on the building program at Sackets Harbor arrived via an American seaman deserter who reported the armament of the ships being built at

Sackets Harbor. His intelligence prompted O'Connor to write "... the requisition for 24 pdrs from Halifax had better be altered to 32 pd long – if this be true."⁷⁶ The deposition of Robert Christie, who had deserted March 23, 1814 from his position as a carpenter at Sackets Harbor gave a thorough report of the progress being made there;

...there are two brigs building at Sackets; he expects they are calculated to carry 24 guns each, they are planked up to the bends, but not caulked, and no part of the deck lain, the large ship building on the point he calculated to carry 48 guns, says she is planked up to her bends the same as the brigs, not caulked and no part of the deck lain. He heard Commodore Chauncey say the other night (last Saturday) to Captain Crane they must give the large ship up, as they have not sufficient water to launch her, they had tried making sufficient holes in the ice, and could only find about eleven feet water.⁷⁷

With this level of intelligence moving back and forth between the shipyards it is seems that both sides were closely adapting their building programs to outclass the enemy.

On April 14, 1814 Lieutenant John Le Couteur of the 104th Foot described the launch of the frigate *Princess Charlotte*.

...at ½ past 5, the blocks were knocked away and the pretty Frigate *Princess Charlotte* glided into the smooth fresh water, dashing the white foam before her in her plunge. The gallant *Mulcaster*, her Captain, was launched with her. Half an hour later, the *Regent*, a Noble Sixty-gun Frigate, followed the *Princess*, as a lover to guard his Belle.⁷⁸

After the frigates were launched they were quickly outfitted for service on the lake and, upon entering active duty, gave the Royal Navy the superiority necessary to keep Chauncey's squadron contained in Sackets Harbor. With the launch of *Princess Charlotte*, George Record concluded his service at Kingston having delivered the frigate on time and without penalty. A report sent to Prevost from Kingston on May 5, 1814 observed that the two frigates, "appear to sail remarkably well."⁷⁹

The ships built and launched from Kingston during the final sailing season of the war were of unique construction designed, built and armed in a remote location to combat a single enemy. These ships, built to sail on fresh water, had the added advantage of not needing to stow potable water in their holds. This allowed the ships to be heavily armed, incorporate a high degree of deadrise and at the same time be relatively shallow drafted. This idea of customizing construction to take into account the enemy and the local condition was brought to the fore in a letter arguing against sending fir frigates built in Britain to Upper Canada that stated "...the third ship which is intended and understood to be constructing of that Force, as equivalent and better adapted to the great object of obtaining the decided superiority over our enemy on Lake Ontario"⁸⁰

It is not surprising, therefore, that the construction techniques noted archaeologically are unique. The lack of sufficient compass timber forced the builders to fashion the necessary curves from old growth, straight grained timbers fastened together with bolts and metal plates. The large timbers and tight framing can be attributed to the need for these ships to meet ships built in the heavy American style exhibited by the frigates fighting on the Atlantic and *Jefferson*, *Jones*, *Superior*, and *Mohawk* built at Sackets Harbor during the same period.

3.3 The Career of *Princess Charlotte*

By May 1, 1814 *Princess Charlotte* and *Prince Regent*, pierced for 42 and 56 guns respectively, had been ballasted, rigged, provisioned, and armed.⁸¹ Sir James Lucas Yeo took *Prince Regent* captained by Richard O'Connor as his flagship and gave

command of *Princess Charlotte* to Captain William Howe Mulcaster. Mulcaster, a friend of Yeo's who had followed the Commodore to Canada, had distinguished himself in 1806 during a cutting out expedition in Spain and gained a reputation for courage and intelligence.⁸² Le Couteur refers to him as the “the gallant Mulcaster,”⁸³ suggesting these attributes had also been noted by the men serving with him in North America.

Not wanting to forfeit their advantage, Commodore Yeo and Lieutenant General Gordon Drummond presented to Governor-General Prevost a plan to attack Sackets Harbor in order to secure Upper Canada and destroy the frigate being built there. In a letter to Prevost, Drummond stated, “should an opportunity offer, by even a temporary naval superiority, for the destruction of the Enemy's fleet, and Arsenal at Sackets Harbour, a vigorous combined attack by the Navy would be highly advisable.”⁸⁴ Prevost was unwilling to approve this plan as it required troops be moved to Kingston from Lower Canada.

Yeo and Drummond, loath to sit idle while in control of the lake, decided to proceed with an attack on the less heavily fortified Oswego harbor, a key link in the American supply route.⁸⁵ On May 4, 1814 the British squadron, including the ships *Wolfe* and *Royal George*, the brigs *Earl of Moira* and *Lord Melville*, the schooners *Sir Sidney Smith* and *Lord Beresford*, and the the newly outfitted frigates *Prince Regent* and *Princess Charlotte*, were loaded with troops and set course for Oswego.⁸⁶ Hampered by a southwest wind, the squadron anchored for the evening before resuming the journey to Oswego at 2 am. On May 5 the squadron stood off Oswego but the attack was hampered

by strong breezes that forced the squadron to head offshore. The next morning, with only a light breeze, the squadron again stood in for Oswego. They began the attack with *Wolfe* and *Royal George* firing on the batteries while the gunboats fired on the town. *Princess Charlotte* also took part firing on the fort with its main deck guns. Following this, the troops, including Captain Mulcaster, successfully landed under the cover of *Lord Melville* and *Earl of Moira*. By 2:45 pm the marines and seamen had taken the fort and hoisted the British flag. During the evening the British troops and the spoils of the raid were loaded onto the ships to return to Kingston.⁸⁷

In his report to George Prevost, General Drummond stated that they had captured: “seven heavy guns, that were intended for the enemy's new ship, three 32 pounders that were sunk by the enemy in the river as well as a large quantity of cordage and other naval stores; the loss to them therefore has been very great....”⁸⁸ Two American schooners, *Growler* and *Penelope*, had been scuttled, but were refloated and delivered back to Kingston. While arguably a successful engagement the ninety casualties incurred at Oswego did much to dissuade Yeo from making an attack on Sackets Harbor.⁸⁹ *Princess Charlotte's* Captain Mulcaster was one of those wounded during the battle receiving a musket ball in the upper thigh. This wound was too high up the leg to allow for amputation but he would survive the injury.

Making the most of his advantage Yeo, after unloading the supplies captured at Oswego, set sail on May 11 to search the southern shore of the lake for enemy goods in transit. He took up a position between Sackets Harbor and Oswego with *Prince Regent*,

Princess Charlotte, Wolfe, and Royal George, while the smaller vessels in his squadron searched for the enemy and ferried troops and supplies around the lake.⁹⁰

On May 29 the British captured a boat loaded with supplies heading to Sackets Harbor. The crew reported that they were part of a large flotilla that had gotten lost. Yeo, sensing an opportunity to materially damage the enemy and delay the outfitting of their new ships, sent Captain Stephen Popham and 160 men in two gunboats and three cutters to capture the flotilla. The leader of the flotilla, Melancthon Woolsey, fearing the British would capture his missing boat fled up Sandy Creek and sent a messenger to Chauncey requesting assistance. Early the next morning just after receiving word that Chauncey was sending help, Woolsey ordered a scout to the lake to determine whether the British were in fact looking for the American boats. The scout returned with news that the British were on their way and Woolsey decided to set an ambush using the men from the American flotilla reinforced by Oneida Indians and troops from Sackets Harbor. Despite a careful advance by the British the Americans successfully sprang their trap the next morning, surrounded Popham's party and forced it to surrender.⁹¹ This left the entire squadron short of men and Yeo was forced to move crews out of his schooners, reducing them to transports. On June 5 Yeo abandoned his station off Sackets Harbor and returned to Kingston where, except for a round trip with reinforcement and supplies to Niagara at the end of June, he remained until the launch of his next ship.⁹²

Isaac Chauncey and his shipwright Henry Eckford were busy at Sackets Harbor and it was necessary for the British to launch two additional ships in 1814 in order to

keep up with the American building program. Anyone in Kingston during the summer of 1814 who took a trip out to the naval yard would have seen a sight unprecedented on the Great Lakes: a ship-of-the-line on the stocks. This ship, named *St. Lawrence*, was launched September 10, 1814 and was followed on Christmas Day by *Psyche*, a frigate built in England and sent over in frame. *Psyche* was the last ship launched by the British during the war although, when news of the Treaty of Ghent reached Upper Canada, two more ships-of-the-line, *Wolfe* and *Canada*, were being built at Kingston, indicating that the naval arms race was still escalating rapidly. One has to wonder at what point the building programs on Lake Ontario would have outstripped the ability to outfit and man the ships that were being constructed.

In the months after the war the unfinished Royal Navy ships on the stocks were housed over and the rest of the ships in the establishment were assessed and had their lines taken off by Thomas Strickland.⁹³ The Rush-Bagot Agreement of 1817 demilitarized the Great Lakes, putting an end to the need for ships the size of the three British frigates and the ship-of-the-line. These once proud ships were docked in Navy Bay, housed over and placed in ordinary. Eventually they were decommissioned and sold. *St. Lawrence* was scuttled and used as a wharf. *Prince Regent* and another ship were moored at the head of Navy Bay where they became a navigation hazard prompting their removal sometime in the 1840's to nearby Deadman Bay. It was here they eventually sank out of sight and were largely forgotten.⁹⁴

3.4 Logistical Support

As the intensity of the 'Builder's War' on Lake Ontario escalated, the wilderness shipyard demands for the necessities of shipbuilding (including iron nails, spikes, cannon, carronades, ballast, and other items) increased dramatically. Most of the materials needed for shipbuilding were not readily available at Kingston or Sackets Harbor. For the British shipbuilders stores that could previously have been purchased from the United States now had to be shipped to Kingston from Halifax, Quebec, Montreal and, in many cases, from as far away as Great Britain.⁹⁵ The difficulties associated with obtaining goods affected how, where, and when ships were built on Lake Ontario.

Early in the war the Provincial Marine divided shipbuilding operations between Kingston and York. Goods destined for York were transported to Kingston and then loaded onto ships and sailed to York, putting them at risk of being captured by the American naval forces. This danger, along with the American sacking of York in early 1813, led to the consolidation of shipbuilding operations at Kingston.

Building and outfitting the frigates *Prince Regent* and *Princess Charlotte* during the fall and winter of 1813-14 greatly increased the quantity of supplies needed at Kingston. Goods traveled by ship as far as Montreal where, due to the Lachine Rapids, they were transferred to flotillas of bateaux, or carried overland, for the 180 mile (288 km) journey to Kingston. A letter from Commander Richard O'Connor, commissioner of the dockyard, illustrates how vital the continuous supply of materials was to the

shipbuilding effort; on October 24, 1813 he wrote, “our progress with both vessels being so rapid as to lead me to apprehend a check for want of supplies from below particularly in the article of spike nails of dia. .7, .8, & .9 inch...”⁹⁶ In May 1814, shortly after the launching of *Prince Regent* and *Princess Charlotte*, Yeo reemphasized the difficult nature of the task when he wrote to the Admiralty, “it would be endless to detail the substitutes used and the difficulties to be overcome in constructing vessels of force in a country so new and deficient of materials.”⁹⁷ His comments illustrate the important role logistical concerns played in the construction of the ships at Kingston.⁹⁸

One of the main sources of construction materials for Yeo’s ships were old Royal Navy vessels. These ships were sailed from Britain to Lower Canada as troop transports and, upon arrival, laid up and stripped of their hardware, ballast, and armament. Much of the material to furnish and arm *Prince Regent* and *Princess Charlotte* was supplied by the sloops *Aeolus* and *Indian* in Quebec.⁹⁹ The material taken from these ships and transported to Kingston included 100 tons of iron pigs necessary for ballast on *Prince Regent*,¹⁰⁰ 23,000 yards of canvas for *Prince Regent* and *Princess Charlotte*,¹⁰¹ as well as much of the armament. Even when the necessary supplies were obtained they could go missing en route. For example, in Gordon Drummond's letter to George Prevost, sent from Kingston on April 26, 1814, he asks that the person responsible for the transport of ringbolts required for the guns of *Prince Regent* and *Princess Charlotte* be sent back along the route, accompanied by an intelligent officer, to locate these supplies vital to the outfitting of the frigates.¹⁰²

Both commodores engaged in the contest on Lake Ontario realized the importance of logistical support for their success and for the success of their opponent's shipbuilding efforts. Each side's supply lines were vulnerable to attack and disruption by enemy forces, and any equipment seized would strengthen the aggressor to the same degree that it weakened his opponent. American shipbuilding supplies reached Chauncey from New York by first traveling north up the Hudson River to the Mohawk River where they traveled west as far as Rome and then either down a small canal or overland to Lake Oneida and down the Oswego River to Oswego on Lake Ontario and from there north to Sackets Harbor (figure 4). Low water levels and muddy ground could conspire to make this an arduous journey. Indeed, during the spring of 1814 warm conditions lead a group of teamsters to abandon Chauncey's ordnance after it sank into a muddy road alongside the Hudson River.¹⁰³ Having the shipbuilding operations on Lake Ontario at Sackets Harbor meant that once supplies reached Lake Ontario at Oswego, they had to be transported from there north to the shipyard, leaving them open to predation by the British forces. As the ship building war escalated, both sides attempted to prey on the opposition's supply routes. Despite its difficulties, Chauncey's shorter supply line allowed him to move equipment relatively quickly and to wait until the armaments of the British ships were known and then arm his own vessels accordingly. Commodore Sir Edward W.C. Owen, who after the war studied both shipyards, noted that "the '*Regent*' mounting twenty-four pounders was to be opposed by the '*Superior*' with thirty-two pounders, and mounted with four more guns on the main deck."¹⁰⁴ This

proximity to New York allowed Chauncey to limit any advantage Yeo might gain by escalating the size of ships.

The transport of increasingly heavy armament to Kingston became an issue for Yeo. Heavy loads could be transported in two ways: up the St. Lawrence on shallow-bottomed vessels such as bateaux that could navigate between Montreal and Kingston or overland by wagon and sled (figure 3). The problem with transporting supplies up the St. Lawrence was twofold; first, there were rapids along this route that could endanger the cargo, and, secondly, there was the danger of the shipment being captured by an enemy force striking from the American side of the river. Overland transport was preferred, though many of the necessary supplies could only easily be transported during the winter when the surfaces of the roads between Montreal and Kingston had frozen, creating a solid surface capable of supporting the weight of the shipment. The following letter illustrates the problems associated with both supply and transportation of heavy items such as guns.

Arrangements have been made for the Transport of a considerable proportion of the supplies you require.... Twenty 24 pdrs & twelve 18 pdrs (with ship carriages) and 6 12 pdrs with their stores and appertenances except ships carriages are at Montreal awaiting for the New Winter Road being established. At three Rivers there are Eighteen 24 pdrs with 12 ship carriages and I have ordered from Quebec Six 68pdr carronades and twenty 24 pdr guns. – As it is possible that last mentioned guns may not get to Kingston in time you may only be receiving in the course of the months of Feb. and March -- 38 24 pdrs 10 18 pdrs and 6 68 pdr carronades.¹⁰⁵

The difficulty in obtaining the necessary materials combined with the need to quickly build and launch the frigates in order to overtake the American building program

led to numerous shortcuts being taken in the construction of the ships.¹⁰⁶ While *Princess Charlotte* was very heavily framed, a survey done following the war reported numerous problems with the construction. Thomas Strickland considered *Princess Charlotte* to be “Perfectly sound, but being put together very bad and not sufficient fastening occasions weakness.”¹⁰⁷ He also noted a lack of sufficient knees and carlings, a shortfall that is evident in the archaeological record. A later report noted widespread dry rot and decay brought on by the use of unseasoned timber during construction.¹⁰⁸

The shortage of adequate shipbuilding materials is evident in the archaeological data. There is a lack of fasteners associated with the chocks beneath the keelson and those between the first and third futtocks. There is also no evidence of either hanging knees or a deck clamp in the construction of the orlop deck. At the level of the orlop deck there is only one row of bolts protruding from the frames and evidence found towards the stern suggests that these bolts were for lodging knees and not a deck clamp.

Given the already overtaxed state of the supply route it is little wonder that Royal Navy personnel in Upper Canada were vehemently against a plan to send four ships in frame from England to Kingston. Early in the war the Admiralty had decided to go forward with a plan to build four vessels complete, except for planks and decks, and then disassemble and ship them to Montreal and then on to Kingston. By the time these four fir-built ships, including the two frigates *Prompte* and *Psyche* and two brigs, were ready for shipment, the ability of the British to move supplies from Montreal to Kingston were being strained by the building and outfitting *St. Lawrence*. Yeo opposed the plan, as the

strain it put on the supply route would put the completion of the ships already being built at Kingston in jeopardy.¹⁰⁹ He wrote that the only possible way to move the pre-fabricated ships from Montreal to Kingston without derailing the current projects was to pay a private contractor and he was loath to do this as he feared the American forces might get wind of the situation and move to capture or destroy the ships in transit.¹¹⁰ Despite these objections the ships were built and sent across the Atlantic, although, by the time they arrived in North America it had been decided that only one of them was to be shipped on to Kingston. Contractor William Forbes was hired to transport *Psyche* to Kingston, a job he accomplished without incident.¹¹¹ This private contract allowed the Royal Navy to concentrate on transporting the supplies necessary to outfit the 104-gun *St. Lawrence* under construction at the Kingston Naval Yard.

Indeed, obtaining the necessary armament for his increasingly large ships proved to be a constant battle for Commodore Yeo. The frigates *Prince Regent*, *Princess Charlotte*, and the 104-gun *St. Lawrence* were to be heavily armed for their size, but it was difficult to obtain the necessary cannon. During the spring of 1814, with the launch of *Prince Regent* and *Princess Charlotte* imminent, reports of the ordnance bound for Sackets Harbor led Richard O'Connor to remark, "Where in the name of heaven are all these long guns to come from?"¹¹² As these larger ships were introduced, the guns for *Prince Regent* and *Princess Charlotte* were removed from *Aeolus* and *Indian* in Montreal and the guns and other fittings for *St. Lawrence* were removed from the 74-gun ships *Ajax*, *Centaur*, and *Warspite* at Quebec.¹¹³

The locations of both the American and British shipyards on Lake Ontario, and the strain of transporting shipbuilding materials for increasingly large vessels being built with increasing frequency, affected both the construction and armament of the ships assembled on Lake Ontario during the War of 1812. There was an adequate supply of long, straight timbers in the old growth forests around Kingston, but tall, straight trees did not yield good compass timber, which had to be hauled to Kingston from up to 20 miles (36km) away.¹¹⁴ This paucity of proper timber can be seen in the scantlings recorded during the research undertaken by Jonathan Moore in 1999 during research for a draft entitled “*Frontier Frigates and a Three Decker: Wrecks of the Royal Navy's Lake Ontario Squadron*” on wrecks Able and Baker in Deadman Bay and that of *St. Lawrence*. The construction of *Prince Regent* (figure 5) and *St. Lawrence* (figure 6) made little use of compass timber and employ unique methods to create the necessary shapes from thick straight timbers. This creative use of timber is also evident in the construction of Wreck Baker.

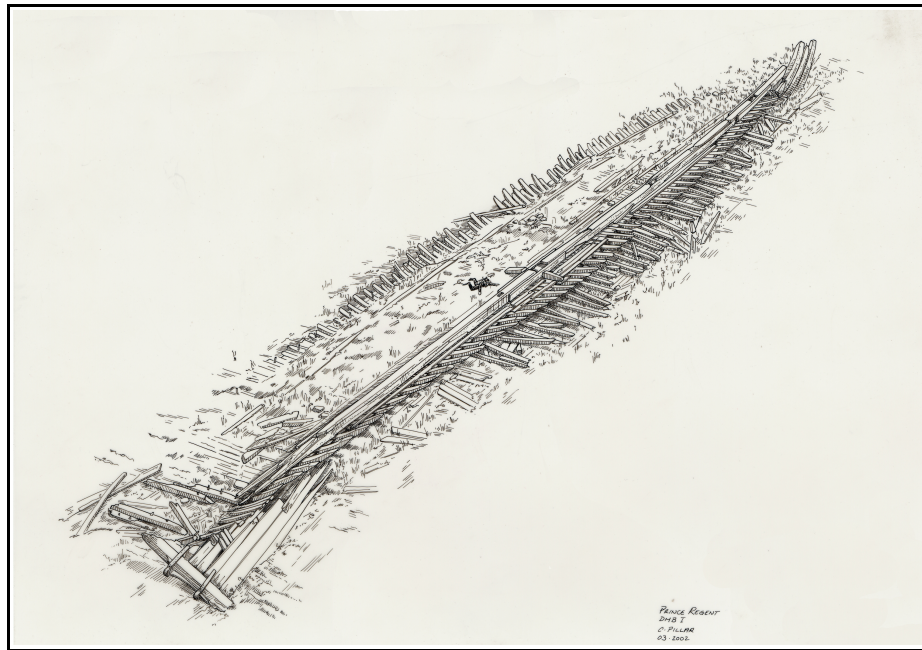


Figure 5. Plan of the *Prince Regent* remains based on the photo project. (drawing by C. Pillar).



Figure 6. Plan of the *St. Lawrence* based on the photo project. (drawing by C. Pillar).

4 ARCHAEOLOGY

4.1 Earlier Work on the Deadman Bay Wrecks¹¹⁵

Forgotten beneath the waves, the two wrecks in Deadman Bay became the casualties of time. The first archaeological work on the wrecks was undertaken in 1938 by Ronald Way the Director of Fort Henry, which looks out over Navy and Deadman Bays. In the years since, numerous attempts have been made to conclusively identify the wrecks. Archaeological interest in the wrecks has fallen into two categories: research for the purpose of identification, and the removal of objects and scantling from the wrecks for the purpose of display. This second category includes the work of Ronald Way (who removed timbers and other articles for display at Fort Henry) and numerous recreational divers looking for souvenirs. These wrecks, while now considered boring by most of the local sport diving community, were at one time the location of cannon ball hunts. The wrecks may also have been the targets of underwater demolition exercises carried out by cadets from the Royal Military College (located on the site previously occupied by the Royal Navy Dockyards). Given the attention the two frigates have received in the past, it is surprising that Wreck Baker is so well preserved today.

Archaeological work on the wrecks began in February of 1938, during the restoration of Fort Henry, when Ronald Way created a work platform on the ice above the wrecks and used a hard-hat diver to recover artifacts from the wrecks in Deadman Bay. The finds included 17 cannon (likely used as ballast), a copper lantern, a copper covered powder tray, seamen's boarding pikes, bayonets that had been stuck in the

planking, and parts of the ship including two mast steps. The recovered mast steps must have come from Wreck Baker as Able's mast steps are still in place.

In 1952, Dr. Richard A. Preston of the Royal Military College published a paper in *Historic Kingston* entitled "The Fate of Kingston's Warships." Preston's paper was based on historical research coupled with information gathered during 12 dives by Lieutenant-Commander W.H. Willson, a diver from the Royal Military College who was the first to designate the wreck in the shallow water at the head of the bay 'Wreck Able', and the deeper one 'Wreck Baker'. Willson recorded the lengths of Wrecks Able and Baker at 93 and 134 feet (28.35 and 40.84 meters) respectively. Preston tells us that three wrecks, two large wrecks and one small, were found in Deadman Bay and that during Ronald Way's investigation the wrecks were well enough preserved that the diver was able to enter beneath the lower deck of the Wreck Baker.¹¹⁶ Unfortunately, today little evidence of this deck remains.

Preston used the data he gathered to make the first attempt at identifying the remains in Deadman Bay. He identified Wreck Able as *Montreal* and Wreck Baker as *Prince Regent (Kingston)*.¹¹⁷ It is unfortunate that he had the wrong measurement for Wreck Able as it made the rest of his otherwise logical argument flawed and led him to an incorrect conclusion. Preston began to doubt his own conclusions and, in 1960, maritime historian John R. Stevens visited the wrecks producing a sketch plan of Wreck Able done from the surface. He came to the correct conclusion that Wreck Able was not *Montreal* but *Prince Regent*.¹¹⁸ The identity of Wreck Baker was to remain a mystery.¹¹⁹

In 1987 a Kingston marine heritage organization, “Preserve Our Wrecks” revisited and surveyed the Deadman Bay wrecks, concluding that Wreck Able was *Prince Regent* and tentatively identifying Baker as *Psyche*.¹²⁰ Parks Canada Marine Archaeologist Jonathan Moore, who took part in the 1987 survey, has continued in the footsteps of Preston, conducting numerous dives on the wrecks and into the Canadian and British archives. Between 1995 and 1998 a photographic survey of the wrecks was conducted as part of a larger survey spurred on by the advance of zebra mussels into the Great Lakes. Preliminary archaeological work was also continued by Moore between 1999 and 2002 that involved remeasuring the length and breadth of the remaining timbers, taking careful measurement of the mast steps removed from Wreck Baker, further photographic recording, and archaeological examination. Moore measured the wrecks at 160 feet 7 inches (48.95 meters) for Wreck Able and 131 feet 8 inches (40.13 meters) for Wreck Baker. Using these measurements, Moore concluded Wreck Able is *Prince Regent (Kingston)*, the largest of the three frigates. When compared to the as-built lines planes taken by Thomas Strickland, Moore's length measurement is too large to be either *Princess Charlotte*, with a gun deck of 121 feet (36.88 meters), or *Psyche*, with a gun deck measurement of 130 feet (39.62 meters), and too small to belong to the first-rate ship *St. Lawrence* with a gun deck length of 191 feet 2 inches (58.27 meters). His measurement of Wreck Able most closely fits Thomas Strickland's lines plan of *Prince Regent (Kingston)* that recorded a gun deck length of 155 feet 10 inch (47.24 meters). Moore was also able to match his archaeological measurements of the mast step

spacing to Strickland's plan.¹²¹ Moore identified Wreck Baker as *Princess Charlotte (Burlington)*, as its length measured at 131 feet 8 inches (40.13 meters) is too great to be either *Montreal (ex-Sir George Prevost, ex-Wolfe)* or *Charwell (ex-Beckwith)*, and not long enough to be *Prince Regent*. Moore concluded that, based on the length he recorded for Wreck Baker, it could only be *Princess Charlotte* and the extreme deadrise indicated by the shape of the removed mast steps echoes that of *Princess Charlotte* in Strickland's lines plan. He therefore concluded that Wreck Baker is *Princess Charlotte*. However, in order to prove his hypothesis Moore felt that a more detailed study of Wreck Baker was necessary.

4.2 Archaeological Field Work on Wreck Baker in 2000

In 2000, at the suggestion of Jonathan Moore, an in-depth archaeological study of Wreck Baker was undertaken by a team of three Texas A&M students including the author. This study carried on from the point where Moore's work left off. The work focused on providing further archaeological evidence to support or disprove the preliminary conclusion that Wreck Baker is *Princess Charlotte* and to document the construction of one of the three frigates built in Upper Canada by the Royal Navy. During the 2000 field season the stem and stern assemblies were recorded along with the full length of the keelson, the cross chocks, 13 frame sections, and particularly interesting timbers including a breasthook and a transom piece that had become disassociated from the rest of the wreck.

The majority of the field work was conducted during the month of July 2000 by

Texas A&M students Daniel Walker, Amy Borgens Cramer, and Adam Kane. Ben Ford, an intern at the Lake Champlain Maritime Museum, was also able to spend a few days on the site. Prior to the start of field work a 'Licence to Conduct Archaeological Exploration Survey or Field Work' was obtained from the Ontario Ministry of Citizenship Culture and Recreation. This licence stated that “No silt, corrosion, or any other surface covering on or around the vessel, its equipment or machinery, shall be removed or disturbed.”¹²² In keeping with the limited scope of the licence no excavation was undertaken. Fortunately, the majority of the scantlings are accessible without any excavation being required.

Wreck Baker lies in shallow water oriented with the bow to the east in 11 feet 9 inches (3.6m) of water and the stern in 14 feet 9 inches (4.5m), though this changes according to the weather. The water clarity in Deadman Bay was good with visibility up to 20 feet (6.01 meters) at the beginning of the season; however, by the end of the second week, although still good, it had decreased due to the seasonal algae bloom. The water temperature averaged 65 degrees Fahrenheit (18.3 degrees Celsius) due to unseasonably cold and overcast summer weather. Fortunately, thunderstorms or unworkable conditions never interrupted the diving schedule. The site itself was reached from shore via a guide rope held down with cement core weights. The swim along the line took approximately 5 minutes with the diver arriving at the bow of the wreck. The site was marked during diving operations by three flags, one at the bow, one at the stern, and a third flag attached about half way along the length of the wreck. The middle flag was

brought in at the end of each day and retied again the next morning.

The first tasks of the excavation season involved laying a baseline tape along the length of the keelson and assigning numbers to the frame sets. The frame sets were numbered from 1-47, starting from stem to stern. The futtocks were differentiated using the system set out by J. Richard Steffy in *Wooden Shipbuilding and the Interpretation of Shipwrecks*. For example, on frame set 13 the cross chock was labeled 13-0, the first port futtock 13-1, and the first starboard futtock 13-2; from this point the port futtocks were assigned consecutive odd numbers and the starboard futtocks received even numbers.¹²³ Once this was done the recording of the keelson, bow, and stern construction was undertaken. These tasks, along with the recording of the first frame sections with a goniometer, kept the team busy for most of the first week. The goniometer consisted of an electronic level sealed inside a waterproof housing for use underwater. To record a frame, a tape was laid down along its length and the goniometer then placed on the tape, the number displayed was recorded along with the location on the tape. An overall plan of the site was prepared by Amy Borgens, who floated above the site and sketched the wreck section by section (figure 7). After returning from the site at the end of the day the sketched sections were transferred onto a larger site plan and any errors in scale corrected.

The evenings were spent testing the data gathered during the workday and planning upcoming dives. Testing the data involved drafting scale drawing of the notes taken underwater onto graph paper in order to discover any errors in measurement prior

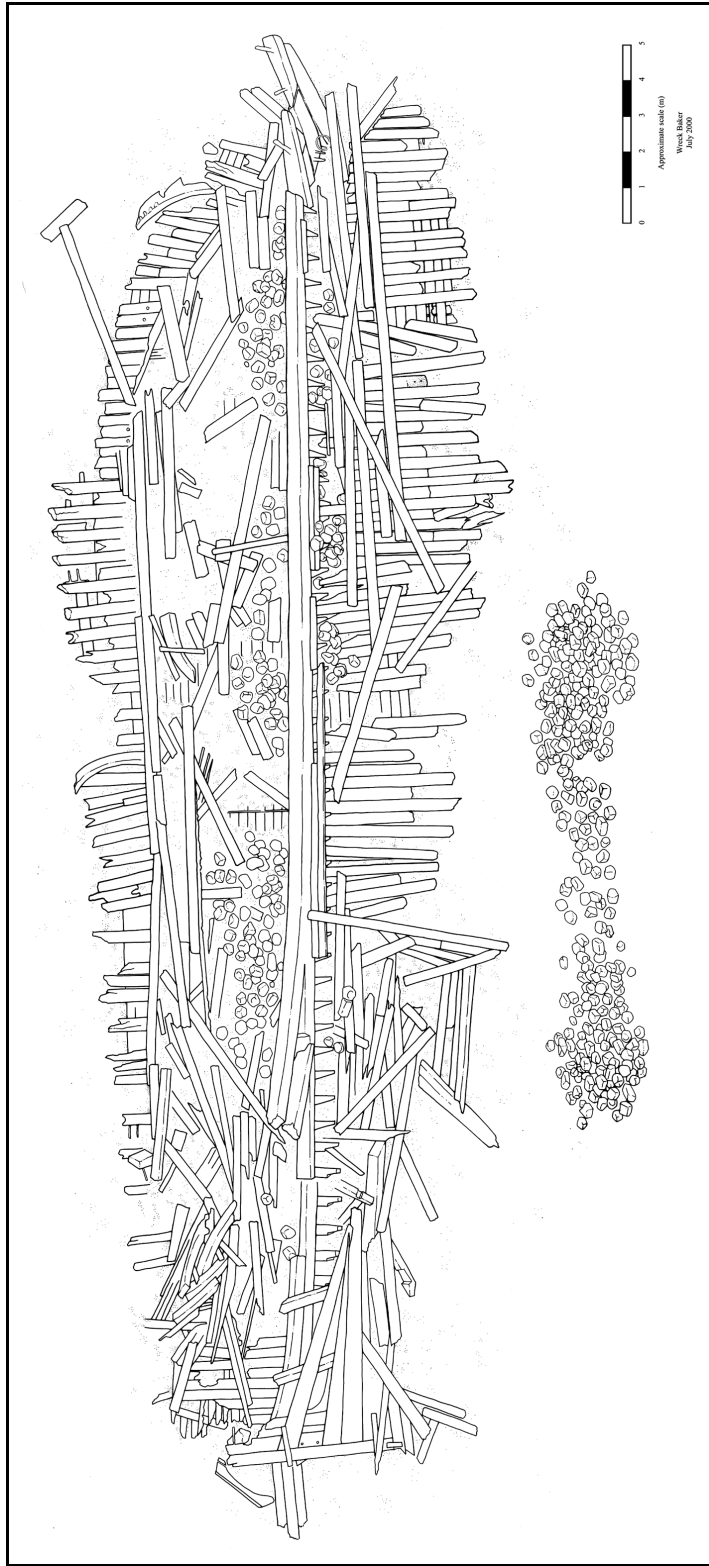


Figure 7. Site plan of Wreck Baker. (drawing by Amy Borgens).

to the conclusion of the field season. The final task of the evening was preparation of slates for the next day's recording. At the beginning of the field season five slates were prepared by attaching two mechanical pencils to a plastic clipboard. Every evening mylar was attached to the front and backsides of the slates with duct tape; the boards could then be used to record data underwater. At the end of the three and one-half week long field season the site was cleaned up by removing the tags used to identify the frames, the dive flags were removed, and the rope guide between the site and the shore was untied and reeled in.

4.3 Construction

As with any study of a wooden-hulled ship, there are certain features common to all ships and others that surprise archaeologists working on them. Most scholarship concerned with the building of ships deals with an idealized form of ship construction as put forth by the treatises in vogue during the period of the vessel being studied. Nautical archaeology reveals that in many cases the idealized forms in contemporary publications were merely that, with numerous factors such as materials, tools, and unique circumstances causing builders to stray from the ideal. The two Royal Navy frigates lying in the shallow waters of Deadman Bay are excellent examples of shipwrights straying from the ideal.

The majority of the wreck sits proud of the bottom and zebra mussels completely cover the hull obscuring many construction details. Wreck Baker is intact along the length of the keelson from stem to stern. The frames on the starboard side are complete

up to the turn of the bilge but have for the most part broken away from the keel-keelson assembly revealing the details of their unique construction. To port, the frames extend past the turn of the bilge and, because the ship settled on the bottom listing to port, they are still largely attached to the keelson. A line of bolts and associated clamp timbers that indicate the location of the orlop deck extend from the upper faces of the port frame timbers. Numerous timbers detached from the upper works of the ship now lie in the hold and are particularly abundant near the stern on the port side, making recording of the frames in this area impossible without extensive digging and shifting. The planking has pulled away from the stem allowing access to construction details, but this is not the case at the stern where the lower strakes are still in place. Two gudgeons remain attached to the stern post although the rudder is missing. The hull appears to have been constructed entirely with iron fasteners (there was no sign of trenails or copper fasteners). The main- and fore-mast steps were removed by Ronald Way in February 1938 and now reside at Fort Henry and at the Marine Museum of the Great Lakes at Kingston. A portion of the keelson is missing where it begins to rise towards the stern, perhaps due to recovery by museum personnel or destruction during military demolition exercises. The archaeological data indicate that the keel has broken at this point. As well as the detached timbers that have settled within the confines of the wreck, there is a debris field around the perimeter of the site that includes many disassociated futtocks as well as a transom timber abaft the stern post. The wood species identifications discussed below are based on a small sample from each scantling type and are by no means

definitive (Appendix A). However, during the detailed study of the wrecks done by the author there was no evidence to suggest variation in wood species amongst similar elements.

4.3.1 The Keel

The white oak keel of the frigate was 121 feet 4 inches (36.97 m) long, 16 inches (40 cm) moulded and 12 inches (30 cm) sided. The upper face of the keel is notched so that the made floors average 4 inches (10 cm) lower than the first futtocks. This allowed the made floors to be held securely in place by the keel rising up to meet the first futtocks. On each side, the rabbet that fit the inboard edge of the garboard strake is 3 inches (7.62 cm) wide along the face of the keel and 1.5 inches (3.8 cm) deep. The rabbet is located approximately 1-inch (2.54 cm) below the bottom of the cross-chocks. The scarfs on the keel were buried in the sediment and not visible, and the false keel, 2.5 inches (3.75 cm) moulded, was visible for less than 6 inches (15 cm) at the stern but was buried for the rest of its length. It is likely that scarfs similar to those found on the keelson were used to assemble the individual pieces of the keel. During attempts to reconstruct the ship on paper it became apparent that the keel had fractured at the point where the deadwood begins to rise towards the stern post. This fact is not apparent to an observer swimming over the wreck. The after extremity of the keel (visible above the sediment) revealed a fishplate that joins the keel to the sternpost. The keel terminates in a skeg that protected the forward edge of the rudder in case the ship ran aground.

4.3.2 *The Stem*

The stem was built using straight timbers that were cut, shaped, and joined to be used in place of compass timbers. It consists of eight large white oak timbers fastened together with 1-inch (2.5 cm) diameter bolts (figure 8). The joint of the gripe, the stem, and the knee of the head, along with a wedge-shaped timber between them, are fastened together by a pair of circular iron bands bolted together from opposite sides of the gripe. This circular band serves the same function as the more conventional horseshoe plate, but serves to reinforce the extra timbers required by the lack of compass timber on the lakes. The inner portion of the stem consists of two apron timbers and one large stemson timber. Cant frames were fastened directly to the apron using more 1-inch (2.5 cm) bolts. The two inner stem posts were rabbeted to fit the ends of the planking.

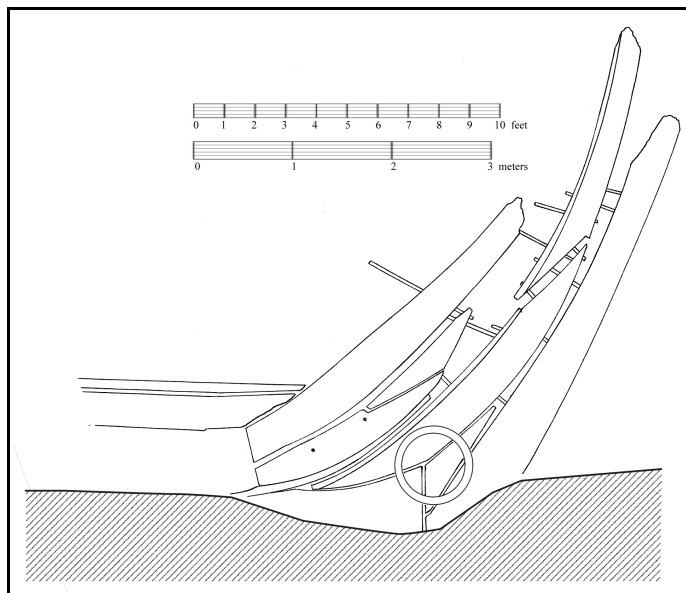


Figure 8. Bow assembly from starboard. (drawing by Daniel Walker).

4.3.3 The Stern

It is unfortunate that at the stern five strakes of planking on the starboard side conceal most of the deadwood construction from view (figure 9). The white oak sternpost, 13 1/8 inches (36 cm) moulded, and 12 inches (30 cm) sided, rises 13 feet 9 inches (420 cm) from the keel at an angle of 91 degrees. The inner sternpost, moulded 15 inches (38 cm) by 12 inches sided (30 cm), is notched at a height of 12 feet 2 inches (370 cm) for the first transom, which was held in place with a single 1-inch (2.5 cm) bolt. Immediately above this, another bolt would have held a notched transom piece. Just aft of the stern, lying on the bottom, is a transom timber that has broken away. The size of this piece suggests it was originally higher up in the hull than the current height of the posts.

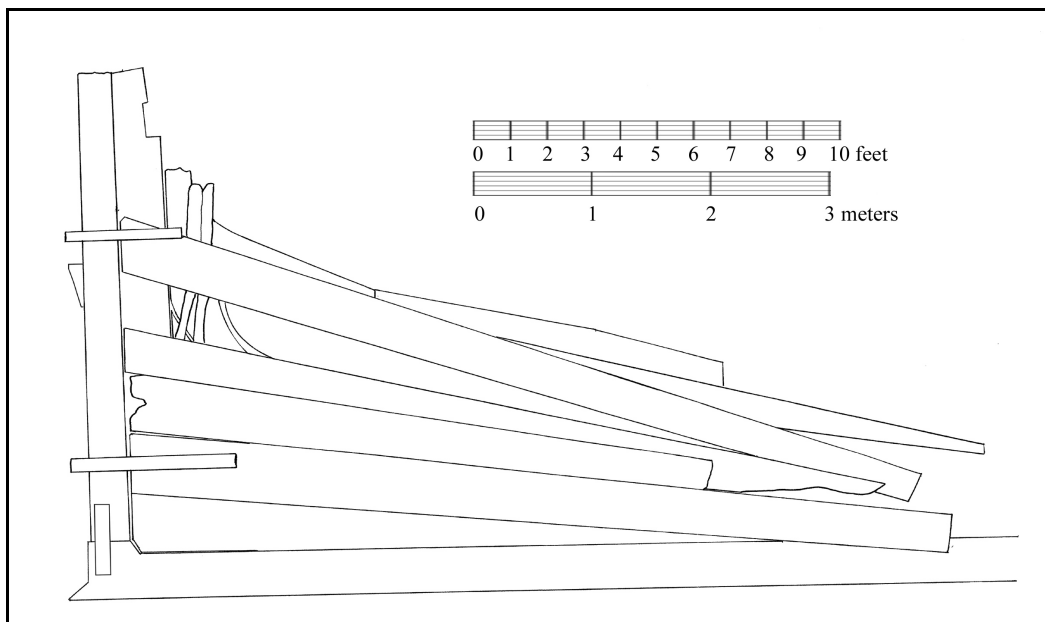


Figure 9. Stern from starboard. (drawing by Daniel Walker).

The deadwood knee rises to a height of 11 feet 2 inches (340 cm) on the inner sternpost and abuts the keelson assembly at its forward end. A rectangular impression in the top of the deadwood indicates the location of a deckbeam stanchion. Two wrought-iron gudgeons remain at heights of 3 feet 9 inches (114 cm) and 10 feet 6 inches (320 cm) from the base of the keel. Although both gudgeons are 8 inches (20.3 cm) wide, the straps of the lower one are longer at 5 feet (152 cm) than the straps of the upper one at 3 feet 6 inches (107 cm). A triangular iron pintle stop, or 'dumb brace', is located 7 inches (17.8 cm) beneath the higher gudgeon and measures 15 1/8 inches (38.5 cm) in length. Unfortunately, the rudder is missing and may well have been removed prior to the sinking of the ship.

4.3.4 The Frames

Wreck Baker had a unique method of constructing the white oak frames that affected other elements of the ship's construction. Three types of frames were used in the construction of the ship. Ten cant frame per side were bolted to the stem timbers at the bow, followed by 47 full-frame sets and, finally, at the stern nine half frames were bolted to the deadwood. Sections were taken at frame sets 2, 4, 13, 18, 19, 25, 27, 29, as well as at cant frames 1 and 5, the third half-frame forward from the stern and also one of the frames that had become detached from a cross chock on frame set 41-47. The number of sections that could be taken was limited by the stipulation in the archaeological licence that prevented disturbing the overlying timbers.

The ship was heavily framed with less than 1.5 inches (4 cm) of space between

frames. Each frame consisted of a pieced-together or 'made' floor next to a first futtock. At the keel, the made floors averaged 12 inches (30 cm) sided and 16 inches (40 cm) moulded, and were bolted to first futtocks of the same dimensions (figures 10 and 11). The made floors were constructed by attaching two frame timbers to either side of a cross-chock using three bolts per side (figure 12). The cross-chock and its associated frame timbers fit together with vertical scarfs that extend from the keel centerline to the outer ends of the cross-chock. A 1-inch (2.5 cm) diameter bolt driven through the keelson, cross-chock, and into the keel fastened each made frame assembly into place. The individual cross-chocks, while maintaining the same basic form, differ in their dimensions. Each cross-chock fit its corresponding frame timbers very tightly. This means that rather than cutting chocks and notches to pre-determined shapes they were all custom cut and formed as individual units and fitted together as such. No chock could be used with a different set of timbers than the ones it had been cut for. The heels of the first futtocks were notched to fit over the keel, and a simple triangular unfastened chock was placed atop the futtock heels to fill in the space between the frame and keelson.

In many cases the made floors were not notched over the keel, but instead the top surface of the keel was notched to fit the floors. Forward of the midship frames, the cross-chocks are positioned aft of the adjoining timbers and, aft of midships, they are positioned forward of the attached timbers. The first futtocks are always on the same side as the chocks. This means that at midships there is a single first futtock between two made-floors (figure 13).

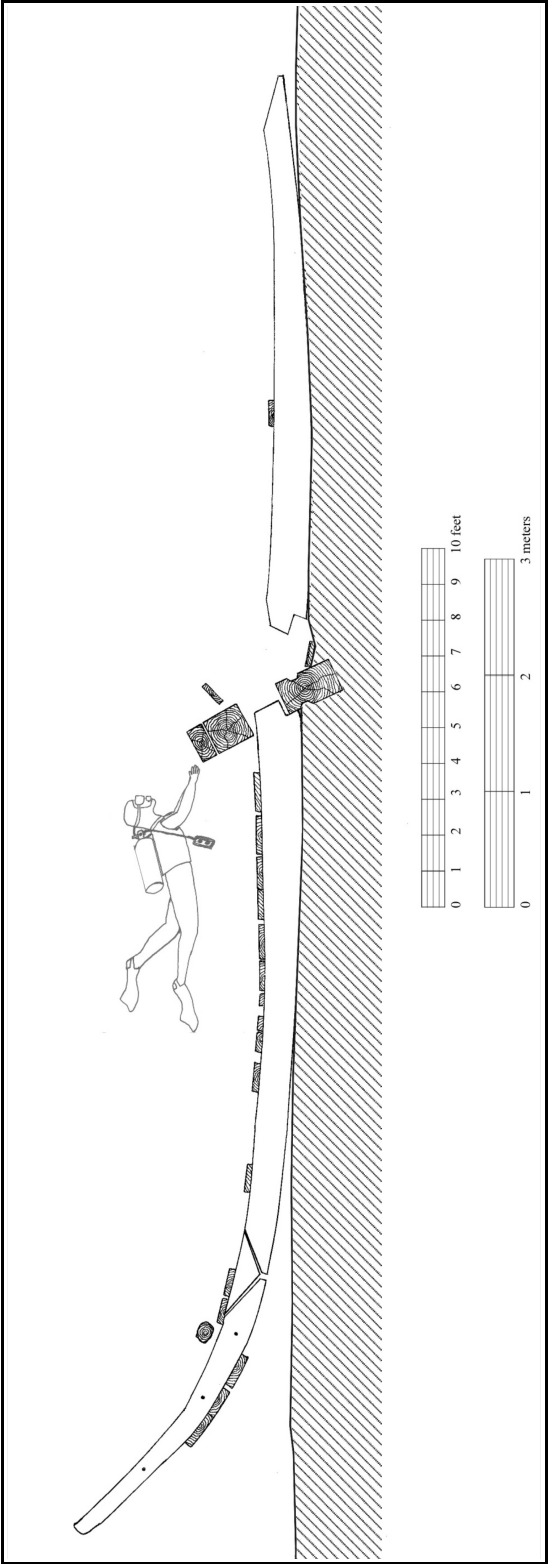


Figure 10. Profile of Frame 13 looking forward. (drawing by Daniel Walker).

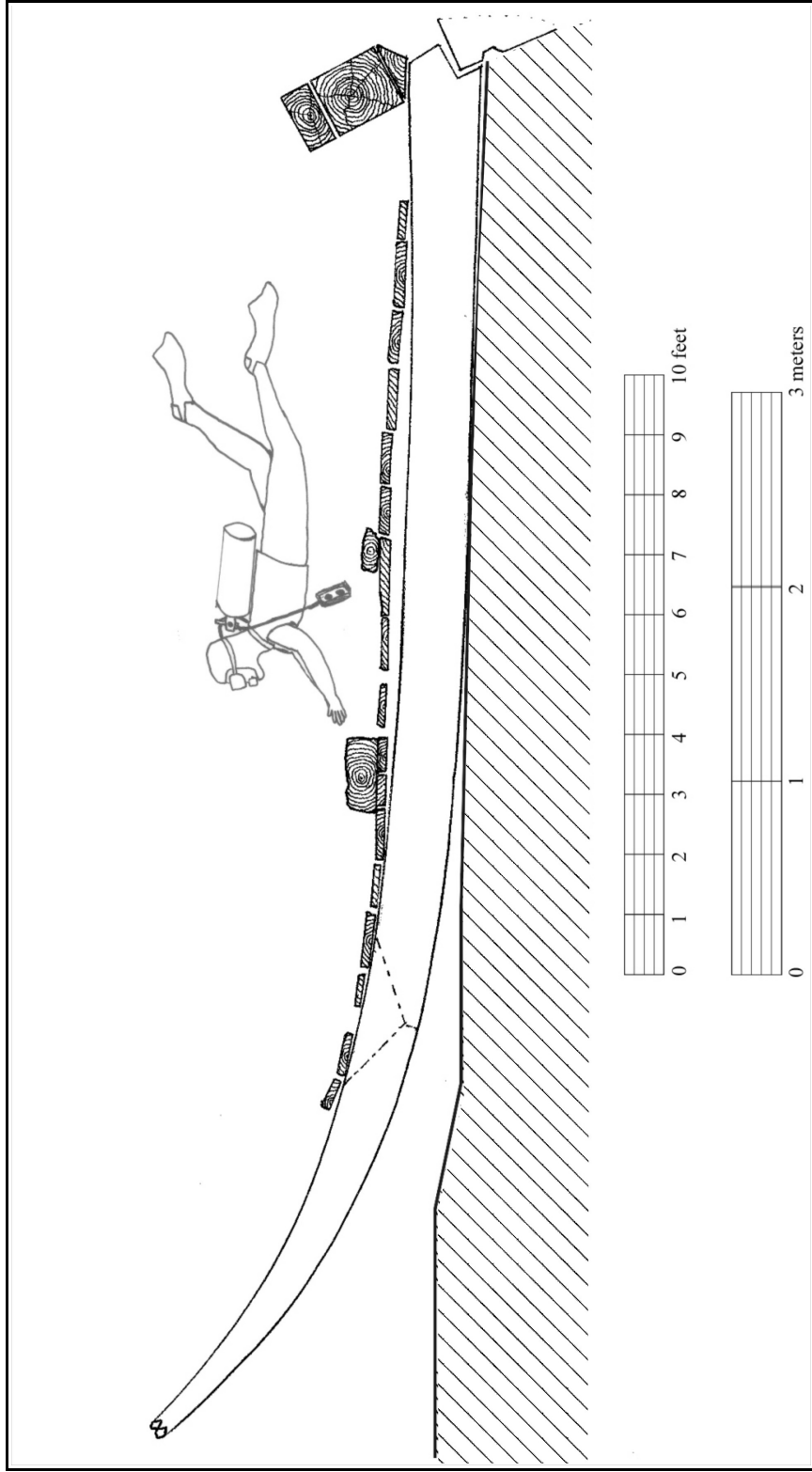


Figure 11. Frame 19 port only, looking forward. (drawing by Daniel Walker).

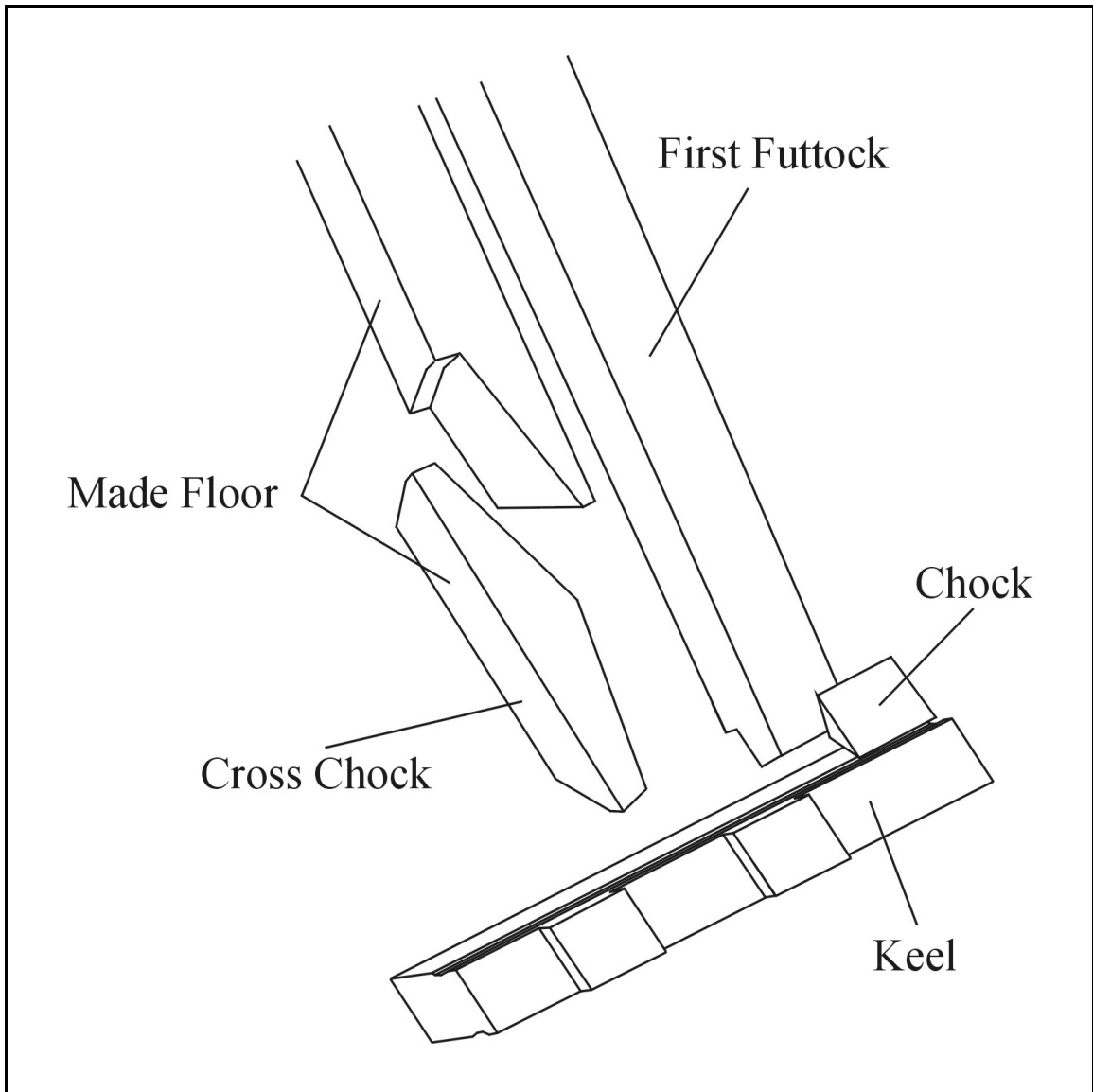


Figure 12. Frame expansion from above. (drawing by Daniel Walker).

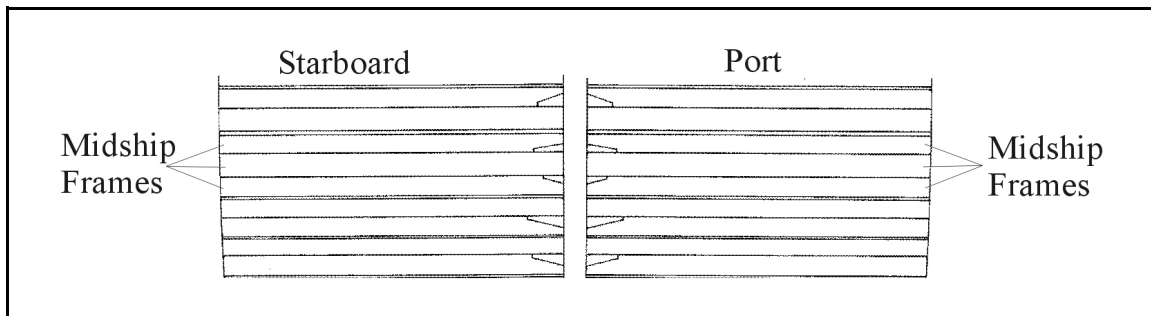


Figure 13. Framing pattern at midships. (drawing by Daniel Walker).

The ship is preserved on the port side up to the third futtock. The butt of the first futtock head and the third futtock heel is reinforced with a chock. This simple chock was attached to the corresponding futtocks using four iron spikes. All other frame connections were accomplished by simple butt joints. Outboard of the chocks, between the first and third futtocks, are a series of bolts that appear to have held the orlop deck structure in place. In some locations wood fragment that resemble broken lodging knees are still attached to the bolts.

The six frame sets furthest aft (41-47) are somewhat different from the rest (figure 14). As the deadrise increased towards the stern the builders modified the made-floor system to accommodate it. The cross chocks of these frames increase in sided dimensions compared to their counterparts further forward and they are notched on their after face. The attached timbers are correspondingly notched on the forward face and the cross chocks are attached to the frame timbers with four large bolts (figure 15). The timbers are joined so that the outboard face of the assembly has a constant sided dimension. The timbers attached to the chock do not cross the keel but rather rest their

heels against the deadwood below the chock. On the made floor of this type furthest forward in the stern, the area below the chock forms a triangle with the interior face resting against the deadwood, the outboard face against the planking, and the upper face against the chock. As they proceed further aft and the deadwood rises, this triangular shape is maintained at the base but there is more rectangular frame between the chock and the triangle at the base. Between adjacent made floors there is a first futtock with its heel bolted to the side of the deadwood. Aft of frame set 47 there are nine half frames that butt against the sides of the deadwood.

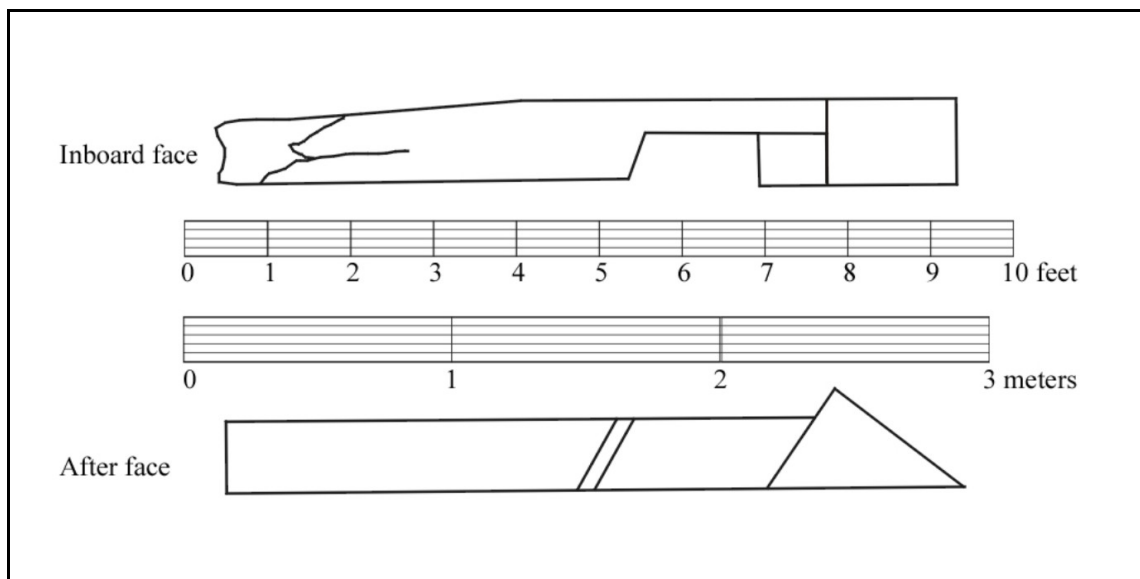


Figure 14. Stern frame showing inboard and after faces. (drawing by Daniel Walker).

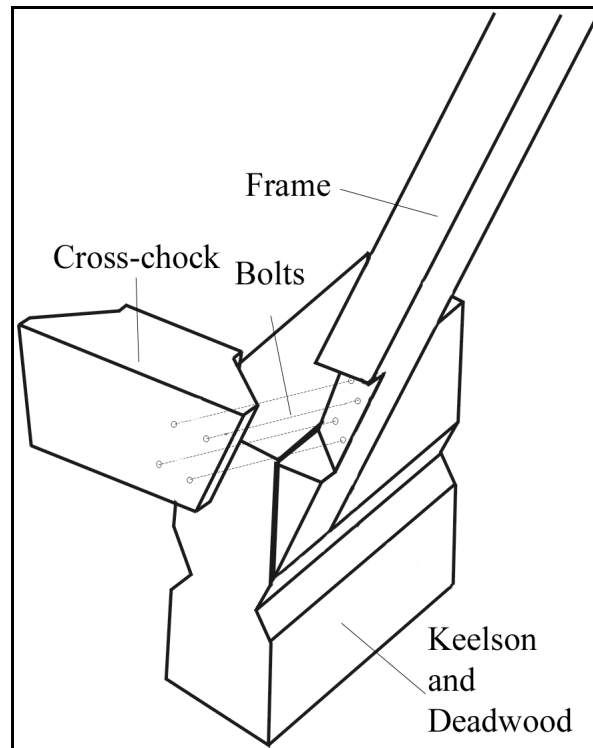


Figure 15. Stern frame expansion. (drawing by Daniel Walker).

The frames attached to the bow assembly forward of the keel and keelson are canted forward at ever increasing angles and attached to the stem timbers with large 1-inch (2.5 cm) diameter iron bolts. These cant frames are typically found in bow construction. As the angles changed filler pieces were sometimes necessary, these were not attached to the stem but rather bolted to the adjacent frames.

The curious tripartite system of constructing the floors allowed for smaller individual timbers to be used in the construction of the floors and also permitted greater deadrise than would have been possible using a single timber for the floor. It may have been instituted due to a lack of good compass timber of the proper dimensions. Howard Chappelle states “the lake frigates had their capacity much reduced by means of great

deadrise, intended to make them fast and weatherly. The *Princess Charlotte* was extreme in this respect.”¹²⁴ It may also have been instituted to save time but this seems unlikely as the tight fit between the cross chocks and frame timbers and their lack of uniformity suggests a labor-intensive process.

4.3.5 *The Keelson*

The keelson begins at the stemson and runs to the deadwood knee at the stern. It was an assembly of five white oak timbers measuring 12 5/8 inches (32 cm) moulded and 12 inches (30 cm) sided, capped over by four smaller white oak timbers measuring 5 1/2 inches (14 cm) moulded by 12 inches (30 cm) sided that make up the rider keelson (figure 16). The rider keelson is fastened to the keelson using spikes that were driven on alternate sides of the keelson centerline. All keelson timbers were flat scarfed together and bolted in place. Although the rider keelson hides the exact bolting pattern, it is clear that a bolt was driven from the keelson through each cross chock and into the keel. The keelson does not curve up at the bow but rather runs straight, ending abruptly at the stemson (figure 17). The keelson is not notched as the upper surfaces of the frames were flush.

The upper surface of the rider keelson was notched to accept the stanchions supporting the lower deck beams. The markings on the top of the rider keelson indicate that the stanchions were inserted after the installation of the deck beams had been completed. The impressions in the rider get deeper as they move aft suggesting that the

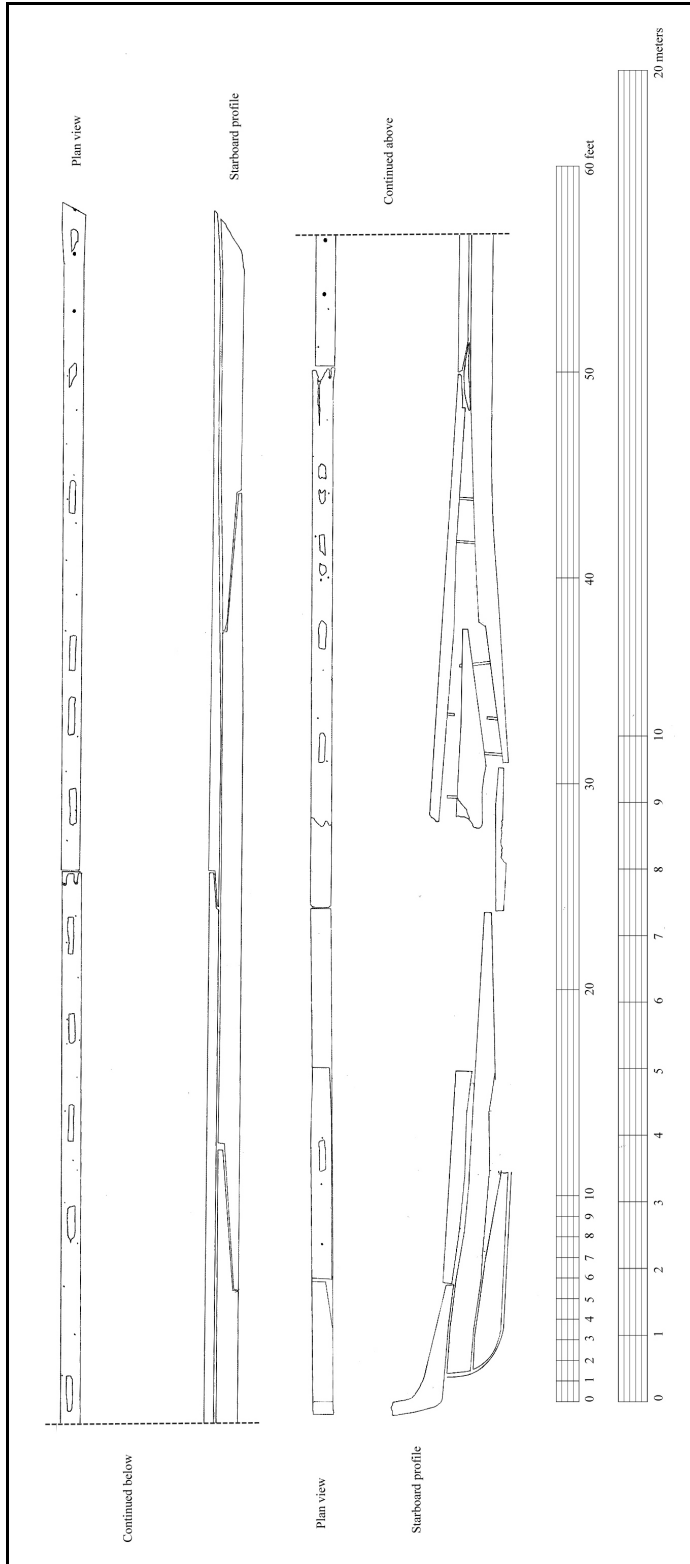


Figure 16. Keelson. (drawing by Daniel Walker).

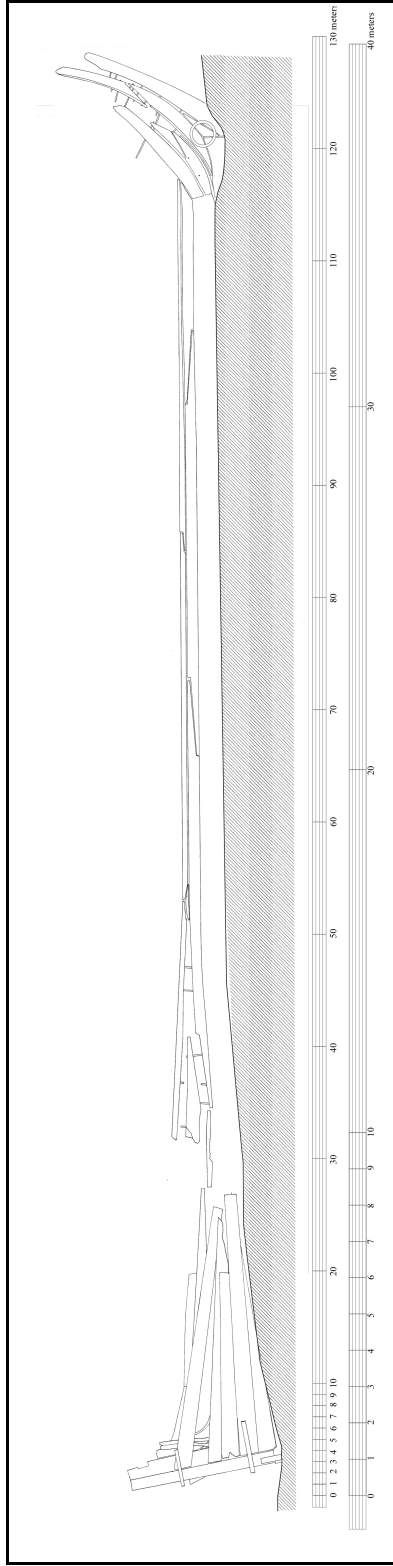


Figure 17. Depiction of full length of the wreck. Frame locations not shown. (Drawing by Daniel Walker).

tops of the stanchions were placed into position against the deck beams and then hammered at the base until vertical between the deck beam and the rider keelson. The stanchion positions noted during the recording of the wreck provide important information concerning the placement of the deck beams as well as suggesting the locations of the mast steps and the hatches in the deck above.

At the point where the deadwood begins the keelson timber curves downwards and has broken apart (figure 17). This timber is the last before the deadwood begins and should lie straight. It appears to have been distorted by the forces that led to the fracture of the keel and the splaying of the timbers at the forward end of the deadwood. The start of the rising deadwood is indicated by an increase in the moulded dimensions of the keelson and the insertion of a deadwood timber beneath its after end. The shape of the enlarged keelson timber forces the rider keelson to begin to curve up towards the stern. Unfortunately, the after portions of the transitional keelson and rider keelson timbers have been destroyed.

4.3.6 The Mast Steps

Two mast steps were removed from the wreck by Ronald Way's salvage team in 1938 and were recorded by Jonathan Moore at Fort Henry, the National Historic Site of Canada that overlooks Deadman Bay (one of these is now on display at the Great Lakes Maritime Museum in Kingston). The two mast steps are of similar construction. Both are made of four timbers, approximately 12 inches (30 cm) square bolted together using four fish plates with four 1-inch (2.5 cm) diameter bolts between each pair and four

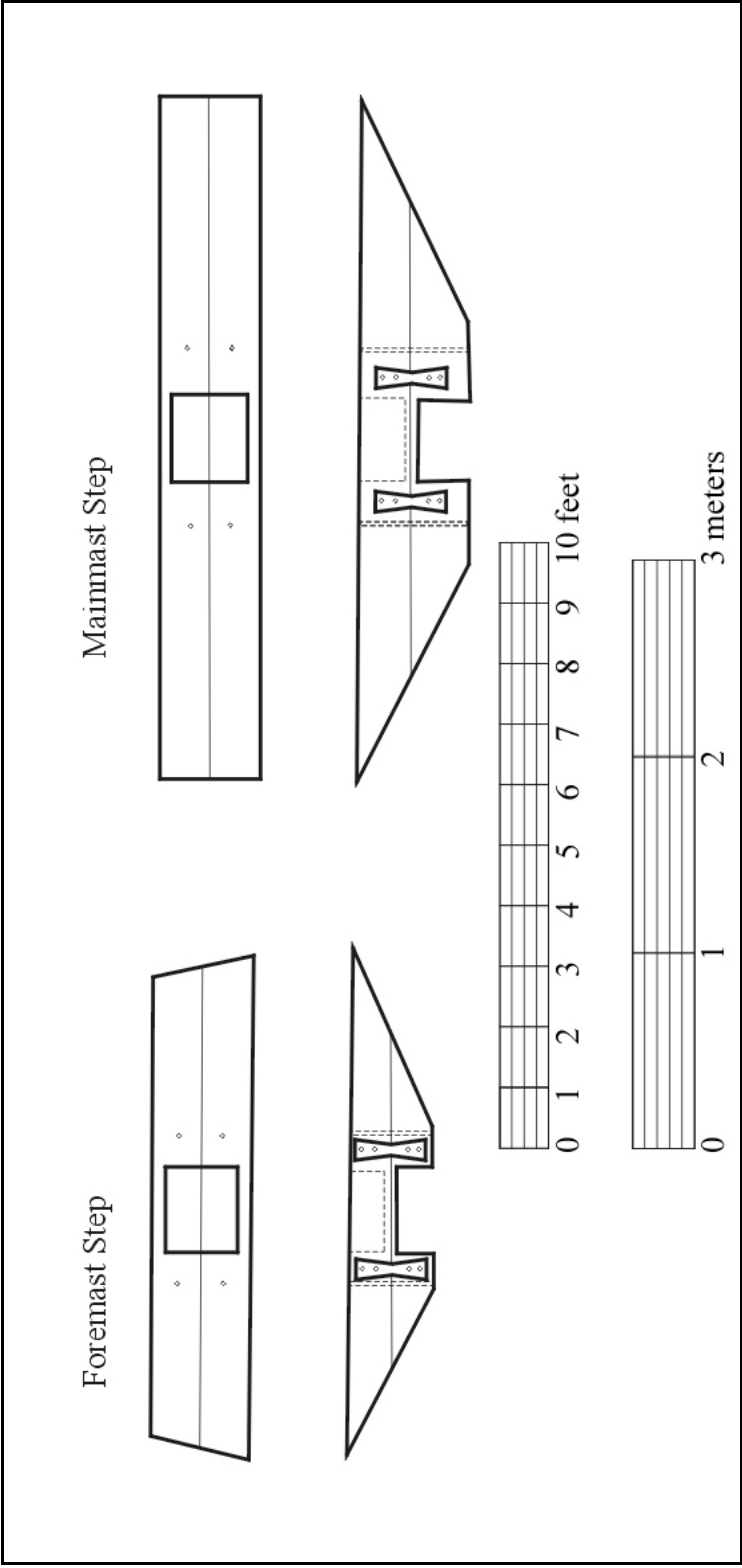


Figure 18. Foremast and mainmast steps. (based on drawings by Jonathan Moore.).

vertical bolts, two per timber (figure 18). The mast steps were notched over the keelson and attached to the frames using the four vertical bolts, two per side. The foremast step's outboard edges are angled to accommodate the lateral shape of the ship as well as the deadrise.

Wreck Baker's 'saddle' mast steps are a type common to 18th-century British and British colonial built vessels. Similar steps have been found on other lake warships, including the 16-gun sloop *Boscawen* built on Lake Champlain in 1759 and the schooner *Nancy* built on the upper Great Lakes in 1789.¹²⁵

4.3.7 *Knees*

Two knees 3 ¾ inches (9.5 cm) thick can be found in the jumble of scantlings detached from the hull near the stern on the port side of the wreck. Their orientation suggests that they are associated with the bolts that mark the location of the orlop deck. They are therefore identified as lodging knees. The distance between the two, 6 feet 4 inches (193 cm), correlates with the positions of the deck beams shown by the location of the stanchion notches in the rider keelson. The knee recorded (figure 19) was attached to the frames with three 1-inch (2.5 cm) diameter bolts. Two more of these bolts were used to attach the knee to the deck beam. These two bolts were driven straight through and a third bolt was toed in where the knee bends. The toed-in bolt angled up and aft towards the deck beam. An indentation 6 inches (15.2 cm) long and less than a ½ inch (1.25 cm) deep indicates the location of a ledge. The timbers that have accumulated around them likely preserved the two knees at the stern. There is evidence that knees

further forward have been broken or eroded away so that they are no longer easily recognizable as such. However, in some cases these timbers become thicker as they proceed aft suggesting that they were once lodging knees.

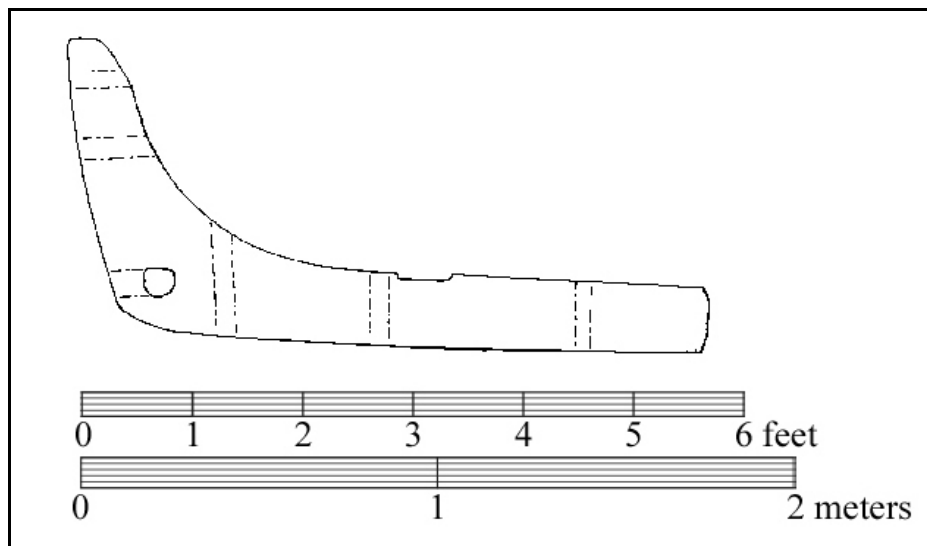


Figure 19. Bottom of a lodging knee recorded on the port side of the keelson near the stern. (drawing by Daniel Walker).

4.3.8 Other Reinforcing Timbers

A timber identified as a breasthook was found on the port side near the stem (figure 20). This timber would have been attached to the stem and the cant frames by eleven 1-inch (2.5 cm) diameter bolts to reinforce this point of stress. Two transom timbers that would have performed a similar duty at the stern were located, one still bolted in place and the other resting on the lake bed, aft of the stern post (figure 21). The shape of the transom pieces provide a clue to the shape of the ship at the stern.

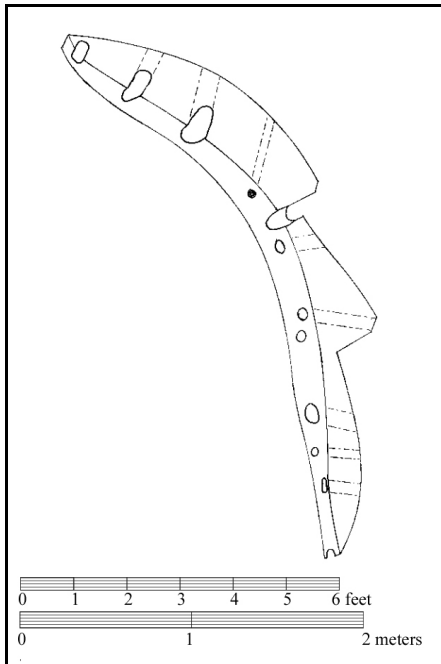


Figure 20. Breasthook found on port side near bow. (drawing by Daniel Walker).

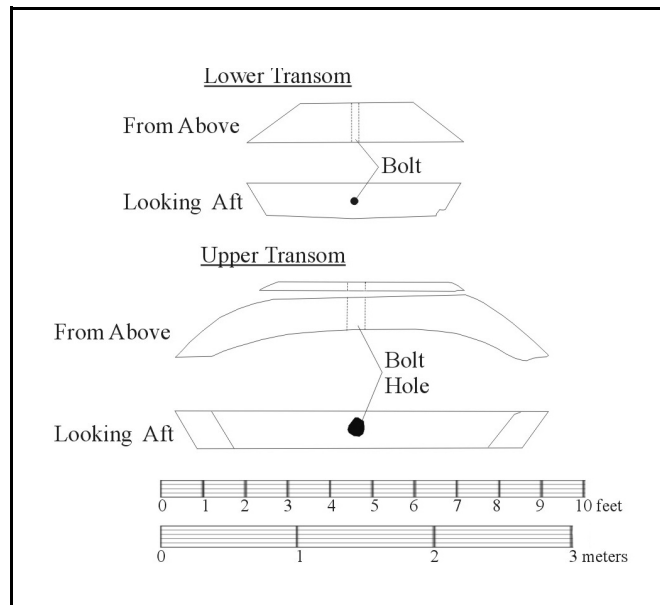


Figure 21. Two transom timbers. (drawing by Daniel Walker).

4.3.9 Ceiling Planking

Ceiling planking is evident on the port side, and much of it is still in place making recording of the frames problematic. At midship there are 16 white oak ceiling planks between the keelson and the clamp. The ceiling strakes are between 8 5/8 inches (22 cm) and 12 5/8 inches (32 cm) wide and 1-inch (2.5 cm) thick. Careful examination of the ceiling planking revealed that at frame 32, a semi-circular notch had been cut out of the first ceiling plank to port of the keelson. Unfortunately, its twin to starboard is no longer in situ so it can not be confirmed if this was true on both sides of the ship. The semi-circular notch is 15 3/4 inches (37.5 cm) by 7 1/16 inches (18 cm), and likely indicates the location of a 15 inch (38 cm) diameter bilge pump used for removing water from the hold. The bilge pump would have typically extended down between the frames to the hull planking. Due to the tight frame spacing in this ship, however, the pump had to sit atop the frames.

4.3.10 Hull Planking

The hull planks were butt joined and attached to the hull with 7 1/2 inch (19 cm) long spikes placed diagonally, two per frame. The hull planking at the turn of the bilge is 12 inches (30.5 cm) wide by 3 inches (7.6 cm) thick, while at the stern the garboard and the two adjoining strakes are 20 inches (51 cm) wide at the sternpost and narrow slightly as they move forward. The fourth strake from the keel is smaller at 16 inches (40.6 cm) and the fifth and sixth strakes again become 20 inches (51 cm) wide. The stern plank at the fourth strake appears to meet a stealer at its forward end.

4.3.11 Fasteners

The ship was built entirely with iron fasteners. The large timbers that make up the skeleton of the ship were held together with 1-inch (2.5 cm) diameter drift bolts driven through pre-drilled holes. This method of securing the timbers together is extremely strong. When the wood becomes wet it swells and the iron bolts are locked in place. Smaller hull timbers, including the ceiling and hull planking were fastened using iron spikes of various lengths. The only evidence of a treenail was found in frame 13, where it appears to have been used as a plug for a knot hole rather than as a fastener.

5 PUTTING IT BACK TOGETHER AGAIN

5.1 Reconstruction

In order to analyze the construction of Wreck Baker it is first necessary to reconstruct it on paper. To do this, timbers separated by 180 years of natural and human disturbance must be realigned and pieced together as drawings. As a first step the stem, stern, and keelson were reconstructed from the archaeological data. Once these elements had been drafted independently and rejoined, the frames were placed atop the keel and their shapes were reconstructed. With this data the three-dimensional shape of the ship was drafted to create a set of ships lines. Such a summary of the reconstruction process naturally glosses over many of the challenges that arose along the way. This section of the thesis will describe the re-assembly process and what it reveals to us about Wreck Baker. The frames will now be referred to in the traditional manner the builders would have used. Frames aft of midships are labeled numerically and those forward of midships labeled alphabetically (see conversion chart Appendix C).

The stem was easily reconstructed, as many of its timbers remain in their original positions while those out of place were repositioned based on their unique shapes and the locations of the bolts used to fasten them together. The keelson and rider keelson were also reconstructed without difficulty as both, with the exception of a few small gaps, remained intact as far aft as frame 22 where the keelson begins to rise to accommodate the stern deadwood. The reconstruction of the stern aft of frame 22 was more difficult. Although the sternpost is completely visible down to the skeg, forward of this the keel

quickly disappears beneath sediment and debris. The reconstruction was further complicated by the deadwood structure being concealed by hull planking. It was possible to reconstruct the upper deadwood configuration from measurements taken where one of the hull planks was missing but unfortunately the lower deadwood was inaccessible for such an examination.

The next step, the 'assembly' of the stem, keelson, and stern sections was exacerbated by the fact that the construction features were concealed at the stern. Joining the stem to the keelson was straightforward as the two sections, except for a small gap that had formed, were still 'as built'. Reassembling the stern and the keelson was more problematic. When the two sections were fit together, the keel did not line up. After re-examining the data and checking for errors the source of the problem revealed itself. As the keel is not visible for much of the distance between the stern and frame 23, the lower deadwood hidden by planking, and the timbers at the end of the keelson broken and dislocated, it was not obvious during the field work that the keel is broken between frames 26 and 27. This epiphany led to a rethinking of the relationship between the stern and keelson that produced a much more viable reconstruction. The final reconstruction provided for more rise in the keelson at the stern, thereby allowing room for more deadwood and creating a stronger, more plausible stern construction.

Once the backbone of the ship had been reconstructed, it was necessary to determine the shape of the hull. To accomplish this, the 14 frame sections taken in the field were drafted and properly positioned over the length of the keel to provide a

representation of the ship as built. While the port frames are still bolted to the cross chocks, the angle at which they meet the keel and keelson is slightly distorted due to a twist along the length of the keel and keelson structure. The starboard frames have broken away and lie on the sand next to the keel. Unfortunately, many of the port frames could not be recorded due to the debris on top of them. As a result, most of the sections were taken on the disjointed starboard frames. Frame A, one frame forward of midships, was recorded on both sides of the keel, and the port frame appears to be close to its original position.

A number of clues were used to determine the correct angle of deadrise for the frames, one of the first being the angle of deadrise where a frame met the keel. It was assumed that the frame would sit flat on the keel and it was positioned on paper in this manner. Another clue was the position of the bolts that held the deck structure in place. The depth of hold was known for both *Princess Charlotte* and *Psyche*, and the frames were placed so that they coincided with the historical data. The maximum moulded breadth on *Psyche's* lines is 35 feet 4 inches (10.77 meters), while on *Princess Charlotte* the maximum moulded breadth is shown as 37 feet 2 inches (11.33 meters). In order to achieve the narrower breadth of *Psyche*, the angle of deadrise would have to be increased, yielding a frame section that differed considerably from the recorded lines. The same is true for the depth of hold, for on *Psyche* the depth of hold is 10 feet 3 inches (3.12 meters). In order to achieve this, the archaeologically recorded frames would have to be positioned in such a way that the deadrise would increase further, making it even

less likely to be *Psyche*. When frames A, L, 5, 7, and 11 were positioned instead to replicate the depth of hold recorded for *Princess Charlotte* (8 feet 8½ inches or 2.65 meters), although the deadrise was less severe than that found in the Strickland plan, the maximum breadth for *Princess Charlotte* was replicated. The less severe deadrise might be accounted for by changes in the frame shapes due to distortion as the wreck settled on the bottom and fell apart over time.

Although little of the orlop deck remains, several features do reveal its construction. Rectangular notches in the top of the rider keelson provide the locations of the deck stanchions and the deck beams they supported. A series of bolts show the location of the lodging knees that supported the orlop deck. As we have seen, only two complete lodging knees were found on the wreck, located near the stern, though the badly damaged remains of others along with the bolts that held them in place can be found along the length of the wreck. Notches placed on the inboard face of the recorded lodging knees indicate the existence of ledges between the deck beams. Interestingly, the plans of *St. Lawrence* show a similar construction with lodging knees between the beams on the orlop deck, though absent on the decks above, and without evidence of hanging knees. Other than the lodging knees there is no evidence of knees among the remains of Wreck Baker.

Although Wreck Baker's saddle-type mast steps were removed from the wreck, their positions are indicated by bolts driven through the rider keelson. One bolt was placed fore and aft of each mast step and driven through the rider keelson and the other

central timbers to provide additional support for the masts. The foremast step was located over frames L and M and the mainmast step was positioned over frames 13 and 14. The heads of these bolts are flush with the top of the rider keelson, indicating that they were designed to strengthen the structure at this point rather than securing some type of block or chock in place. The shape of the mast steps also helped to determine the deadrise of the lower hull.

The stem, keelson, stern, and frames provided the principal evidence for determining the overall shape of the ship, but numerous smaller timbers and details were also noted and taken into consideration. The two transoms, one still bolted in place and the other lying in the sand behind the wreck, allowed the curvature of the ship at the stern to be accurately reconstructed.

5.2 Analysis

To determine the identification of Wreck Baker, the archaeological record needs to be compared to the historical record of the two candidates whose lengths are similar to that of Wreck Baker, *Psyche* and *Princess Charlotte*. Fortunately, lines plans exist for both ships. These plans provide information on the length, breadth, and shape of the ships that can be compared with the archaeological data. Three separate plans are available that shed light on the identity of the wreck. The first is a plan of *Psyche* drafted for the Admiralty December 1813 (figure 22), the other two plans purportedly represent *Princess Charlotte*.

The plan of *Princess Charlotte*, drafted by John Goudie in 1813 (figure 23),

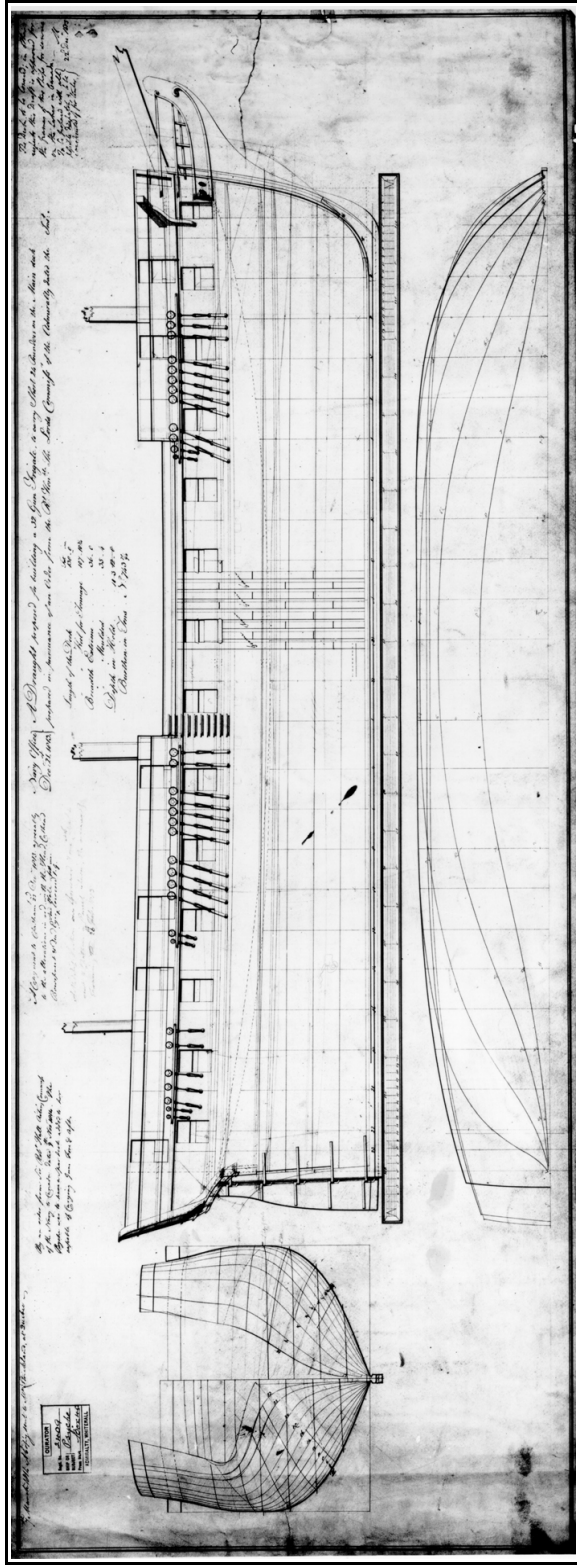


Figure 22. The proposed draught of *Psyche*. (National Maritime Museum, neg DR2409).

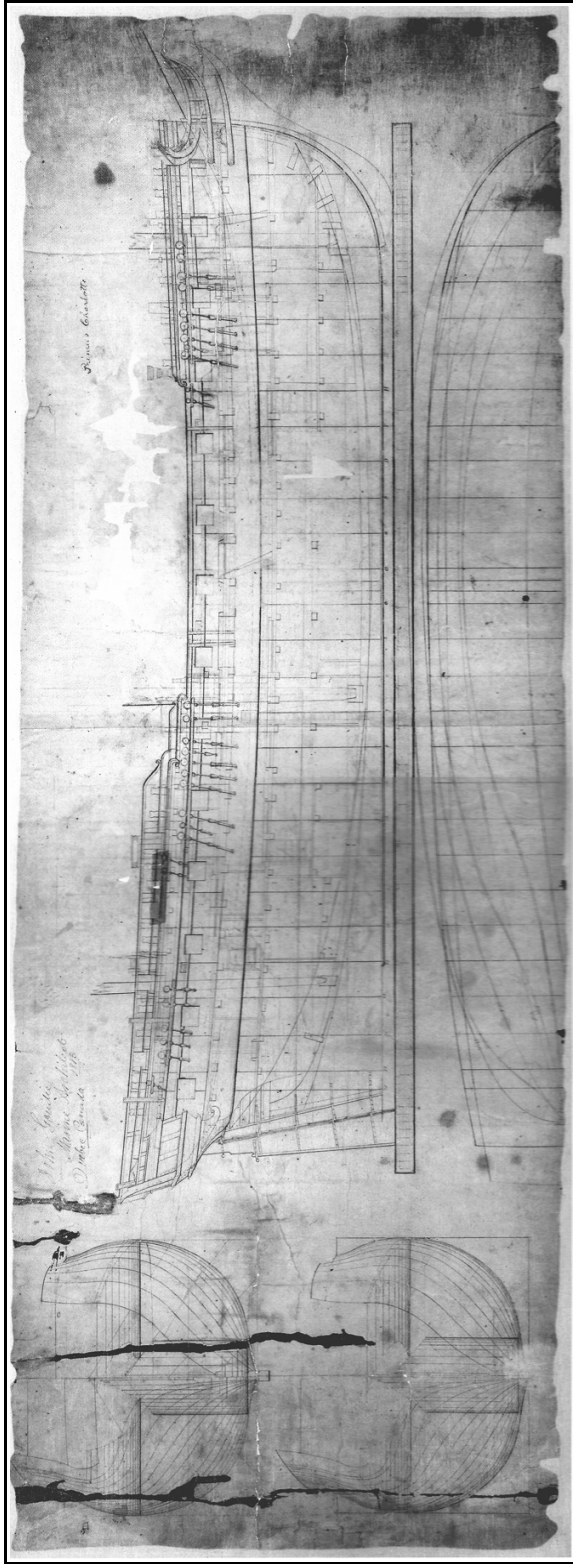


Figure 23. Goudie's plan thought to be of *Princess Charlotte*.(NAC NMC-97256).

depicts a frigate with little deadrise, a classic ocean-going shape, that is in stark contrast with the *Princess Charlotte* lines taken from the hull and drafted by Thomas Strickland in 1815. The Strickland plan depicts a frigate with extreme deadrise, with hold space so limited that it could only have operated on the Great Lakes (figure 24). There are several questionable features regarding the identification of Goudie's plan as *Princess Charlotte* (in addition to its marked difference from the Strickland plan recording the ship as built in 1815). Script above the stern of the frigate records “John Goudie/ Marine Architect/ Quebec Canada 1813” and then, in another hand, smaller writing over the bow identifies the draft as *Princess Charlotte*. Forward of the half breadth two lines of fainter script read *Prince Regent /Princess Charlotte*. It is possible that this draft was rediscovered after a significant time had elapsed and an effort was made based on its features and date to identify the illustrated frigate. Thus, it is possible that the identification as *Princess Charlotte* was erroneous. It is also possible that Goudie began with this design in mind in 1813, but that the design was significantly changed prior to the assembly of the frames. Since the 1813 Goudie plan differs greatly in its hull form from Wreck Baker, the archaeological data must be compared to the similar forms seen in the Admiralty plan of *Psyche* and the Strickland plan of *Princess Charlotte*.

The lines produced from the archaeological data (figure 25) reveal a ship with a sharp deadrise similar to, although not as extreme as, that found on the Strickland plan. Once reconstructed, the length of Wreck Baker's keel comes to 121 feet 4 inches (36.98 meters) a length that falls between those recorded for *Princess Charlotte* as 118 feet

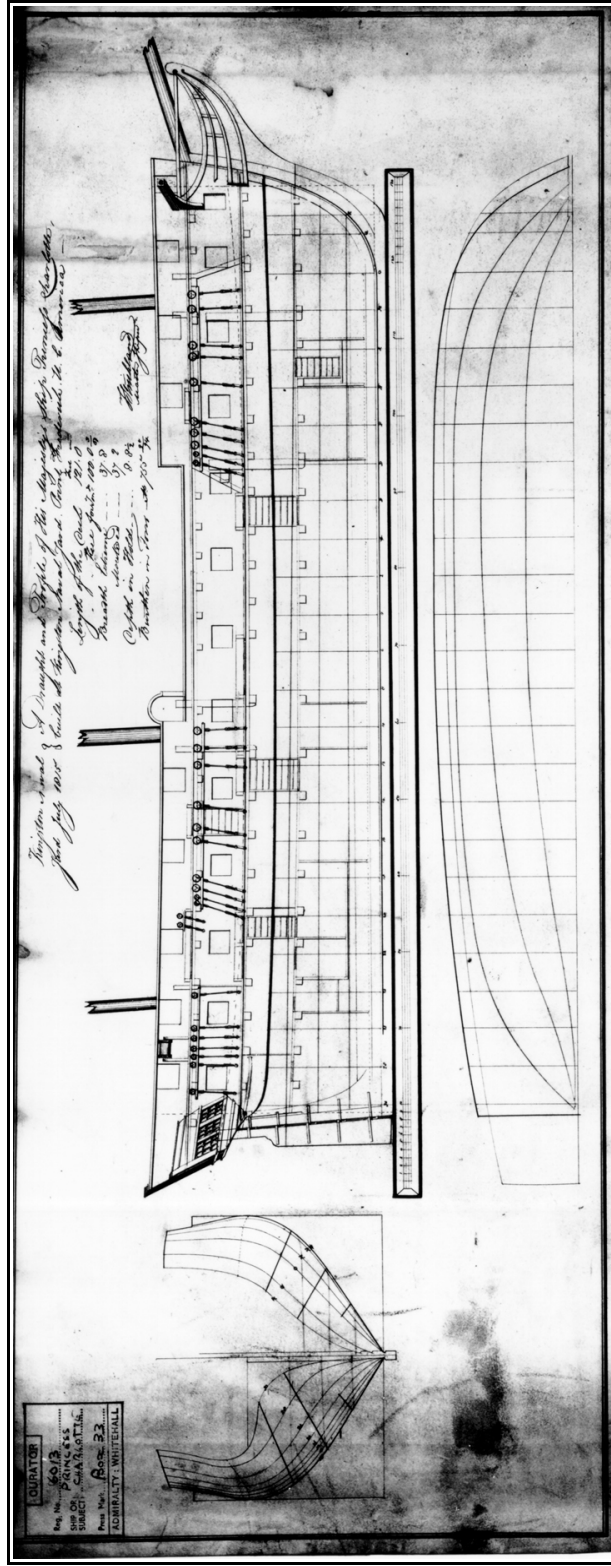


Figure 24. Strickland's plan of *Princess Charlotte* (National Maritime Museum, neg DR6013).

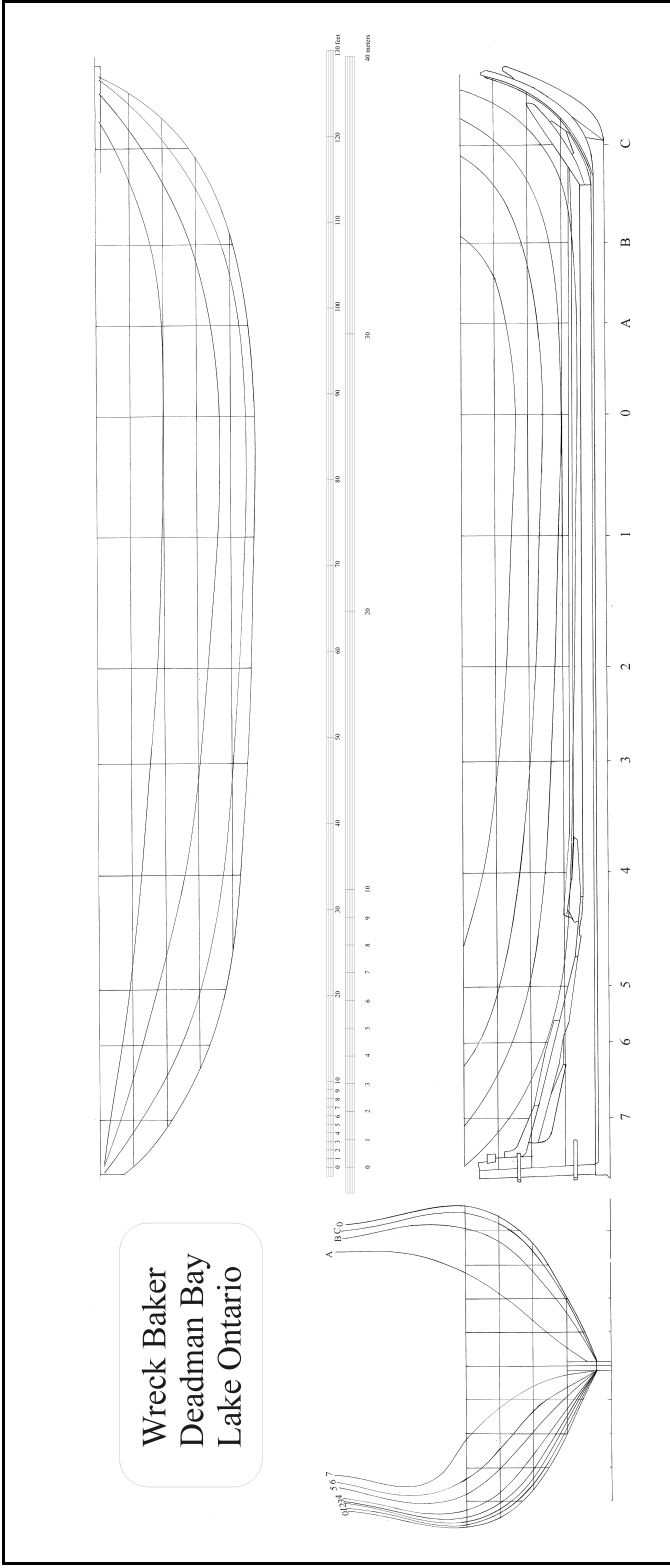


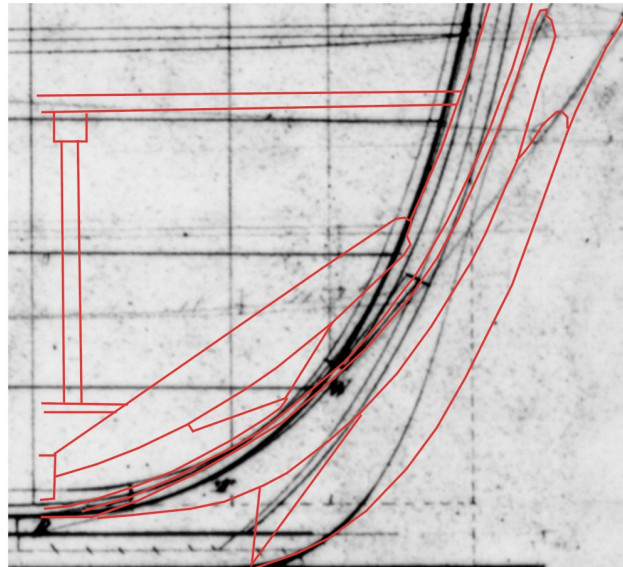
Figure 25. Lines of Wreck Baker. (reconstruction by Daniel Walker).

(35.97 meters) and *Psyche* 125 feet (38.10 meters). There is evidence that the *Princess Charlotte* lines drafted by Strickland may be inaccurate in some respects. While the length of the keel is stated as 100 feet (30.48 meters) on the plan, the actual measurement is 118 feet (35.97 meters). Significantly, a later historical document lists the keel at 121 feet 6 inches (37.03 meters),¹²⁶ an almost exact match with 121 feet 4 inches (36.98 meters) derived from the archaeological data. In addition, the shape of the lower bow, as recorded archaeologically, is an almost exact match to that on Strickland's plan of *Princess Charlotte* and very different from the bow of *Psyche* (figure 26).

The stern posts of both *Psyche* and *Princess Charlotte*, shown in the lines drawings, differ from the archaeological data in the number of gudgeons used. The archaeological remains held only two gudgeons within a span that both historical plans show as having three (figures 22, 24, and 25). This may be explained by the fact that when the Strickland plan was produced, the ship was in the water and the view of the stern post was obscured. In the case of *Psyche*, the builders may have strayed from the plan somewhat since the ship was built in England and then disassembled for shipment to the Kingston Naval Yard. There would not have been the same constraints on materials in Britain as in Kingston. This different gudgeon configuration may indicate the ship was built entirely in Kingston rather than merely assembled there.

The construction observed on the wreck can also be used to draw conclusions about its identity. The materials included in the hull indicate that good compass timber was not available when the ship was built. The frames, stem, and stern are all

Reconstructed Stem (in Red)
over *Psyche*'s Stem



Reconstructed Stem (in Red)
over *Princess Charlotte*'s Stem

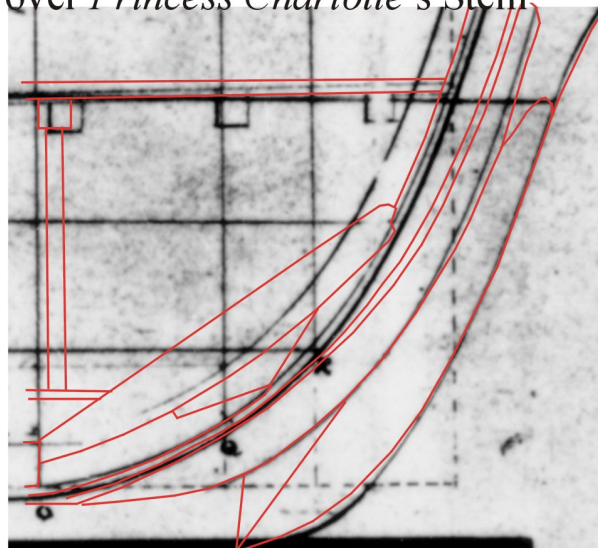


Figure 26. The reconstructed stem overlying those from the proposed draught of *Psyche* and Strickland's 1815 lines taken of *Princess Charlotte*.

constructed out of straight timbers bolted together to form the complex shapes required in ship construction (figures 27 and 28). It is noteworthy that this lack of compass timber is also echoed in the unique constructions of both *Prince Regent* and *St. Lawrence*, as documented by Jonathan Moore (figures 29 and 30).

As part of the photo project conducted by the organization 'Preserve Our Wrecks, Kingston', wood samples were taken from a number of timbers, and Moore commissioned several drawings based on the information recorded in the photographs. When the construction features of the wrecks known to be the frigate *Prince Regent* and the ship of the line *St. Lawrence* are compared to those of Wreck Baker, a number of similarities become apparent. The construction plan of *St. Lawrence's* orlop deck (figure 31) shows the use of lodging knees and ledges to support the deck rather than hanging knees, and is very similar to the orlop deck on Wreck Baker recreated from the archaeological data (figure 27). The lack of knees used in the construction of Wreck Baker may be reflected in the survey of *Burlington* (ex *Princess Charlotte*) undertaken by Strickland in 1820. This thorough survey of the ship and the repairs it required makes no mention of knees at all (Appendix B).¹²⁷ While little remains of *St. Lawrence*, the archaeological evidence indicates that its frames were constructed of large, thick, straight timbers bolted together in a unique fashion (figure 29). The better-preserved remains of *Prince Regent* also indicate that the use of compass timbers was avoided by instead employing numerous small straight timbers cut and bolted together to create the necessary curves. This is particularly evident in the construction of the floors, which

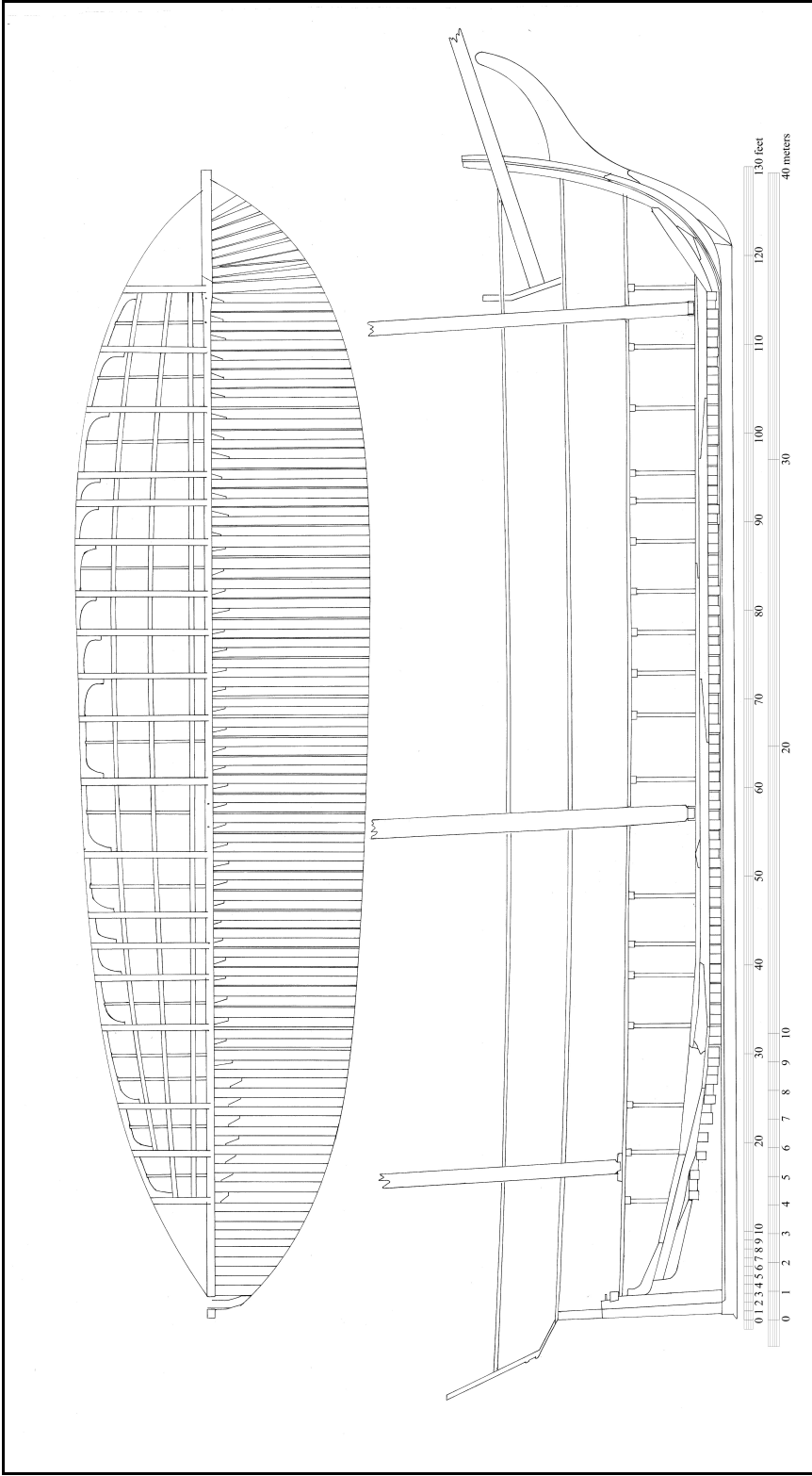


Figure 27. Reconstructed framing and orlop deck configuration. (drawing by Daniel Walker).

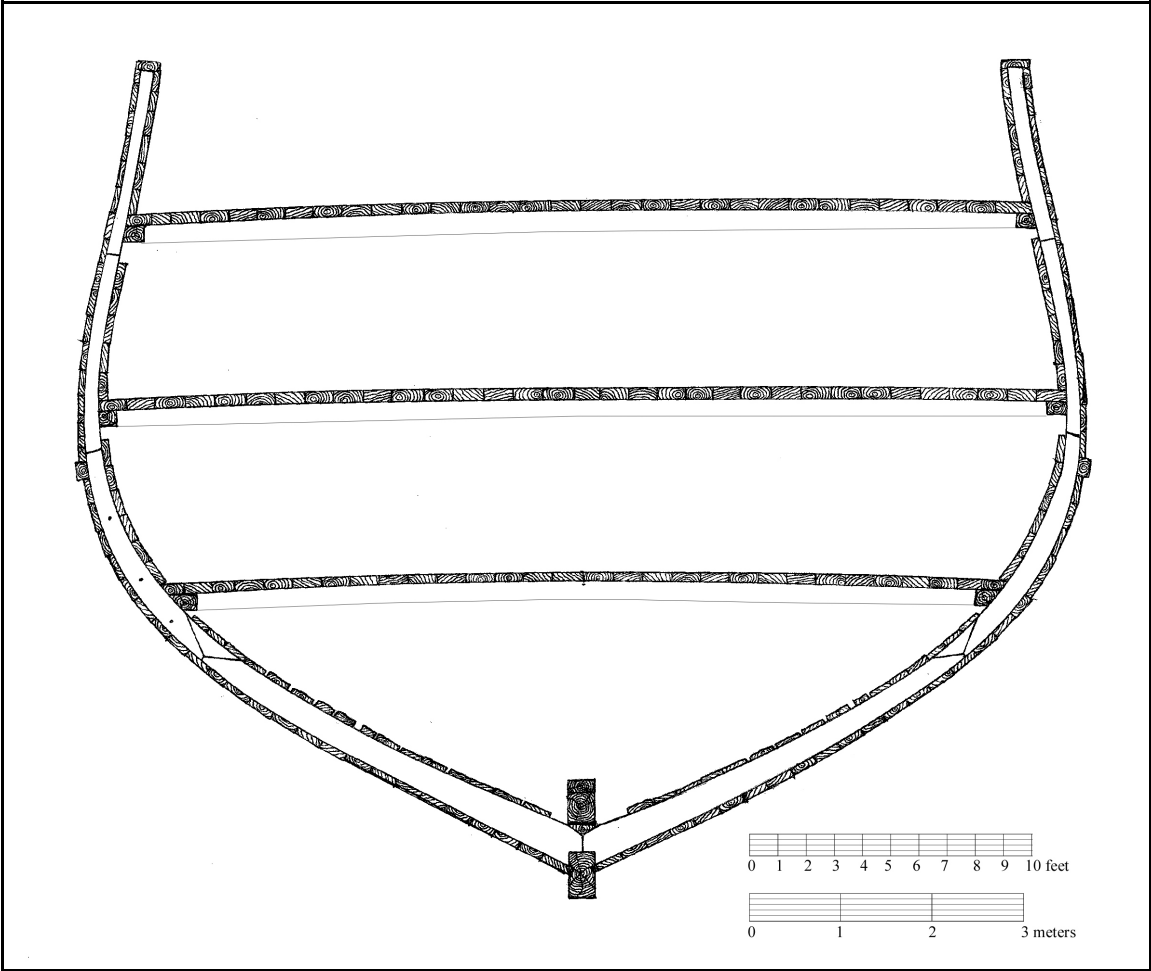


Figure 28. Reconstructed section of Wreck Baker at frame A. (drawing by Daniel Walker).

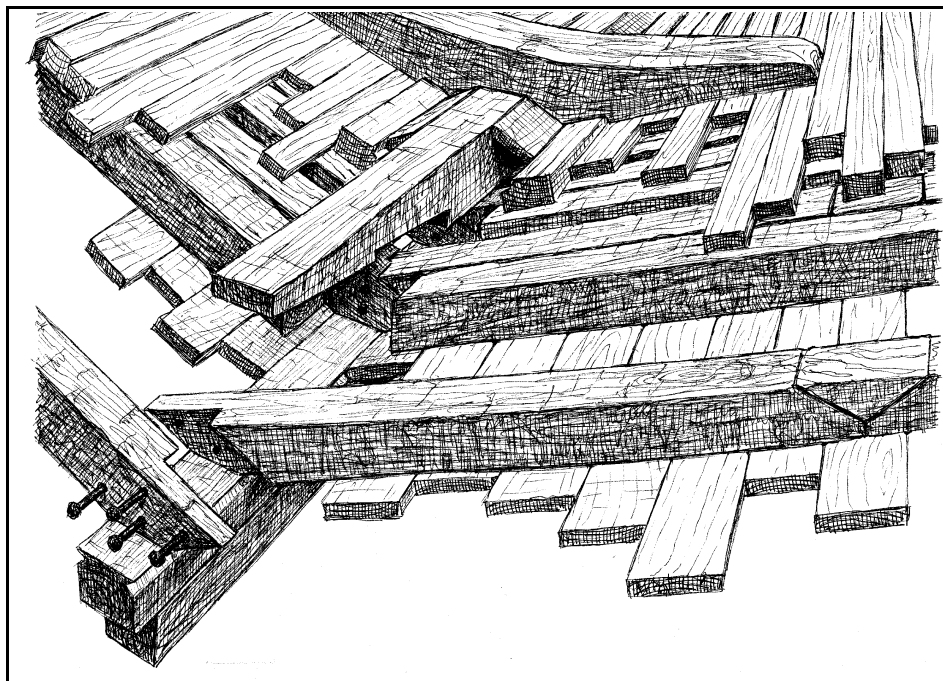


Figure 29. Exploded framing view of the construction of *St. Lawrence*. (drawing by F. Werthman).

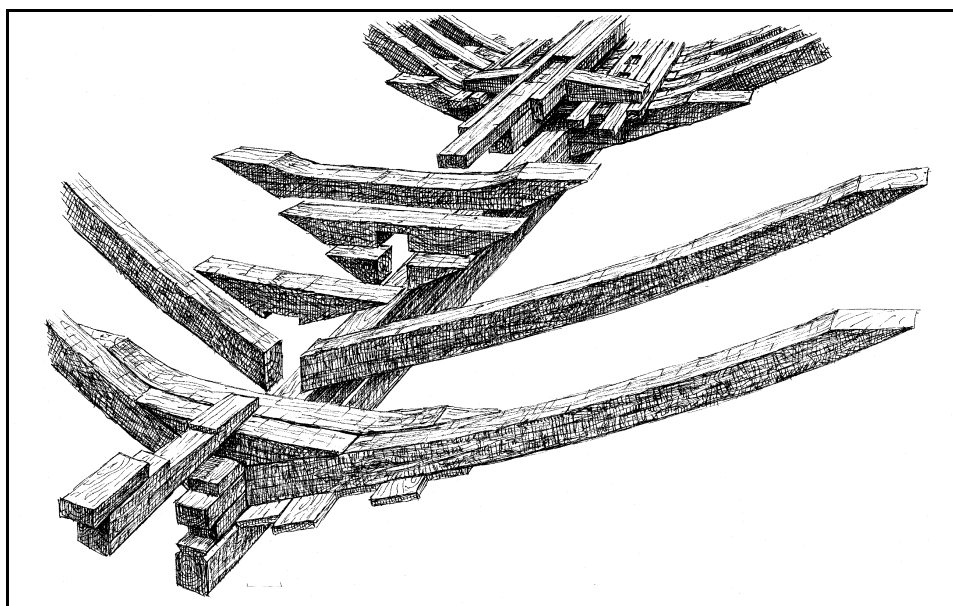


Figure 30. Exploded framing view of the construction of *Prince Regent*. (drawing by F. Werthman).

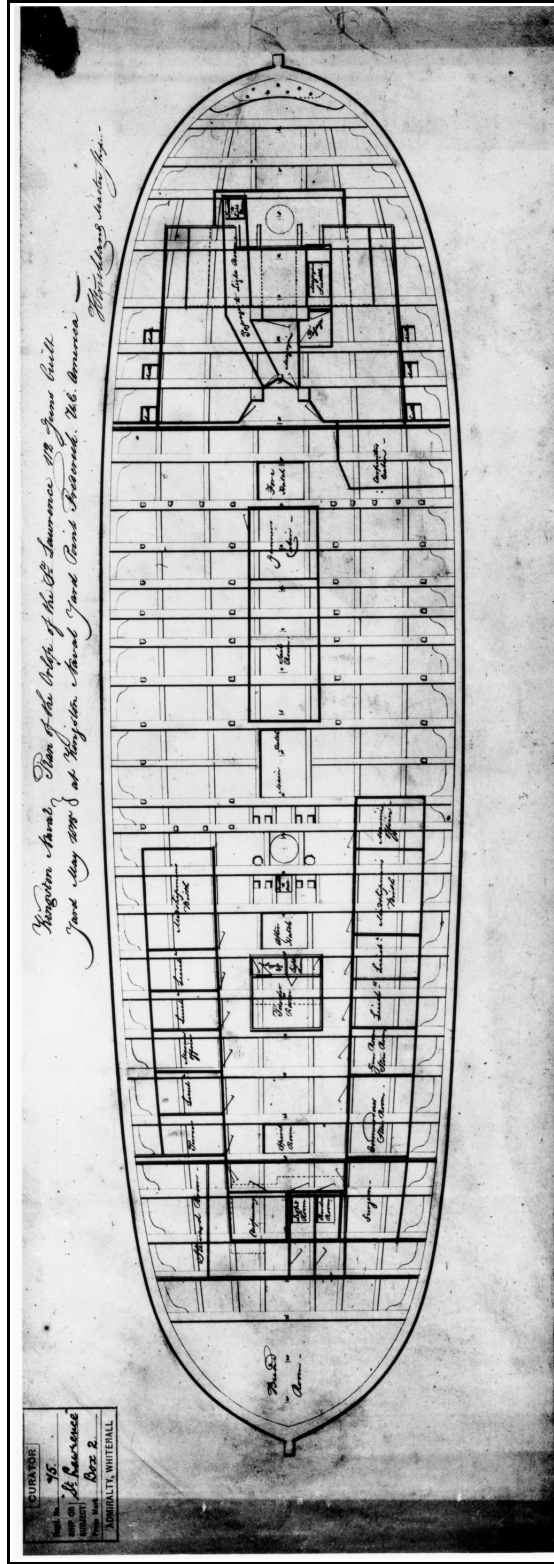


Figure 31. Plan of the orlop deck on the *St. Lawrence*. (National Maritime Museum neg DR75).

were made by bolting together four timbers to create the necessary curvature (figure 30).

The wood samples taken by Jonathan Moore show that all three wrecks were built using white oak for most of their scantlings (Appendix A). This suggests that they were all built in Kingston and further confirms the identity of Wreck Baker as *Princess Charlotte*. According to historical documents, *Psyche* and the other three vessels built in England for shipment to Canada were assembled from fir.¹²⁸ It is possible that the varied frame construction seen in the large 1814 warships stems from experimentation with the available materials and timbers to create the strongest vessels possible.

A lack of fasteners was also noted during the survey of the wreck. The chocks between the first and third futtocks were often not bolted or spiked in place but held by ceiling planking or the clamp. The chocks that sat above the heels of the first futtocks and beneath the keelson were similarly unfastened. This evidence fits the dearth of fasteners bemoaned by Richard O'Connor during the construction of *Prince Regent* and *Princess Charlotte*.¹²⁹

The unique frame construction, white oak scantlings, the lack of compass timber, the comparisons between the archaeologically recorded reconstruction and the contemporary record of the length, breadth, and depth of hold reveals Wreck Baker to be *Princess Charlotte*.

6 CONCLUSION

Archaeological investigation has proved Wreck Baker to be of both historical and archaeological significance. This vessel, identified as *Princess Charlotte*, was launched from the Royal Navy Dockyard on Lake Ontario during the War of 1812. It was built with the materials available to combat a distinct enemy within a specific arena. *Princess Charlotte* was designed to exploit the advantages of operating on the lake and to meet the heavily constructed and armed American squadron built by Henry Eckford under the direction of Commodore Isaac Chauncey.

This ship and the others built by the Royal Navy in Kingston during the War of 1812 were designed to dominate the American ships being produced at Sackets Harbor. They therefore differed in many ways from the ships Britain was building to blockade European ports. By the time *Prince Regent* and *Princess Charlotte* were conceived the British had lost three seagoing frigates to the American super frigates. It appears the shipwrights understood that these vessels needed to be built to match the strength of the American frigates. *Princess Charlotte* was very heavily built with only minimal space between the frames. Prior to the attachment of its planking this ship must have appeared very solid and durable.

The most obvious element that sets Wreck Baker apart from seagoing ships is its sharp deadrise. Operating on the fresh water lakes removed the need to carry drinking water and permitted the ship to incorporate the extreme deadrise allowing it to be “fast and weatherly,”¹³⁰ while still able to carry a heavy weight of metal for its class. Other

adaptations were necessitated by the need to quickly build large ships in a remote location. The majority of materials needed at the shipyard to construct, ballast, and arm the large ships had to be scavenged or manufactured in the industrialized cities of Lower Canada or in Britain, and then shipped to Montreal and from there either transported overland or floated up the rapids of the upper St. Lawrence River to Kingston. This constraint, coupled with a lack of good compass timber in the surrounding old growth forests, led to the unusual construction of the ship. The made-floors of Wreck Baker avoided the need for large compass timbers. In addition, there is little evidence of knees amongst the timbers that survive today. While the made floors required six 1-inch (2.5 cm) bolts per frame set, the chocks both beneath the keelson and between the first and third futtocks are not secured except by adjacent timbers (the keelson and the ceiling planking respectively). The lack of knees and fasteners matches the observations of Strickland when he surveyed the ships at Kingston following the war.¹³¹

The construction of the wreck was influenced by the purpose for which it was built as well as by the logistical difficulty in obtaining supplies. Over the course of the war both the British and the Americans increased the size and armament of the ships built for operation on the lakes in order to maintain naval parity or gain a short lived supremacy. The penultimate ships designed and built by the British at Kingston during this race were the two frigates *Prince Regent* and *Princess Charlotte*. Once outfitted, the two warships gave the Royal Navy a short lived supremacy on the lake in the spring of 1814.

Wreck Baker is identified as *Princess Charlotte* based on the archaeological evidence and the comparison of these results with the historical record. When the shape of the hull derived from the archaeological evidence was compared to the lines plans from both *Princess Charlotte* and *Psyche*, they correlated more closely with those of *Princess Charlotte*. While the length of the wreck matched neither historical plan, the shape of the ship (reconstructed from the archaeological record) closely matched the historically recorded dimensions of *Princess Charlotte* in depth of hold, deadrise, maximum breadth, and the shape of the bow. By the same measure, the reconstruction greatly differed from the features and dimensions of *Psyche*. The identification of wood samples as white oak strongly points to the identification of Wreck Baker as *Princess Charlotte*, and not the fir built frigate *Psyche*.

On April 14, 1814 *Prince Regent* and *Princess Charlotte* were launched down the slipways of Navy Bay. George Record, the shipwright in charge of designing and building *Princess Charlotte*, had worked near the edge of the British Empire, and had to adapt his designs and construction to meet the challenges presented by both the enemy at Sackets Harbor and the logistical difficulty of obtaining the necessary desired timber and manufactured materials. Wreck Baker is a testament to the ingenuity, dedication, and knowledge of its builder. From the historical and archaeological evidence presented in this thesis it has been shown that the parallel careers of the frigates *Princess Charlotte* and *Prince Regent* continue to this day as they now lie several hundred feet apart in the shallow waters of Deadman Bay near Kingston, Ontario.

ENDNOTES

- ¹G. Auchinleck, *A History of the War between Great Britain and the United States of America During the Years 1812, 1813, and 1814* (Toronto: Maclear and Co., 1855), 5.
- ²Robert Gardiner ed. *The Naval War of 1812* (London: Chatham Publishing, 1998), 19.
- ³G. Auchinleck, *A History of the War between Great Britain and the United States of America During the Years 1812, 1813, and 1814* (Toronto: Maclear and Co., 1855), 8.
- ⁴Theodore Roosevelt, *The Naval War of 1812* (New York: Random House Inc., 1999), 64.
- ⁵Kenneth A. Cassavoy and Kevin J. Crisman. "The War of 1812: Battle for the Great Lakes" in *Ships and Ship Wrecks of the Americas*. Ed. George Bass. (New York: Thames and Hudson Inc. 1988), 170.
- ⁶G. Auchinleck, *A History of the War between Great Britain and the United States of America During the Years 1812, 1813, and 1814* (Toronto: Maclear and Co., 1855), 15.
- ⁷John Mackay Hitsman, *The Incredible War of 1812* (Toronto: Robin Brass Studio, 1999), 22.
- ⁸John Mackay Hitsman, *The Incredible War of 1812* (Toronto: Robin Brass Studio, 1999), 23.
- ⁹Paul Leicester Ford ed., *The Works of Thomas Jefferson* (New York: G.P. Putnam and Sons, 1905), 11:265. "The acquisition of Canada this year, as far as the neighborhood of Quebec, will be a mere matter of marching, and will give us experience for the attack of Halifax the next, and the final expulsion of England from the American continent." Thomas Jefferson to William Duane. August 4, 1812
- ¹⁰Henry Adams, *The War of 1812* (New York: Cooper Square Press, 1999), 3.
- ¹¹Henry Adams, *The War of 1812* (New York: Cooper Square Press, 1999), 3.
- ¹²Henry Adams, *The War of 1812* (New York: Cooper Square Press, 1999), 3.
- ¹³John Mackay Hitsman, *The Incredible War of 1812* (Toronto: Robin Brass Studio, 1999), 51.
- ¹⁴ Henry Adams, *The War of 1812* (New York: Cooper Square Press, 1999), 16.
- ¹⁵NAC, CO 42 146:135. William Hull Proclamation, July 12, 1812.
- ¹⁶ John Mackay Hitsman, *The Incredible War of 1812* (Toronto: Robin Brass Studio, 1999), 67.
- ¹⁷ Theodore Roosevelt, *The Naval War of 1812* (New York: Random House Inc., 1999), 51.
- ¹⁸Nicholas Tracy ed. *The Naval Chronicle The Contemporary Record of the Royal Navy at War Volume 5 1811-1815* (London: Chatham Publishing, 1999), 104.
- ¹⁹Theodore Roosevelt, *The Naval War of 1812* (New York: Random House Inc., 1999), 62-65.
- ²⁰ Samuel Leech, "HMS Macedonian vs. USS United States" in *Every Man Will Do His Duty: An Anthology of First Hand Accounts from the Age of Nelson 1793-1815* 1st ed., eds. Dean King and John B. Hattendorf. (New York: Henry Holt and Company, Inc., 1997), 316-17.
- ²¹Theodore Roosevelt, *The Naval War of 1812* (New York: Random House Inc., 1999), 68-72.

²²Nicholas Tracy ed. *The Naval Chronicle The Contemporary Record of the Royal Navy at War Volume 5 1811-1815* (London: Chatham Publishing, 1999), 151.

²³Theodore Roosevelt, *The Naval War of 1812* (New York: Random House Inc., 1999), 77.

²⁴Magoun, F. Alexander. *The United States Frigate Constitution and other Historic Ships* (New York: Bonanza Books, 1928), 64.

²⁵Robert Malcomson, *Lords of the Lake: The Naval War on Lake Ontario 1812 – 1814* (Annapolis: Naval Institute Press, 1998), 36.

²⁶John Mackay Hitsman, *The Incredible War of 1812* (Toronto: Robin Brass Studio, 1999), 81.

²⁷John Mackay Hitsman, *The Incredible War of 1812* (Toronto: Robin Brass Studio, 1999), 104.

²⁸Robert Malcomson, *Lords of the Lake: The Naval War on Lake Ontario 1812 – 1814* (Annapolis: Naval Institute Press, 1998), 41-42.

²⁹John Mackay Hitsman, *The Incredible War of 1812* (Toronto: Robin Brass Studio, 1999), 104.

³⁰Robert Malcomson, *Lords of the Lake: The Naval War on Lake Ontario 1812 – 1814* (Annapolis: Naval Institute Press, 1998), 169.

³¹Henry Adams, *The War of 1812* (New York: Cooper Square Press, 1999), 28.

³²Robert Malcomson, *Warships of the Great Lakes 1754 – 1834* (Edison: Knickerbocker Press, 2001), 70-71.

³³John Mackay Hitsman, *The Incredible War of 1812* (Toronto: Robin Brass Studio, 1999), 112.

³⁴John Mackay Hitsman, *The Incredible War of 1812* (Toronto: Robin Brass Studio, 1999), 118.

³⁵ Henry Adams, *The War of 1812* (New York: Cooper Square Press, 1999), 81.

³⁶Robert Malcomson, *Lords of the Lake: The Naval War on Lake Ontario 1812 – 1814* (Annapolis: Naval Institute Press, 1998), 88.

³⁷Robert Malcomson, *Lords of the Lake: The Naval War on Lake Ontario 1812 – 1814* (Annapolis: Naval Institute Press, 1998), 88.

³⁸Robert Malcomson, *Warships of the Great Lakes 1754 – 1834* (Edison: Knickerbocker Press, 2001), 75.

³⁹John Mackay Hitsman, *The Incredible War of 1812* (Toronto: Robin Brass Studio, 1999), 140.

⁴⁰John Mackay Hitsman, *The Incredible War of 1812* (Toronto: Robin Brass Studio, 1999), 146.

⁴¹Robert Malcomson, *Lords of the Lake: The Naval War on Lake Ontario 1812 – 1814* (Annapolis: Naval Institute Press, 1998), 131.

⁴²G. Auchinleck, *A History of the War between Great Britain and the United States of America During the Years 1812, 1813, and 1814* (Toronto: Maclear and Co., 1855), 164.

⁴³Robert Malcomson, *Lords of the Lake: The Naval War on Lake Ontario 1812 – 1814* (Annapolis: Naval Institute Press, 1998), 136.

Port of Quebec

Henry Walsh d[itt]o. d[itt]o of timber, masts, and planks, for the town of Three Rivers.”

⁵⁹ NAC, RG 8 1, 729:8 Record to Prevost, January 14, 1813.

Your humble Petitioner sheweth, that on the 24th of November last, I made application to Colonel Breyer for a situation to serve on the Lakes of Upper Canada, either on board of one of H. Majesty’s Vessels ,or otherwise in the Ship Yard as may have been required. Colonel Breyer (from the reference I produced) favor’d me with letters to the Commissary and Quarter Master Generals, at Montreal. On my arrival at that place, received information that the former Gentleman was at Quebec, & the latter of his way, to Upper Canada, whose return was shortly expected, when my case could be decided on. I have since waited the event. My circumstance bid me pray your excellency’s decision.

I am with the greatest respect
Your Obedient Humble Servant
Geo Record

To His Excellency
Sir George Prevost

William Henry
January 14 - 1813

⁶⁰ NAC, RG 8 1,1220:110. Record to Freer, January 16, 1813.

To Geo Record My [unknown word) Office Quebec 16 Jan. 1813

Sir,

Sir George Prevost having rec.d your letter of this 4th [unknown word] has directed me to inform you that he has never been made acquainted with your previous offer of service; but as Col. Baynes, bears testimony of your Capacity to be useful in the Public Service, if you are disposed to proceed immediately to Upper Canada, his excellency will direct a letter to be furnish’d you to Maj. Gen.’l Sheaffe desiring that you may be employ’d then as an Officer in one of the Armed Vessels, or in one of the Ship yards in such a situation as you Ability & Pretentions may entitle you to.

I have be

Noah Freer ms

⁶¹ NAC, RG 8 1, 1220:116. January 16,1813.

⁶² NAC, RG 8 1, 729:96. Feb 14, 1813.

⁶³ NAC, RG 8 1, 729:113-116. March 11, 1813.

Point Frederick Kingston
11th March, 1813

Sir

I have the honour to address you in consequence of a very alarming mutiny that took place after Roll call this morning in the Dock Yard, amongst the artificers. They nearly to a man refused to work giving some [unknown word] is reasons about provisions not having been served to them: which were completely contradicted by the

evidences of the quarter master then present. Sending entreaties of no avail, I sent to Major Heathcote Commanding Officer at this Point, requesting him to order out an officer and 40 men and strive to obtain by compulsory means that unattainable by gentle, the artificers being surrounded by the military, I called upon Mr. Allen the Master Builder, to point out ringleader, that some example might be timely made. Mr. Allen declined this. I then told those of the artificers who would work to hold up their hands; & seized myself upon four or five of those refusing this signal. All but one of these agreed to work; & the ----- gentleman I have order into confinement.

As this is not the first time I have discovered symptoms of mutinous spirit amongst these people I of course have looked around and have employed persons to endeavor to trace matters to their source. I can bring no direct proof but if ever the circumstantial had weight I could fix on Mr. Allen as the prime mover of these discontents. He is also an American born subject! [underline in the original] When delicacy and safety lead by different paths, in terms of danger like the present, I need hardly insist on to your better judgment the road to be preferred.

I have therefore to suggest Sir that Mr. Allen be removed from the yard & his place filled by the Assistant Builder, Mr. Record than whom I know not a more capable man, both in the theory and practice in his profession.

You will I am convinced agree with me that Mr. Allen should not be suffered to remain here, after his dismissal. He can have his accounts sent to Montreal to be settled with there by the acting Deputy Quarter Master General Captain Gray.

I have the honor to be Sir
Your most obedient humble servt
J.B. Irwin Capn

⁶⁴ NAC, RG 8 1, 729:111.

⁶⁵ NAC, RG 8 1, 730:178.

⁶⁶ NAC, RG 8 1, 730:181. Record to Freer September 21, 1813.

I shall shortly require employment for the artificers under my command in this Dock Yard and it being his Excellency's pleasure that a transport vessel be built beg leave to recommend the laying down a Brig either to serve as a transport, or as a ship of war, which vessel could immediately be brought to a state of planking, when her service could be determined--- Finding there are stores on hand sufficient for the equipment of two sloops of war I suggest that a ship, or brig of that class would be found to answer either of the above purposes

⁶⁷ NAC, RG 8 1, 731:8-9. Yeo to Prevost October 8, 1813.

Having heard that your Excellency had ordered a vessel to be built independent of the ship, I beg leave to suggest and recommend her being a little larger for reasons I will submit to your Excellency. Mr Record the builder informs me the difference of expense would not exceed three hundred pounds and that he could build the one or the other at the same time. The Royal George from her general weak and defective state I am certain cannot keep the sea much longer without a thorough repair, the which would be attended with nearly as much experience and time as building a new ship.

⁶⁸NAC, RG 8 1, 731:8-9. Yeo to Prevost October 8, 1813.

⁶⁹ NAC, RG 8 1, 731:29-34 O'Connor to Freer October 14 1813.

This directions that a vessel of war and three gun boats should be laid down and constructed without delay..." and the necessary materials be requisitioned.

⁷⁰ NAC, RG 8 1, 731:35-39. O'Connor to Freer October 15, 1813.

I have to acknowledge the receipt of your letter of the 12th Ins.'t signifying that the vessel which is preparing the to be laid down by Mr. Record and intended to have been a Brig shall a Ship of the following dimensions: Length of Keel , One Hundred and Ten Feet; Breadth Moulded, Thirty Six Feet; Depth of Hold, Ten Feet and to acquaint you the same will be complied with. As Mr Goudie will not fail seeing you on his way to Kingston a favourable opportunity will offer for suggesting to him the necessity of reducing at this season of the year, the wages of the artificers employed to sane and resonable terms holding in consideration the working hours at present are one third less than at the time of their engagement.

The period being elapsed for which the other artificers were engaged they have not hesitated to declare their objection to working at wages so considerably less than the others receive though willing otherwise to admit the liberality of the government to them.

If the pay of the Artificers obtained through Mr. Goudie was reduced to what the others receive their wages would then be very liberal a cause of discontent removed and I have reason to hope that a little time would reconcile them to it, if not, we must place them on the same footing sooner than lose the services of any at such a crisis.

⁷¹ NAC, RG 8 1, 731:60-64 Yeo toPrevost October 22, 1813.

On the subject of the former I can assure your excellency I have strong doubts as to the Enemy's having launched another Brig, tho the officer appears positive.

I sincerely wish any efforts or persuasion of mine could cause a proper exertion to be made in our Dock Yard, or that I could hold onto any hope of the new ships being ready early in the spring but on the contrary I feel confident that unless your excellency causes some prompt and active measures to be taken not one of the ships will be finished.

I beg leave to submit to your excellency the propriety of having only one builder in the Yard whom the men will readily obey, at present Mr. Goudie's men will not attend to Mr. Record and Mr. Record's men will not without the same pay Mr. Goudie's have, this is natural because both are paid by Government, but if Mr. Goudie could be prevailed on to Contract for Completing the large ships and him to Pay his workmen it would then be his Interest to finish her in the shortest possible time he could have no object in interfering with Mr. Record and Mr Records Men would no longer have cause to be dissatisfied with their wages as whatever Mr. Goudie 's men might have, it would be a private agreement between individuals.

If Mr. Goudie comes up under any other circumstances I foresee nothing but cabals and difficulty for in my opinion he is not to be relied upon unless bound down by an agreement.

⁷² NAC, RG 8 1,731: 86-91 O'Conor October 30, 1813.

I apprehend you almost dread the sight of a letter from me, lest you should hear more of our discontented artificers—who aware how very important their services are, and fully acquainted what Government pay on Lake Champlain together with their privations here think demands however unrealistic must be complied with, appraised of, though scarcely believing their intentions serious of applying for an increase of wages, already extravagantly high, and feeling no additional pay, however exorbitant would procure further exertion from them – I had to consider and promptly decide on a plan suitable to their wishes as the same time best – calculated to promote much activity and economy, the public service, which desirable circumstances appears most likely to be effected by the accompanying contract submitted for his Excellency's approval, any additional alteration he may please to direct will I am confident be acceded to, the working shipwrights are by a separate Instrument bound to the performance and fulfillment of this contract – an active ----- man is gone down to entice Shipwrights up, and will I have no doubt procure more reasonable expenses are promised to pay him and them. I feel gratified at my success in this affair, from a conviction that under existing circumstances it is the only method of securing perhaps, either of the vessels being completed – that I may sincerely wish Mr. Goudie would undertake to complete the vessel laid down by him if not on the same terms higher prices may induce him – but this should be kept secret -- to prevent jealousies and discontent that would otherwise prevail.

I am informed about twenty Shipwrights are on their way from Amherstburg with some officers of the yard, should the latter prove qualified to fill vacancies here it will afford me much pleasure to recommend them for his...

Terms of Records Contract

£10 for then finding workmen & the ship & being completed by the 1st May 1814 ---
£1000 penalty for a failure in the performance of the agreement.

⁷³NAC RG 8 1, 731:133-137 O'Conor November 24 1813.

⁷⁴NAC RG 8 1,731:179, O'Conor to Prevost, December 17, 1813.

⁷⁵This period is also covered in Jonathan Moore, *Archaeological and Historical Investigations of Three War of 1812 Wrecks at Kingston Ontario*. (Report for Province of Ontario Licence to Conduct Archaeological Exploration or Fieldwork 1999-096 at Sites BdGd-6, BbGc-45 and BbGc-46), 2006.

⁷⁶NAC RG 8 1, 732:54-55, O'Conor March 7, 1814.

⁷⁷NAC RG 8 1, 682:246-247, Deposition of Robert Christie, March 24, 1814.

⁷⁸John Le Couteur *Merry Hearts Make Light Days: The War Journal of Lieutenant John Le Couteur, 104th Foot*, ed. Robert Graves (Ottawa: Carleton University Press, 1994), 159.

⁷⁹NAC RG 8 1, 683:98, May 5, 1814.

⁸⁰NAC RG 8 1, 732:99. April 6, 1814.

⁸¹NAC ADM 52, 3928 *Princess Charlotte Master's Log*.

⁸²Robert Malcomson, *Lords of the Lake: The Naval War on Lake Ontario 1812 – 1814*

(Annapolis: Naval Institute Press, 1998), 205.

⁸³John Le Couteur *Merry Hearts Make Light Days: The War Journal of Lieutenant John Le Couteur, 104th Foot*, ed. Robert Graves (Ottawa: Carleton University Press, 1994), 159.

⁸⁴NAC RG 8 1,683, 1-5 Drummond to Prevost April 22, 1814.

⁸⁵NAC, RG 8 1, 683:93-96 Drummond to Prevost May 3, 1814.

⁸⁶NAC, RG 8 1, 683:105.

⁸⁷NAC ADM 52, 3928, *Princess Charlotte* Master's Log.

⁸⁸NAC RG 8 1, 683 105-114 Drummond to Prevost May 7, 1814.

⁸⁹Robert Malcomson, *Lords of the Lake: The Naval War on Lake Ontario 1812 – 1814* (Annapolis: Naval Institute Press, 1998), 275.

⁹⁰Robert Malcomson, *Lords of the Lake: The Naval War on Lake Ontario 1812 – 1814* (Annapolis: Naval Institute Press, 1998), 278.

⁹¹Robert Malcomson, *Lords of the Lake: The Naval War on Lake Ontario 1812 – 1814* (Annapolis: Naval Institute Press, 1998), 279-81.

⁹²Robert Malcomson, *Lords of the Lake: The Naval War on Lake Ontario 1812 – 1814* (Annapolis: Naval Institute Press, 1998), 280-283.

⁹³Robert Malcomson, *Warships of the Great Lakes 1754 – 1834* (Edison: Knickerbocker Press, 2001), 137.

⁹⁴ Jonathan Moore, *Archaeological and Historical Investigations of Three War of 1812 Wrecks at Kingston Ontario*. (Report for Province of Ontario Licence to Conduct Archaeological Exploration or Fieldwork 1999-096 at Sites BdGd-6, BbGc-45 and BbGc-46, 2006), 22-25.

⁹⁵NAS, GD51/2, 496, Drury to Melville, January 1, 1814.

⁹⁶NAC, RG 8, 1, 731:131.

⁹⁷PRO, ADM 1, 2737:100, Yeo to Croker, May 21, 1814.

⁹⁸This topic was also discussed by Jonathan Moore, *Archaeological and Historical Investigations of Three War of 1812 Wrecks at Kingston Ontario*. (Report for Province of Ontario Licence to Conduct Archaeological Exploration or Fieldwork 1999-096 at Sites BdGd-6, BbGc-45 and BbGc-46, 2006), 6-7.

⁹⁹ Robert Malcomson, *Warships of the Great Lakes 1754 – 1834* (Edison: Knickerbocker Press, 2001), 102.

¹⁰⁰ NAC, RG 8, 1, 732: 23.

¹⁰¹ NAC, RG 8, 1, 732: 25.

¹⁰² NAC RG 8 1, 732:153-54, Drummond to Prevost, April 26, 1814.

¹⁰³ Robert Malcomson, *Lords of the Lake: The Naval War on Lake Ontario 1812 – 1814* (Annapolis: Naval Institute Press, 1998), 253.

¹⁰⁴PRO ADM 1, 2264: 397, Owen, November 5, 1815.

¹⁰⁵NAC, RG 8, 1, 1221: 264-66, Prevost to Yeo, December 8, 1813.

¹⁰⁶Jonathan Moore, *Archaeological and Historical Investigations of Three War of 1812 Wrecks at Kingston Ontario*. (Report for Province of Ontario Licence to Conduct Archaeological Exploration or Fieldwork 1999-096 at Sites BdGd-6, BbGc-45 and

BbGc-46, 2006), 75.

¹⁰⁷PRO ADM 1, 2262: 137, Thomas Strickland, March 23, 1815.

¹⁰⁸PRO ADM.1, 1999: 106 August 29, 1820. This is also discussed by Jonathan Moore, *Archaeological and Historical Investigations of Three War of 1812 Wrecks at Kingston Ontario*. (Report for Province of Ontario Licence to Conduct Archaeological Exploration or Fieldwork 1999-096 at Sites BdGd-6, BbGc-45 and BbGc-46, 2006), 16.

¹⁰⁹NAC, RG 8 1, 732: 97-103.

¹¹⁰NAC, RG 8 1, 732: 139-41.

¹¹¹ Robert Malcomson, *Lords of the Lake: The Naval War on Lake Ontario 1812 – 1814* (Annapolis: Naval Institute Press, 1998), 295.

¹¹² NAC, RG 8 1, 732: 54-55, O’Conor to Freer, March 7, 1814.

¹¹³ Robert Malcomson, *Lords of the Lake: The Naval War on Lake Ontario 1812 – 1814* (Annapolis: Naval Institute Press, 1998), 294-5.

¹¹⁴AO, Thomas Mossington Papers, I, undated memorandum. From Jonathan Moore, *Archaeological and Historical Investigations of Three War of 1812 Wrecks at Kingston Ontario*. (Report for Province of Ontario Licence to Conduct Archaeological Exploration or Fieldwork 1999-096 at Sites BdGd-6, BbGc-45 and BbGc-46, 2006), 13.

¹¹⁵Section 4.1 is based on research by Jonathan Moore and recorded in both Jonathan Moore, *Archaeological and Historical Investigations of Three War of 1812 Wrecks at Kingston Ontario*. (Report for Province of Ontario Licence to Conduct Archaeological Exploration or Fieldwork 1999-096 at Sites BdGd-6, BbGc-45 and BbGc-46, 2006) and Jonathan Moore “Frontier Frigates and a Three Decker” unpublished manuscript.

¹¹⁶R. A. Preston, “The Fate of Kingston's Warships,” *Historic Kingston* 1 (1952), 4.

¹¹⁷R. A. Preston, “The Fate of Kingston's Warships,” *Historic Kingston* 1 (1952), 13.

¹¹⁸RMCA, Preston Papers, Box 5, Part 2, Preston to Stevens, October 12, 1960, Stevens to Preston, October 15, 1960.

¹¹⁹Jonathan Moore “Frontier Frigates and a Three Decker” unpublished manuscript.

¹²⁰Susan M. Bazely, *Preserve Our Wrecks (Kingston) Underwater Survey Licence No. 88-42*, unpublished report (Toronto: Ontario Ministry of Citizenship, Culture, & Recreation, 1988).

¹²¹Jonathan Moore, *Archaeological and Historical Investigations of Three War of 1812 Wrecks at Kingston Ontario*. (Report for Province of Ontario Licence to Conduct Archaeological Exploration or Fieldwork 1999-096 at Sites BdGd-6, BbGc-45 and BbGc-46, 2006), 46-47.

¹²²Ontario Ministry of Citizenship, Culture, and Recreation Licence to Conduct Archaeological Exploration Survey or Field Work Licence No. 2000-112

¹²³J. Richard Steffy, *Wooden Ship Building and the Interpretation of Shipwrecks* (College Station: Texas A&M University Press, 1994), 195.

¹²⁴Howard Chappelle, *The History of the American Sailing Navy: The Ships and Their Development* (New York: W.W. Norton and Company Inc., 1949), 296.

¹²⁵Kevin Crisman, “The Construction of the *Boscawen*” *The Bulletin of the Fort Ticonderoga Museum* 14:6 (1985): 365-366. and

Chris Sabick, *His Majesty's Hired Transport Schooner Nancy*. (M.A. thesis, Texas A&M University, 2004) 102-3.

¹²⁶NAC RG 8 1, 731:174.

¹²⁷NAC ADM. 1999:106 Thomas Strickland August 29, 1820.

¹²⁸ Robert Malcomson, *Lords of the Lake: The Naval War on Lake Ontario 1812 – 1814* (Annapolis: Naval Institute Press, 1998), 242.

¹²⁹NAC RG 8 1, 731: 133-137 Richard O'Connor to Noah Freer November 24, 1813.

¹³⁰Howard Chappelle, *The History of the American Sailing Navy: The Ships and Their Development* (New York: W.W. Norton and Company Inc., 1949), 296.

¹³¹NAC ADM. 1999:106 Thomas Strickland August 29, 1820.

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Abbreviations

ADM	British Admiralty Files
AO	Archives of Ontario
CO	Colonial Office
NAC	National Archives of Canada
NAS	National Archives of Scotland
RMCA	Royal Military College Archives, Kingston
RG	Record Group
PRO	Public Record Office, London

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APPENDIX A: WOOD SPECIES¹

Wreck Name	Timber Name	Wood Name	Wood Species
<i>St. Lawrence</i>			
	Half-floor	Rock elm	<i>Ulmus thomasi</i> Sarg.
	First futtock	White Oak	<i>Quercus</i> spp.
	Limber strake	White Oak	<i>Quercus</i> spp.
	Ceiling plank	White Oak	<i>Quercus</i> spp.
	Hull planks	White Oak	<i>Quercus</i> spp.
<i>Wreck Able (Kingston, ex Prince Regent)</i>			
	Keelson	White Oak	<i>Quercus</i> spp.
	Rider keelson	White Oak	<i>Quercus</i> spp.
	Stern post	White Oak	<i>Quercus</i> spp.
	Floor	White Oak	<i>Quercus</i> spp.
	Floor chocks	White Oak	<i>Quercus</i> spp.
	First futtock	White Oak	<i>Quercus</i> spp.
	Limber strake	White Oak	<i>Quercus</i> spp.
	Ceiling plank	White Oak	<i>Quercus</i> spp.
	Hull plank	White Oak	<i>Quercus</i> spp.
	Strake for fore mast step	White Oak	<i>Quercus</i> spp.
	Main mast bolsters	White Oak	<i>Quercus</i> spp.
<i>Wreck Baker (Burlington, ex Princess Charlotte)</i>			
	Keelson	White Oak	<i>Quercus</i> spp.
	Rider keelson	White Oak	<i>Quercus</i> spp.
	Keel	White Oak	<i>Quercus</i> spp.
	False keel	Chestnut	<i>Castanea</i> spp.
	Stem	White Oak	<i>Quercus</i> spp.
	Stern post	White Oak	<i>Quercus</i> spp.
	Stern Knee	White Oak	<i>Quercus</i> spp.
	Half floor	White Oak	<i>Quercus</i> spp.
	Half floor cross chock	White Oak	<i>Quercus</i> spp.
	First futtock chock	White Oak	<i>Quercus</i> spp.
	First futtock	White Oak	<i>Quercus</i> spp.
	Ceiling plank	White Oak	<i>Quercus</i> spp.
	Hull plank	Chestnut	<i>Castanea</i> spp.
	Wale	White Oak	<i>Quercus</i> spp.

¹ Jonathan Moore, “Archaeological Investigations of the War of 1812 Wrecks at Kingston, Ontario”.

APPENDIX B: SURVEY OF *PRINCESS CHARLOTTE (BURLINGTON)* IN 1820²

Kinston
Naval Yard
August 29, 1820

Survey of His Majesty's Ship
Burlington of 42 guns, taken
afloat

Place where	Particulars decayed, or that want repair	N ^o of pieces		Total	Nature of Decay
		St. ^d	L. ^d		
Frame	Timbers in hold	34	38	72	Dry rot and defects from the bad quality of the timber
	11 between L.D. and Upp. D.	50	46	96	
	12 Between Upp.D. and 2.D. & Forec.	35	36	71	
	13 in the range of 2.D. & Forec.	25	31	51	
	Transoms	1			
	Fashion pieces	2	4	6	
	Knightsheads				
	Hawse pieces				
	Keel				
	Deadwood				
	Keelson				
	Stem				
	Apron				
Stemson					
Sternpost					
Innerpost					
Sternson					
Hold	Footwaling	def	ective		
	Hooks				
	Crutches				
	Steps of Masts				
Platforms	Bulkheads	bad			
	Beams				
	Flat				

²NAC ADM 1, 1999:106 Thomas Strickland August 29, 1820.

Lower Deck	Beams Flat Shelf Pieces Clamps Spirketting Waterway	3	5	8	
Upper Deck	Beams Flat Shelf pieces Clamp Spirketting Waterway Riding bits	8 partl deca deca	4 y defe yed yed	12 ctive	
2. Deck and Forec.	Beams Flat Shelf pieces Clamp Spirketting Waterway Catheads	12 must deca deca	15 be shi yed yed	27 fted	
Without Board	Wales Plank of bottom Topsides Knee of the head Channels	Defe Partl all	ctive y def bad	ective	

From the foregoing defects we are of the opinion she will Require a large repair, which may be performed in 18 months after taken in hand; an estimate of the charge thereof, and providing her with furniture and stores, is as follows, viz. –

		Mat.	Workm.	Total
For the hull	-	2551	4082	6633
14	iron fastening	749	-	749
15	masts and yards	170	180	350
16	furniture and stores	-	-	-
17	Total -	3470	4262	7732

**APPENDIX C: CONVERSION CHART FOR FRAME SET DESIGNATIONS
BETWEEN SURVEY AND NAVAL TRADITION**

Survey	Traditional		Survey	Traditional
1	M		30	16
2	L		31	17
3	K		32	18
4	J		33	19
5	I		34	20
6	H		35	21
7	G		36	22
8	F		37	23
9	E		38	24
10	D		39	25
11	C		40	26
12	B		41	27
13	A		42	28
14	midship		43	29
15	1		44	30
16	2		45	31
17	3		46	32
18	4		47	33
19	5			
20	6			
21	7			
22	8			
23	9			
24	10			
25	11			
26	12			
27	13			
28	14			
29	15			

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