WESTERN EMPIRE: THE DEEP WATER WRECK OF A MID-NINETEENTH CENTURY WOODEN SAILING SHIP

A Thesis

by

JOSHUA AARON LEVIN

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

MASTER OF ARTS

May 2006

Major Subject: Anthropology

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Approved by:

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ABSTRACT

Western Empire: The Deep Water Wreck of a Mid-Ninetenth Century Wooden Sailing Ship. (May 2006)

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Chair of Advisory Committee: Dr. Kevin J. Crisman

This study of *Western Empire* is split into two distinct parts: (1) historical research of the life of the vessel, relying on primary documents; and (2) analysis of the deep water survey data. The first part concentrates on the historical documents that constitute the history of *Western Empire*. The second part begins with a review of the tools and procedures used in performing the deep water survey. An analysis of the information that can be taken from such a study will follow, and it concludes with suggestions for remotely operated vehicle operators when performing an on-the-fly survey of shipwrecks in deep water. The official ship logs, crew agreements, and contemporary newspaper articles are used to recreate the life of *Western Empire* and shed light on a period in which wooden sailing ships were being displaced by iron ships and steam power.

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CHAPTER I

INTRODUCTION

In the early 1980s, an oil company survey vessel came across an anomaly on the sea floor of the Gulf of Mexico during a routine pipeline survey, an anomaly they believed was a shipwreck. The company informed the Minerals Management Service, a branch of the U.S. Government, who added it to their database, but it remained unidentified for nearly 20 years. It wasn't until 1999 when that anomaly was more closely inspected during the return trip from the survey of another wreck site. The survey which identified the vessel was a cooperative project between the Minerals Management Service, Deep Marine Technologies, and Texas A&M University. The video footage recorded during this work was analyzed and compared to known shipwrecks in the area. The historical search yielded a single likely candidate: *Western Empire*, a Canadian ship built in 1862 that sunk during a hurricane in 1875. This identification allowed *Western Empire*'s history to be uncovered, opening a window into the world of wooden sailing ships during the last third of the nineteenth century.

The period during which *Western Empire* sailed the seas was a time when new technology was being developed. Nautical practices were undergoing immense change as traditional wooden sailing ship designs were being supplanted by iron and steam. Although these new technologies had already gained their foothold by the time *Western Empire* was constructed in 1862, wooden sailing ships were still able to compete in this

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This thesis follows the style of *Historical Archaeology*.

changing world. *Western Empire*, although not built of iron and not following the lines of the popular clipper ship model, nevertheless proved that wooden sailing ships designed for both large cargoes and speed could still ply the waters of the world's oceans. It was an example of the era in which it sailed.

The lives of those who sailed on *Western Empire* were in many ways typical of nineteenth century seamen. The men employed on the ship worked hard, often risking their lives, and sometimes losing them in the service of the ship. However, not all were resolute in their devotion to the ship and its mission of profit. There were those who tried to avoid their duties, and others who defied the orders of the officers. Some did this as individuals, and others banded together and started a mutiny. The men drank, fought, deserted and caused many problems for the ship's master. Yet not all of the men who avoided work did so voluntarily: sickness was common on board the ship. Sometimes it was cured with the medicine of the day, and sometimes the illness took the sailor's life. Disease was not selective in its victims, and it claimed the lives of both sailors and officers, including two captains.

The ship also went through its own problems throughout its career. It was involved in terrible storms and gales, including the hurricane that ended its career off the coast of Florida. *Western Empire* collided with numerous ships, where both sustained and inflicted damage, sometimes to such extent that it required lengthy repairs at a dockyard before it could sail again.

The Beginning of *Western Empire*

Western Empire was built in 1862 by William H. Baldwin and Company, during the time when Baldwin partnered with William Dinning. Their shipyard was located at Saint-Roch, on the cape outside the city of Quebec. From 1859-1868 they built the *Empire* series of nine ships (Marcil 1990:52).

These ships, in order of production, were *Indian Empire*(1860), *Colonial Empire*(1861), *Celestial Empire*(1861), *Western Empire*(1862), *Eastern Empire*(1862), *French Empire*(1863), *Northern Empire*(1863), *British Empire*(1863), and *Southern Empire*(1863) (Wallace 1927:95). Although most of the ships went their separate ways, one company, the White Star Line, purchased two of them: *Western Empire* and *Southern Empire*. However, the two ships never sailed together under the White Star flag. In 1863, *Southern Empire*, fresh off of its construction blocks, set sail for Australia (see advertisement of voyage in Figure 1) and disappeared (Louden-Brown 2001:12). The vessel was never recovered and nothing is known about its demise. It wasn't until four years later, in 1867, that the line purchased *Western Empire* and had it continue in the foot steps of its younger and unlucky sister ship.

The *Empire* series of ships, as well as many others produced in Quebec at this time, were built during a period of relative optimism. Canada had recently signed a treaty with France intended to created a new market for its shipbuilding industry. Unfortunately, that market was lost when Canada abrogated part of the agreement and the French rescinded their offer, which left the shipyards with completed vessels and no

buyers (Faucher 1957:197).

Western Empire was completed in August of 1862 and was first registered by *Lloyd's Register* in 1863 as a Class A1 vessel. Shipbuilders in Quebec used half-models when designing and building their ships (Marcil 1995) rather than ship's lines. Unfortunately, no half-model has been found for *Western Empire* or any of its sister ships (which may have had similar designs). Without the half model, the design features of the ship remain unknown. A full excavation of the ship's sunken remains could provide the details necessary to create an accurate set of lines, but as the wreck was only briefly surveyed, the details of its design and construction at this point cannot be determined. *Lloyd's Register* does provide some information on the general characteristics of the ship. *Western Empire* had a length of 190.8 feet (58.2 meters), a width of 38.1 feet (11.6 meters), a depth of 22.9 feet (7 meters), and total tonnage of 1250. It was noted that it was rigged as a ship, was felted and partly sheathed in Yellow Metal, and was also given iron bolts. In addition, the register marked that *Western Empire* was given the maximum number of years, seven, for the duration of its A1 rating (Register 1863). With the A1 rating under Special Survey (which will be discussed later), *Western Empire* was surely a well-built vessel. However, overall dimensions can only go so far in telling us what the ship looked like.

Clipper ships, with their fine lines and speed under sail, maintain the interest of most historians. However, they only represented a small proportion of the ships built each year (MacGregor 2001:33). The period of the last third of the nineteenth century saw the rise of another ship type from the region of the American northeast, specifically

Maine: the downeaster. Downeasters were named such due to the locale of their construction: Maine and Massachusetts. They typically had moderately sharp lines and a large cargo capacity, which allowed for a combination of both speed and freight (Bathe et al. 1967:227).Lubbock (1963) stated that downeasters were the "highest development of the sailing ship, combining speed, handiness, cargo capacity and low operating costs to a degree never before obtained in any earlier square-rigger." Shipbuilders were able to learn from the lines developed by the clippers, and apply them to a large merchantman, creating a large cargo vessel with a low building cost that could sail at a fast speed (Souza 1998:111). When the overall dimensions and tonnage of *Western Empire* are compared to contemporary clippers and downeasters, it is apparent that its design was closely related to the latter being built in the nearby state of Maine (Table 1).

Life of *Western Empire*

For the first part of its life, *Western Empire* operated as an Indiaman, trading cargo at Bombay, Calcutta, and other Indian Ocean ports. However,the materials that *Western Empire* traded in were not the types of cargo often mentioned in mid-nineteenth century histories. It did not carry tea or expensive spices, but rather it traded in mundane commodities such as linseed and poppyseed. *Western Empire*, while not one of the great Tea Clippers, was likely one of the simple, large capacity ships that ran the the India route outside of the historical spotlight.

As the history of *Western Empire* unfolds, it will become apparent that this

vessel fell into the category of the commonplace cargo ship, like the downeaster. Such types of transport are often overlooked in history books as they did not ignite the imagination of readers. Books and essays on shipping during this period usually discuss the more lucrative trades and exotic technologies. *Western Empire*, a practical wooden sailing ship at the end of the clipper ship's heyday and the beginning of the era of iron and steam, fell through the historical cracks. However, the history of *Western Empire,* while not one of a new age or a particularly exciting ship type, is an example of a dying breed of ship in a world that was experiencing massive technological change.

Throughout its life, *Western Empire* traveled to India, Australia, the Americas, and many places in between. It will be seen that although steam and iron were fast becoming prevalent technologies in shipping, wooden sailing vessels remained in widespread use. *Western Empire*, although it was not one of the clipper ships, profitable enough to compete with these faster ships on voyages to India and Australia. On average, *Western Empire* completed the outward journey from England to Calcutta in about 110 days (CA 1863; CA 1866). This compared to a time of 90 days for the merchant frigate *Minden* from 1848 (Lubbock 1963:258). A twenty day difference between the two vessels appears significant, but the frigate was likely a lighter and faster vessel and able to make the journey in a shorter time. In 1866, *Western Empire* made the return journey from Calcutta to England in 125 days (CA 1866). In 1882, the steel sailing ship *Pinmore* completed the voyage in 101 days (Lubbock 1963:258). Steel and iron ship construction allowed for finer lines, which nautically speaking translates to faster speeds. *Western Empire*, although not made of metal or designed for utmost speed

like a clipper, was able to remain competitive with those vessels and return a profit for its owners, once making the trip from England to Melbourne in 81 days and another time in 106 days (CA 1870; CA 1871). It is not known which one of these sailing times was an aberration, but it is likely that the second exceeded the standard voyage time. Competing clipper ships made the trip in anywhere from 68 to 77 days (Lubbock 1963:258), while steam ships completed the trip in around 60 days (LT 1867). Again, *Western Empire*, while not the fastest ship on the seas, was able to compete with the other sailing vessels.

The history of the ship is an excellent example of the life of a wooden sailing ship during the third quarter of the nineteenth century. This account of *Western Empire* was primarily culled from two types of documents: Crew Agreements and Official Logs. Crew Agreements provide a wealth of information including the port at which they were drawn up, the ship owners, the master, and date of embarkation. They also state the names, ages, wages, origin, last ship served, capacity, and discharge information for all of the crew. Any deaths during the voyage were also recorded, as well as information about the deceased's debts and effects. The Official Log first became an obligatory document after the English Parliamentary Act of 1850 (Hope 1990:287). The contents of logs repeat some of the information from the Crew Agreements, but their main purpose was listing the major events that occurred during the contracted voyage. They also formalized the ratings given to the crew upon discharge by the master. The men, upon release, would be given a grade of either VG (very good), G (good), M (middling), or I (indifferent). The latter two were considered black marks upon a man's record of

service (Hope 1990:287). For each of the years for which a record exists, the crew will first be analyzed, followed by an account of the voyage.

Although built in Quebec, *Western Empire* did not actually trade with any Canadian ports until late in its shipping career. R. Girvin & Company, the first listed owner in *Lloyd's Register*, was either the organization that originally paid for the construction of the ship or simply the first company to utilize *Western Empire* as a trading vessel once it arrived in England. Without the original purchase information about the vessel, its contractor and/or first owner will remain unknown. Therefore, the working history of this ship will begin, not with the initial travels from Canada to England, but with the first East Indies voyage from its English home port.

CHAPTER II

EARLY HISTORY OF *WESTERN EMPIRE*

The history of *Western Empire* began with its construction in 1862 in the city of Quebec. Built by William Henry Baldwin, one of Quebec's finest shipbuilders in partnership with William Dinning, this 190-foot (57.9 meter), 1250-ton vessel was an exemplar of Canadian wooden shipbuilding in the mid-nineteenth century. The story of *Western Empire* provides an opportunity to examine wooden sailing vessel construction in Quebec when iron was fast becoming the shipbuilding material of choice. By the 1860s, wooden shipbuilding had begun to lose ground to iron construction, but the wooden yards of British North America were still going strong. The building of the vessel occurred during a spurt of optimism caused by a tariff agreement with the French. Yet, how, in this period of technological advancement, was Quebec able to maintain its wooden shipbuilding industry? The answer lies within the strength of the traditional relationship between wooden shipbuilding and the Quebec economy. An understanding of the foundation of this interdependence will provide the necessary groundwork for the analyzing the period when *Western Empire* was constructed.

The social, political, and economic climate during the middle of the nineteenth century exercised great influence over the construction and purpose of the vessels built in the Quebec shipyards. Analysis of this era will begin with the history of the town in which *Western Empire* was built: Quebec.

During the middle of the nineteenth century, much of Quebec's economy was

directed by Canada's status as a colony of Great Britain. This dependence and association with the English affected the Québécois not only politically, but also economically and socially. Whether it was tariff issues, trade status, access to capital, or a multitude of other factors, the daily life of the Quebec shipbuilder was directly linked with England. In addition, the relationship between the businesses of shipbuilding and trading will be discussed. Chief among these trading commodities was timber, which will be looked at in greater detail due to its overarching importance to the Quebec shipbuilding economy as well as the economy in Britain.

During this period, the trend in global ship construction was moving towards iron and steam. However, wooden construction did not immediately disappear, nor did the introduction of maritime iron and steam production in other markets instantly undermine the Quebec economy. The continued construction of vessels like *Western Empire* and its sister ships during this period of technological dichotomy was a testament to the strength and resilience of Canada's wooden shipbuilding industry and its access to inexpensive raw materials. Unfortunately, that strength would not last indefinitely. While the introduction of the iron and steam did not have any immediate effects, it did mark the beginning of the end for the Quebec timber trade and wooden shipbuilding industry.

Great Britain's Primacy in Directing Trade

Great Britain exerted significant influence on Quebec's industries, and this control over the trade and livelihood of the colonies showcased England's power. But the mother country also had its weaknesses. England had depleted its supply of shipbuilding timber by the end of the sixteenth century. Never having replenished its forests, it became necessary to obtain foreign help to maintain timber supplies for the navy, merchant fleet, and others industries that required vast amounts of wood. However, being dependent on outside resources put England in a precarious position. Dependencies could be seen as weakness, and weaknesses could be exploited. The case of Napoleon and the Baltic trade will be discussed later, but the end of the eighteenth and beginning of the nineteenth centuries was a time when England had good reason to fear for its timber supply chain. Britain's hunger for timber was enormous and demands on naval construction led to increased dependency on foreign timber markets as the nation's merchant fleets continued to grow (Lower 1933:42).

This immense need for wood also made England the dominant player in the international timber trade (Potter 1955:125). Throughout the eighteenth and nineteenth centuries, England's primary trading partners were able to profit handsomely, crowding out other competition and expanding their economies from timber trade with this single country. During the second quarter of the nineteenth century, eastern Canada was the main supplier of England's timber. Nearly all of the timber trade from Quebec and Newfoundland was with England. If England dropped out of the trade picture, Canada

would have been left wanting. This was exactly what began to happen in the middle of the nineteenth century.

In addition to the trade in raw timber, shipbuilding was another major British demand that Quebec was able to supply. Without the English market for their timber and ships, the Quebec economy could not have prospered, and without the Quebec market to supply much needed ships and timber, the English would have greatly suffered (Faucher 1957:214) While the two enjoyed a symbiotic relationship of supply and demand, it was the Quebec economy that constantly reacted to accommodate Britain's needs to produce the necessary items (Faucher 1957:198). It has even been suggested that the British market directed the Quebec shipbuilding industry by England's complete domination of the Quebec market (Rice 1977:111). In addition, the British were amenable to encouraging the Quebec and other Canadian markets in an attempt to resist the growing American shipbuilding industry. Because the Québécois designed their vessels on the American model, the English were able to obtain boats that had similar hull shapes and sailing quality without supporting a rival economy (MacGregor 1984:112).

The relationship between Britain's market fluctuations and Canadian shipbuilding will be further examined in the growth of Quebec's timber trade. Understanding the timber trade in Quebec will help create a more complete understanding of the commercial environment at the time of *Western Empire*'s construction.

Growth of the Timber Trade

Before England began significant imports from Canadian timber markets, the Baltic states were the main supplier of that resource. The Baltic provided timber at relatively low shipping cost due to its proximity to Britain, eliminating England's need to look elsewhere. However, a harbinger of the problems inherent in the English timber trade arose in the name of Napoleon.

The danger of relying on a single foreign territory for such a needed commodity came to pass in 1808 when Napoleon effectively closed British trade to the Baltic, halting the supply of timber and forcing Britain to find alternatives sources (Lower 1933:42-43). They could trade with a more expensive, and thus less profitable market, or they could artificially create a new market. They chose the latter and developed a new market by imposing additional duties on all but Canadian timber imported into Great Britain.

By the end of the Napoleonic Wars, foreign timber was charged a duty of nearly 100 percent (Potter 1955:123). This effectively prevented British merchants from continuing any type of lucrative trade with the Baltic and opened up potential markets in Quebec and other Canadian cities for business.

With foreign timber effectively cut off from the British market by a large tariff, colonial timber was being imported in vast quantities at competitive rates. The portion of trade given to Canadian timber was so great that from 1816 to 1846 it commanded at least a 60 percent share of the British timber trade, and Canadian dominance steadily

increased until the early 1860s (Potter 1955:127). A comparison of exports from 1799 and 1811 highlights the growth of Canadian trade. The year 1799 represented the era of a Baltic-dominated market in which the Baltic states shipped 5,121 middling and large masts and 149,049 loads of other timber. Conversely, Canadian exports totaled a mere seven masts, 1,078 loads of oak and pine. In 1811, after the tourniquet was placed on Baltic trade and the market began its shift to Canada, Quebec's exports increased to 19,025 masts, 24,469 loads of oak and 52,888 loads of pine (Marcil 1995:42). Such a dramatic increase was indicative of the rapid growth of the Quebec timber market. As the industry grew, the only limiting factor was the rate at which the timber could be cut and shipped. Fortunately, Quebec was blessed with large surrounding forests awaiting development. It was these forests that not only interested foreign buyers, but enabled Quebec to become a thriving center for ship construction. Shipyards that were in close proximity to their primary resources (wood) were often more profitable, and Quebec's large forests solidified its position as a major ship construction center (MacGregor 2001:27).

While the timber trade may have started Quebec's period of rapid growth, other industries also contributed to the city's rise in maritime markets. As the middle of the nineteenth century approached, discovery of gold in both Australia and California introduced a fresh infusion of interest and trade across the seas (Faucher 1957:199). The new gold-rush towns needed ships to bring them to life and sustain them. While Quebec shipyards were not active in supplying the California trade, they did find a niche and a welcome market in Australia. Quebec was truly at its height during the 1850s when the

timber trade was in full swing and orders for new ships to stoke the Australian gold rush seemed infinite.

The growth of Quebec and Canadian shipping was largely determined by outside circumstances. The rise of Napoleon and the closing of the Baltic ports forced Great Britain to create a new market for its timber needs, and the colonies Canada, with their massive timber resources, were waiting with open arms. The near-complete relaxation of duties on Canadian timber combined with the raising of massive tariffs on all other foreign timber enabled Canada to seize the timber market and enter a period of incredible industrial growth. Previously, high shipping costs had prevented Canadian timber from entering the English market, but the political situation in England negated that issue and Canada was now a major player in English industry.

Lloyd's Register recognized the growth of this market and established a new branch committee at Liverpool in 1845 whose mission was largely centered around colonial-built ships. Lloyd's Register used surveyors known as "Shipwright Surveyors" to oversee the construction of new vessels. These men were trained as shipwrights and instead of pursuing a career as such, they used their knowledge to inspect vessels as they underwent construction (Lloyd's Register 1934:65). Within seven years, six new Shipwright Surveyors had been contracted to oversee shipbuilding in Quebec and the other Canadian maritime regions. These new surveyors did not limit themselves to only a few stages of the shipbuilding process, but instead they embedded themselves in the various shipyards and oversaw the entire construction sequence. This brought about a noticeable improvement in workmanship and design, which did not go unnoticed in

England. Lloyd's Register marked ships "Built Under Special Survey" with a maltese cross, as can be seen in the register entry for *Western Empire* (Figure 2) (Lloyd's Register 1934:96-97).

It was the timber trade that initially sparked this period of growth and dramatically changed the economic structure of Quebec (Marcil 1995:43). Once a slow-paced provincial port, the turn of the nineteenth century infused the city with the vigor of industry and busy construction and shipping. However, was Quebec ready to become an industrial center? Did it have the necessary institutions to sustain such rapid growth?

Business and Trade

Eileen Marcil, a Quebec historian, listed four requisites for a stable and prosperous shipbuilding industry to exist (Marcil 1995:45-48). The first was that both shipbuilders and their crews required a means to survive the slow periods. If Quebec was completely reliant upon shipping and shipbuilding, then any slow season would see a mass exodus of skilled labor from the city and an inability of businesses to recover from the slump. To help combat these low periods, builders provided local employment by developing public works (Marcil 1995:45). This is not to say that businesses never failed; foreclosures of yards and loss of businesses did occur, and many workers were often left unemployed. However, this investment in public works did provide a solution to the periods when shipbuilding was experiencing a slump.

Second, Marcil stated that a system of finance must be established to provide the

necessary loans and capital at the initial stages of shipbuilding. At the turn of the nineteenth century, merchants themselves provided the bulk of the financing. As trade grew, speculation became a major part of the business, and firms with British connections became major financiers. During this early growth, the presence of these men allowed for continued expansion. However, with the decline of trade in the third quarter of the nineteenth century, many lenders departed, leaving only a few firms to handle the bulk of a quickly dwindling business (Marcil 1995:46-47). With the loss of the lenders, the economic capital behind the industry departed, which allowed the failing economy to continue in its downward spiral.

The third requisite was that a certain level of business efficiency must be present; otherwise, the amount of effort and invested capital would not produce profitable results. This efficiency was dependent on the cost of materials and availability of men to work the yards. Winter was the main season for shipbuilding and there was a much larger supply of workers than demand for their work. This enabled yards to pay lower wages and increase their profit margins while maintaining competitive prices for their products. The yard owners at this time would often have many ships being simultaneously built, necessitating tight organization and planning to keep their yards running efficiently. Delays and uncertainties were common and placed a constant threat on keeping jobs on schedule and under budget. The large Quebec workforce allowed for men to specialize their skills, enabling yard owners to pull from a massive pool of expert workers available to solve the myriad of problems that arose (Marcil 1995:47-48).

Lastly, a ship-brokerage system was necessary to either find freight for a

charterer or vice versa (Marcil 1995:46). Various companies were in existence at this time whose sole purpose was to find work for newly built ships and also build ships for newly chartered business. By removing this stress from the shipbuilders and those that chartered the ships, each was able to pursue their primary occupations with greater ease. These independent institutions simply brought the two parties together and arranged profitable deals that kept the Quebec shipbuilding industry running strong.

Quebec succeeded in this area, and 1854 was seen as the climax of the Canadian wooden shipbuilding industry (Faucher 1957:199). The growth of the timber trade and associated markets peaked around this year, but the business conditions that created such a rise could not last forever. A number of factors contributed to the decline, but it was the introduction of steam power in shipbuilding that most historians discuss.

The Loss of Trade

The second half of the nineteenth saw a decline in both wooden construction and exports of timber, but the cause of this loss is not clear. The industry did not see its final demise until the late 1880s, and North America held onto its wooden tradition with a mighty grip during that 30-year interval. The convergence of these wood and iron shipbuilding technologies is unique to this period in history. This was especially true for North America, where the two existed harmoniously for several decades before the eventual domination of steam and iron. Therefore, it is important to understand the relationship between these competing industries.

This continuation of the older technology after the establishment of steam and iron can be understood by looking at the period as a time of competitive equilibriums (Harley 1973:373). The availability of construction materials and alternative employment for workers strongly affected production of ships, whether of metal or wood (Harley 1973:373). As each shipyard reacted to fluctuations in the market and shipbuilding design, they altered production accordingly. Strikingly, shipbuilding in North America as a whole declined far more rapidly than that of just sailing ships. This implies that the reduction of American-built wooden ships in the British market was caused by the rise of a local British iron shipbuilding market, and not due to the introduction of iron and steam shipbuilding in the pre-existing wooden shipyards of North America. Britain's abundant natural endowments of coal and iron may have contributed to its dominance during and after the industrial revolution (Mokyr 1999:32-34). With easy access to the resources necessary for iron and steam construction, England could regrow its home market in maritime shipbuilding. No longer dependent on ship timbers for construction, they could rely on local sources to supply the necessary requirements for building ships of iron. This enabled the British to begin turning their backs on traditional wooden shipbuilding and look to a future where they were in total control of the shipbuilding process. Even if the Canadians had developed industries of iron plate production and of iron ship construction, England's lower shipping costs for locally-produced material would have prevented competition.

Shipping costs were, of course, a major influence on the decisions of merchants sending materials across the oceans for sale. One of the most important aspects when

determining these costs is the amount of available space on a vessel for cargo. Before 1850, the fuel for steam engines heavily encroached on that space, limiting the total tonnage of goods that a steam-driven vessel could carry (Harley 1988:863). However, less than a decade later, the industry had caught up and a support structure was developed for refueling. The problem of fuel-space became a non-issue, enabling steam propulsion to begin its ascent as the most profitable method for driving goods across the sea (Souza 1998:113). In addition, the opening of the Suez canal in 1869 effectively eliminated sailing ships from Far Eastern trade. The reduction in shipping time combined with the earlier solution of a support structure for steam enabled steam propulsion to become the dominant propulsion in the Eastern trade.

Therefore, it was not that Canadians did not appreciate the new technology or acknowledge its coming dominance, but that their industry was not prepared for such a drastic change. In addition, the inability of the labor force to change from wood to iron was a strong motivating factor for keeping the status quo of wooden shipbuilding (Harley 1973:388-389). The change for both the workers and the shipbuilders from wood to iron entailed enormous overhead costs, costs that they did not have the funds to cover, especially as the trade had been in decline for a number of years. The men had no background in iron shipbuilding, and Quebec was forced into a situation where new capital and skilled labor needed to be recruited. Unfortunately, they did not have the resources to do it.

The wooden shipbuilding industry was closely related to a craft economy, which was not conducive to the industrial style of iron shipbuilding (Faucher 1957:211). In

addition, the men of the Quebec wooden shipyards generally used their own tools. As iron shipbuilding first encroached the industry with composite shipbuilding, the yards became the tool-owners (Faucher 1957:213). Men could no longer work on their own, and became dependent on the yards to supply the tools of the iron trade. Furthermore, already impoverished yard owners would have had another piece of capital that needed to be raised to cover the cost of the tools for his men. Consequently, their inability to raise the necessary capital prevented the conversion of their yards from wood to iron. While the introduction of iron and Quebec's failure to adjust seem to be influential in the decline of Canadian shipbuilding, the primary factor was the same that contributed to its meteoric rise: the timber trade. However, Quebec's shipbuilding industry did have an opportunity to postpone its demise.

The importation of Canadian timber into Britain had increased steadily until the early 1860s (Potter 1955:127). This growing market was a boon to Quebec, and they harvested their timber in anticipation of its continued growth. However, the arrival of iron, combined with the opening of other markets was too much. Quebec, when faced with competition, couldn't compete without the tariff exemptions, and their export trade suffered. In turn, stockpiles of lumber began to accumulate in Quebec to such an extent that the Executive Board of Trade recommended the cessation of lumbering activities (Faucher 1957:202).

In addition, the Ottawa valley, the Saint Lawrence River and its tributaries, as well as the border of Lake Champlain, which had provided seemingly inexhaustible timber supplies during the initial rush and opening of the market began to fade (Marcil

1995:42). As time passed and prime trees were systematically harvested, the forests slowly began to lose usable timber. The lumber industry was not without its own problems, and like today, it was viewed as a wasteful industry. Lumberjacks would only choose the largest and best trees, and if any had signs of rot after they had been chopped down, they would be left on the forest floor. If the wood was good, the log would be squared, and a third of the wood removed and left behind. In all, the timber industry had cut too many trees for the shrinking markets of the 1860s, and they had wasted a huge amount of timber that was left to dry in the ravaged forests. This discarded wood often acted as kindling, fueling numerous fires and creating greater loss for Canadian resources and trade (Lower 1933:54). As sources were depleted, and forest fires destroyed many lumbering areas, the industry constantly remained on the move. The longer this went on, the less good quality timber was available and suitable trees were more difficult to locate (Harley 1973:384-385). With the stocks of timber piling up in Quebec, and the lumbering trade dying in eastern Canada, the future of the shipbuilding economy looked bleak. The lenders who supported the industry in Quebec recognized this after the peak of 1854 and by the 1860s nearly all of them had left (Marcil 1995:47).

After Quebec shipbuilding peaked in 1854, the British market began to decline, but the Québécois had an opportunity in the 1860s to revive their industry (Faucher 1957:197). In 1863, France agreed to accept Canadian-built ships free of duty in exchange for a similar tariff exemption on French wine. In a period where Quebec shipyards were losing their British business, this would have revitalized the dying economy. However, for an unknown reason, the Canadian government reinstated the

wine tax in 1865, forcing France to reciprocate and end the potentially profitable and industry-saving agreement (Faucher 1957:200). In anticipation of the opening market, Quebec shipbuilders had produced an enormous number of vessels, which then had to be sent to England as their only other export market. Unfortunately, England did not have a need for them, and the vessels were sold cheaply, if at all (Faucher 1957:200). After this, the slump that had started after 1854 continued. The revival in shipbuilding in the 1860s was purely temporary and only served to postpone the end of shipbuilding in Quebec. Wooden shipwrights remained in business by lowering the cost of their ships in order to compete with the higher cost of iron shipbuilding. However, by the 1870s, iron ships had significantly come down in price, making it impossible for a wooden vessel to be sold for overseas work. Instead, the shipbuilders in Quebec and other maritime provinces conceded to the international market and only produced for the home market (MacGregor 2001:22).

In all, the stagnation of the timber trade and inability to change with the times doomed shipbuilding in Quebec. Yet, for the first half of the nineteenth century, Canada was one of the premier shipbuilding centers of the world, with Quebec at its forefront. Its ability to continue for much of the later part of the century was a testament to its hardiness, but in the end it succumbed to the changing world. The ships that the city's shipyards produced were able to compete with the faster clipper ships due to their larger cargo capacity while maintaining a reasonable speed under sail. *Western Empire* was an example of the persistence of wooden sailing ships in the burgeoning age of iron and steam and was a testament to its builders in Quebec.

CHAPTER III

WORKING LIFE OF *WESTERN EMPIRE*

Britain-India Trade

1862-1863

The crew on *Western Empire*'s maiden voyage to India consisted of 37 men and 6 apprentices. The men ranged in age from 14, an ordinary seaman, to 50, the ship's master. The average age of the crew was 28. It was not known if the master of this voyage was the same man who captained the ship over from Canada, but he did not remain long on the ship, as the next Crew Agreement lists a new master (Crew Agreements [CA] 1862).

The majority of the men on board were from Great Britain(24), but there were also representatives from Sweden(2), Denmark(1), Finland(1), USA(4), Norway(1), Russia(1) and India(2). One entry was illegible. Their hierarchy was organized as follows: 1 master, 2 mates, 1 second mate, 2 carpenters, 1 butler, 1 sailmaker, 1 cook, 24 seamen, 3 stewards, 1 boy, and 6 apprentices. However, not all of those who signed on for the voyage completed the round trip back to London (CA 1862).

Western Empire left Liverpool on 27 August 1862 under the ownership of R. Girvin & Co. with B. Atkinson as its captain for its first trip to the Indies (see map of voyage in Figure 3). On 6 January 1863, *Lloyd's List* (LL) (1863a) reported that two

ships, *Mercury* and *Hubbard*, had sighted *Western Empire* at Mauritius, which is located off the coast of Africa east of Madagascar, where it was on its way to Calcutta, India. This announcement likely provided the ship owners with the first news on the voyage of their new ship since it left London at the end of August. On 16 February, *Lloyd's List* (1863) announced the completion of the outbound leg of *Western Empire*'s voyage with its arrival in Calcutta (LL 1863b). Although it was on 16 February that the ship's arrival in Calcutta was announced, this was not the actual date that the ship came to port because of the typical time delay in shipping information. While in Calcutta, two sailors were discharged from their service with the ship. One left on 21 January and the other on 3 February. Although they only completed half of the voyage, they were given ratings of Very Good by the captain. On 11 February, two new sailors signed the agreements and joined the ship's crew. The new hires were not sailors, but signed on as a butler and a boy. Even with the reduction of crew, there was an adequate number of men to work the ship, and the additional hires likely addressed the needs that the captain discovered. It is unknown as to why the captain, after losing two sailors, would hire more people on board who could not do the duty of the lost men (CA 1862). The ship left Calcutta on 15 February 1863 for Mauritius (LL 1863c) and arrived on 25 March. The Crew Agreement (1862) noted that on 21 April and 29 April, two more seamen were discharged while at port in Mauritius. Neither of these men were replaced and the crew likely had to make do with the reduction.

Western Empire left the port of Mauritius and began its homeward journey to London on 3 May 1863 (*LL* 1863d). The ship was sighted on 18 May (*LL* 1863e), 2 July

(*LL* 1863f), and 29 July(*LL* 1863g). Each time, a report was given to *Lloyd's List* so that its homebound progress could be tracked. Finally, on August 7, *Western Empire* arrived in England. It first stopped at Deal (*LL* 1863h) before it journeyed to Gravesend a day later (*LL* 1863i). The cargo that the ship carried was offloaded at the customs house and recorded.

The London Customs "A Bill" from 10 August 1863 began by repeating some of the basic information about the ship. It listed the total number of crew as 35, the master as B. Atkinson, the total tonnage of the vessel, and finally, the cargo. The crew count of 35 must have not counted the boys nor the butler, otherwise there is a discrepancy with the Crew Agreement of the ship. *Western Empire* returned from its Bombay/Mauritius trip with the following goods: sugar, "pastre" bars (blocks of dye), hides, arrowroot (a thickening agent), rum, "m'dize" (short for general merchandise), wine, and cinnamon. The Customs A-Bills did not signify the end of the voyage, as going through customs today usually does not signify the end of our trip. The customs house was solely the first stop in England where the cargo was inspected before it was allowed to be delivered to its final port. On 23 August, *Western Empire* cleared Customs and went on its way to Liverpool (*LL* 1863j), where it arrived on 4 September 1863 (*LL* 1863k). It was this date that marked the end of *Western Empire*'s first voyage.

All of the men were given ratings of Very Good at their release except for one of the carpenters, who was only given a Good. Unfortunately, without any log from this voyage, it will remain unknown as to why he was given a lower rating (CA 1862).

1863-1866

The next voyage of *Western Empire* began on 28 September 1863 (see map of voyage in Figure 4). R. Girvin remained the ship owner, but a new master was hired to captain the vessel. The leadership change likely occurred shortly before the voyage as the previous master, B. Atkinson, was listed, but his name was crossed out and replaced with Robert Woodnorth. The information on the Crew Agreement (1863) differed slightly from the 1862 Crew Agreement. As with the earlier document, it listed all crew members, but it also had a special notation for men who joined in Calcutta specifically for its return trip to London. The following information on the crew will take into consideration all of the men, including those added for the return voyage. However, for simplicity, the crew totals for each voyage will be separated (CA 1863).

According to the Crew Agreement, the trip to Calcutta was made by 24 men, including the master and 7 apprentices. However, the Official Log listed 25 men, not counting the master nor listing any apprentices. Of these original men, 13 left the ship at Calcutta, one never joined th ship, and one died at sea. The Official Log adds seven more men when the ship arrived at Calcutta in 1864 (four of whom did not continue on), and then twelve more men in 1865. The Crew Agreement also indicattes changes in the crew when at Calcutta. It appears that five men were discharged and an additional five were immediately hired, most of whom seemingly never joined. Unfortunately, the year when many men joined the ship is not written, but the Agreement does show that during the ship's many visits to Calcutta an additional 28 men signed on. Many of these men

appeared to not stay on the ship very long, if at all, but the information on crew origins and ages reflects all of the men listed in the Agreement (CA 1863).

This trip also appeared to not have gone as smoothly as the first. This was seen in the Official Log (1863) (which began during this trip), as well as in the causes listed for crewmen leaving the ship. Interestingly, the names listed in the Crew Agreement (1863) did not match those in the Official Log (1863). The cause of the discrepancy between these two lists is unknown.

The crew on this second voyage ranged in age from 19 to 51, with an average age of 28.3. Once again, the oldest crew member was the master, but there were also regular seamen who were in their 40s. The youngest, all apprentices, were 16 or 17 years old at the time they signed the crew agreement.

The majority of the crew members (28) originated from Great Britain (including Ireland), but there were also 13 Swedes on board that made up a substantial portion of the crew. There were three men from Spain, two from Italy, and single representatives from Norway, Chile, Canada, and the USA. Six entries were either missing or illegible. Two men from Trieste rounded out the remainder of the crew. The home country of the apprentices was not listed, only their port of indenture (Liverpool for all) (CA 1863).

The men on board *Western Empire* did not receive equal pay for their duties. Payment was given to the sailors in three different ways: (1) as an advance before joining the ship; (2)as a monthly salary that was tracked by the master and given to the men at the completion of their voyage; and (3) as an allotment given to the men monthly. This allotment would have been a percentage of their total pay, enabling some men to

have access to a portion of their earnings before the end of the voyage. To simplify payment descriptions, all sailors are assumed to have asked for a full month's pay in advance, unless otherwise noted. The pay for the master was not listed, but the mate received eight pounds per calendar month, requested a four pound advancement, and was allotted three pounds per month. The carpenter was paid 5 pounds 15 shillings per month, and received a 2 pounds 7 shillings 6 pence allotment. The second officer was paid five pounds per month, while the boatswain, sailmaker, and steward were each paid four pounds per month. The boatswain's mate was paid 3 pounds 5 shillings, with a 2 pound advancement, and the cook was paid 3 pounds 10 shillings per month. All of the ablebodied seamen were paid 2 pounds 10 shillings except for two who were paid 5 shillings more. There was no explanation for the difference. The wages allotted to ordinary seamen were not recorded for this voyage (CA 1863).

Difficulties were immediately encountered between the crew and officers on the second voyage. Before the ship sailed, two of the ablebodied seamen arrived on the poop deck wishing to speak to the master. They received permission to go astern, where they stated to Captain Woodnorth that they believed the ship was not sufficiently manned. Woodnorth disregarded their complaint and ordered them to return to their duties (Official Log [OL] 1863). This confrontation was only the first between the captain and his crew.

When it was time to for the ship to leave port on or around 28 September 1863, a pilot was contracted to help lead the ship out of harbor. However, he was unable to perform his duty because nearly all of the crew was drunk. Six hours after the pilot's

attempt, Woodnorth once again tested the sobriety of his crew, but they remained intoxicated and still incapable of work. Eventually the crew became sober, returned to work, and the ship left port and headed westward to Holy Head in North Wales.

The hungover crew of *Western Empire* suffered its first casualty shortly thereafter on 1 October 1863 when one of the crew members, Robert Wilson, fell from the jib-boom and drowned. The log reports that after he fell, all efforts were made to save his life, including throwing him life buoys and lowering the long boat for rescue (OL 1863).

The first news that the ship-owners received was a sighting on 2 January 1864 (*LL* 1864a). The information stated the ship was on its way to Calcutta, but did not mention the problems leaving port or the loss of the seaman's life. The owners would have had no knowledge of these issues until the ship returned and the Official Log was inspected.

Western Empire arrived at Calcutta on or around 9 February 1864, completing the outbound leg of its voyage (*LL* 1864b). Shortly after arrival, the ship began to lose members of its crew. One man deserted and four more were discharged sick into various hospitals in Calcutta. On 20 March, the second death of a crew member occurred when John Wilson, one of the men discharged due to illness, died of cholera at Calcutta General Hospital (OL 1864). On 6 April, *Western Empire* sailed from Calcutta to Bombay (*LL* 1864c), and arrived there on 7 June (*LL* 1864d). Unfortunately, leaving Calcutta did not stop the spread of sickness on board *Western Empire*. On 18 July, another ablebodied seaman was discharged into Bombay Hospital where he later died

(OL 1864).

The loss of crew wasn't the captain's only problem. While still likely in Bombay, the ship began taking on water sometime around 20 August 1864, when *Lloyd's List* reported that four inches (10.2 cm) of water per hour was entering the ship, forcing *Western Empire* to return to dock for repairs (1864e). On 28 August, the sickness continued to spread, and another ablebodied seaman was discharged into the Bombay Hospital, followed shortly thereafter by a second man (OL 1864). The vessel was finally able to clear Bombay dock sometime between 5-7 September to begin its return voyage to Calcutta (*LL* 1864f).

On 5 October 1864, while docked at Calcutta, a storm began to brew, bringing with it heavy squalls and rain. To retain control over his ship, Captain Woodnorth reduced effects of the gusting winds on his moored vessel by furling the awning, at which point he noticed that several small native vessels were adrift and moving towards *Western Empire*'s hawse. Unfortunately, he had no control over them and all he could was secure his own ship. The barometer began to fall quickly as the gale steadily increased. In response to the worsening conditions, Captain Woodnorth released the port cable to its maximum length and sounded the pump well. The starboard cable was also run out to allow the ship more movement in the growing storm (OL 1864).

As the storm progressed, the wind changed direction and began blowing from the East, driving the ship towards the shore. At times, the force of the wind and the shape of the shoreline almost put the vessel alongside the river bank. As the ship was being blown towards shore, an unknown barquentine drove into *Western Empire*'s port bow,

ripping alongside and destroying the rails and poop stanchions. After the initial collision, the barquentine dropped behind *Western Empire*'s starboard quarter, carrying away the mizzen top mast, backstays and main brace bumpkins as well as all the aft braces (OL 1864). This was only the first accident of the evening.

The vessel *Continental*, drifting in the storm with broken rigging, then ran into *Western Empire'*s port bow, with its topsail yards going through *Western Empire*'s top forecastle deck. More ships followed, striking the already damaged port side, including the bowsprit of the ship *Earl Clarke* which carried away the fore and main mast rigging as well as the fore mast, main mast, mizzen topmast (which was already mentioned as being lost in the collision with the barquentine), mizzen boom, gaff, and likely the rigging (OL 1864).

Both the *London Times* (1864) and *Lloyd's List* (1864g) corroborate the Official Log complete with a listing of the same damage. However, the entry in *Lloyd's List* dates the storm to 25 September, but that may be an error on the paper's part, as both the Official Log and *London Times* date the storm and subsequent damage to 5 October.

After these collisions, the storm drove *Western Empire* alongside the river bank, unable to clear its hawse and with one of its anchors broken. As the storm cleared, it became apparent that the ship was sitting in only 2.5 fathoms (4.57 m) of water on top of the remains of other ships that had wrecked during the storm. To remove the grounded ship, Captain Woodnorth dropped a kedge anchor and hawser into deep water, then used the anchor to slowly drag the ship into deeper water with the coming of each tide. *Western Empire* finally returned to safe anchorage on 10 October, five days after the

beginning of the storm (OL 1864).

After this ordeal the crew was restive and four sailors deserted over a two-week period at the beginning of November (OL 1864). This was also the period when the first news of the storm and the damage it caused were reported back to Liverpool. A short note in *Lloyd's List* (1864h) stated only that the ship required heavy repairs and would be docked. No details were given as to the extent of the damage. Although the vessel was re-floated once again, the extent of the damage was great enough that it became necessary for *Western Empire* to return to dock for repairs (*LL* 1864i).

It was during this period when the ship was being repaired that the four men mentioned above deserted the ship. Finally, on 8 December 1864, *Lloyd's List* reported that the ship had undergone sea trials and "Remained Afloat." This report did not mean that the ship was not seaworthy until 8 December, but only that its seaworthiness was not reported in *Lloyd's List* until that date. It is likely that the ship regained its watertightness earlier than that, but news of its condition was not reported until much later.

While at Calcutta on 26 December 1864, the Official Log (1863) recorded the death of Martin Dewing Hopkins at the Calcutta General Hospital. Strangely, no such crew member was listed either in the Crew Agreements or the Official Log for this voyage. No further or prior entries discussed this death, and it remained an unknown addendum to the log.

The problems that occurred on *Western Empire* while at Calcutta did not cease with the stormy weather or desertion of able bodied seamen. On 28 January 1865, the

carpenter, John MacLeod, went ashore on the pretext of doing ship-related work. However, instead of doing such business, he became intoxicated and then returned on board. When Master Woodnorth berated him for his actions, the carpenter responded with insolence and the two began to fight. The carpenter was not punished, suggesting that the altercation was solely verbal (OL 1863).

The following day, the chief mate ordered John MacLeod to check the level of the water at the pumps, which was one of his standard responsibilities. MacLeod refused the order, but once again no punishment was recorded. The next day, Macleod again refused to do his duties and requested shore-leave to visit with a magistrate about his problems on board. This was granted, but Macleod did not return to the ship for over 24 hours. His absence was assumed to be an act of desertion, so Woodnorth issued a warrant for his arrest ordering the local police to find him and return him to the ship (OL 1863).

The next morning, Macleod returned to his labors without complaint. However, this return to normalcy was short-lived, and the next day he once again requested leave to visit the magistrate. Woodnorth once again granted him permission, but he did not return for nearly 12 hours, far beyond his allotted shore time. These acts of desertion, or at least of insubordination, did not appear to excessively bother Woodnorth, because no punishment was given for any of his infractions (OL 1863). It is possible that such leniency was granted due to the difficulty in convincing a new carpenter to join a ship that was recently damaged.

The next day MacLeod once again performed his morning duties until 8 AM and

then repeated his request to go to shore to see the magistrate. Again, this was granted, and this time he did not return in the 24 hours that was allotted to him. When he finally returned, nearly 30 hours later, he told Woodnorth that the magistrate was not available and then returned to his normal duties.

Over the next two days, he appeared to be obedient once more and followed all given orders. However, on the third day, Macleod worked until 8 AM, and then returned a final time to the shore, but this time he was accompanied by Woodnorth. A court appearance had finally been arranged in which both parties could discuss the assault which occurred the first day between MacLeod and Woodnorth. Unfortunately, when they arrived to the court house, it was discovered that the case was tried in their absence and the decision was given to them when they arrived. MacLeod was ordered to return to *Western Empire* and resume his duties. This was assuredly not what the carpenter was hoping to hear, and he refused to obey the court order. For his open defiance of the court Macleod was arrested and jailed (OL 1863).

With this difficult crewman now left behind at Calcutta, the master returned to the ship on 23 February to depart *Western Empire*. Unfortunately, the port anchor was fouled, and he was unable to recover it. Captain Woodnorth attempted to free it by using the steam windlass of the ship employed to tow *Western Empire* out of the harbor. Unfortunately, the windlass was broken and they had to wait until the next day for it to be repaired. After it was repaired, the anchors were cleared, and the ship was towed back out to sea (OL 1863).

The next set of pages in the Official Log announced that the ship was moored at

the island of Ceylon, or modern Sri Lanka. The first entry under this heading, on 26 February 1865, stated that the starboard side of *Western Empire* was damaged in a collision with the steam ship *Labour*. The chain plates, top plank, and fore and main dead eye bolts were all broken in the collision. In addition, the port chain cable was lost, along with 30 fathoms (54.88 m) of cable, the second bower anchor, and the buoy rope. Native divers were employed to find the anchor and buoy, but they failed and both the anchor and cable were lost. To compensate, the spare bower anchor was used to moor the ship while in the harbor.

Unfortunately for others vessels, *Labour* remained out of control and ran into two other ships causing considerable damage (OL 1863). A week later, on 2 March, a steamer was engaged to tow *Western Empire* to dock for repairs. However, the harbor master was neglectful in his duties and failed to have his assistant in attendance, postponing the tow, and any repairs, for two days. On 4 March, the steamer *Mary Stewart* was able to tow the ship to Garden Reach where it was then moored for repairs (OL 1863).

On 10 March 1865, *Western Empire* completed repairs and was towed back out to sea by the steamer *Rattie* (OL 1863). At this point, it was likely that *Western Empire* returned to Calcutta because on March 16 it was reported that the ship had sailed from Calcutta on its way to Colombo, Ceylon (*LL* 1865a).

On 5 April, *Western Empire* drifted into another ship in Colombo harbor after it lost another anchor. Some damage was sustained during this collision, including the loss of approximately 30 fathoms (54.88 m) of cable. It is unknown as to whether rope or

chain lost, nor was it known where this accident occurred(OL 1863).

On 26 April, a telegram was sent stating that *Western Empire* had arrived at Colombo (*LL* 1865b). While in Colombo, the problems with the crew persisted when the boatswain and four ablebodied seamen refused orders from the chief mate to haul the over-side fenders out of the water. Their reasoning for their insubordination was that it was past six o'clock and their daily duty time was over. There was no record of any punishment for their actions (OL 1863).

After its stay in Colombo, *Western Empire* sailed to Madras, India, and arrived on 4 July 1865 (*LL* 1865b). This was its final stop in the East, and the ship began its trip home to Liverpool on 18 September 1865 from the port of Madras (*LL* 1865b). On 8 January 1866, while the ship was in the middle of the North Atlantic, a heavy gale occurred with waves high enough to smash the quarter boat located on the port side. Water poured into the poop cabins and two of the hen coops were destroyed along with the fore sky sails. *Western Empire* may also have had a deckload of wood on this trip, because the captain noted that before the sea water was able to escape from the deck, lumber was washing around and that it likely caused more damage (OL 1863). Nine days later on January 17, the ship finally returned to Liverpool (*LL* 1866a).

Captain Woodnorth seemed to have been much stricter in his assessment of the crew, and while he rated many of the men as Very Good in both General Conduct and Seamanship, others received only grades of Good, and for some he declined to write any comment (CA 1863).

1866

Western Empire enjoyed a brief stay of approximately two and half months at its home port in Liverpool before it prepared for its return to the Indies for its third Calcutta/Bombay run. The ship remained under the ownership of R. Girvin & Company, and Robert Woodnorth was kept on as ship captain.

The Crew Agreement (1866) listed a crew of 30 men and 1 apprentice, including the master. However, the Official Log (1866) listed a total of 41 men and 4 apprentices. The discrepancy between these two documents was not explained, and there does not appear to be any obvious reason for it. The average age listed in the Crew Agreement was 28.7 years old, with the oldest the master at 54 and the youngest an ordinary seaman at 19 (not including the 16-year-old apprentice) (CA 1866).

This crew was made of many more native Britons than before, with 22 of the 30 men from Great Britain. Unlike the previous voyage which had a large number of Swedes, this trip only employed one. The origin of the remaining five men was not legible. Of the 30 men listed in the Agreement, three did not actually join the ship, eight were discharged in Calcutta, and the remaining 19 returned to Liverpool, with one of them officially remaining for the next voyage (CA 1866).

The payment of the crew was similar to that of the previous voyage. The mate had the largest salary at 7 pounds 10 shillings along with a monthly allotment of 3 pounds. The carpenter and boatswain were the second highest paid at 5 pounds 10 shillings with a 3 pounds allotment. The second mate was paid only 5 pounds per

month, while the sailmaker was paid 4 pounds per month and asked for two months' advancement in wages. The cook was paid 3 pounds 10 shillings. It appeared that all other sailors, including the boatswain mate and third mate, were paid 2 pounds 15 shillings. For the first time we now have the pay of the boys on board, at a measly 10 shillings per month (CA 1866).

Western Empire departed Liverpool on or around 8 March 1866 for its third trip to the East (see map of voyage in Figure 5). The first news returning to Liverpool of this trip was a sighting at sea on 7 May (*LL* 1866b). At this point there appears to be a potential problem with the record. *Lloyd's List* noted a sighting of a *Western Empire* West of Cape Horn on 6 April (*LL* 1866d). This was a dubious entry, first because there is an additional notation of (Amer), and the next known location of the ship was off the northern coast of Brazil 10 days later (*LL* 1866c). Traversing such a distance in that time was highly unlikely, and although there is no other *Western Empire* listed in *Lloyd's Register*, it was likely a different ship.

On 27 June, *Western Empire* reached its final destination at Calcutta (*LL* 1866e). Although there were numerous entries in *Lloyd's List* providing information on the whereabouts of the ship during this outbound voyage, there were no entries in the Official Log. Without them, the details of shipboard life during this trip remain unknown.

After a month at Calcutta, the steward was discharged by Captain Woodnorth on 30 July, and the cook on 11 August. The steward left with a Very Good rating by the captain, but the cook was only rated as Good in both seamanship and general conduct,

suggesting that the master did not think he was an asset to the vessel. The release of those two men may have been the last act that Woodnorth performed as master of *Western Empire* (OL 1866).

The Official Log had the date written as 18 September, but by referencing other dates and entries, it is likely that the date should read 18 August when Captain Woodnorth first became seriously ill with dysentery, necessitating a move to housing on land in the hopes of treating his illness. His disease worsened, and on 24 August he died while at his shore lodgings in Calcutta (OL 1866).

Notice must have been sent to England about the loss of the captain, because on 6 September, a telegram from England was received promoting Chief Mate Thomas Headley to captain. All of the ship's papers, including the articles, register, indentures, seamen discharge information, etc., were transferred to Thomas Headley as the new captain and master of *Western Empire.* An inventory of the late captain's effects was made and certified to the care of Captain Headley to return them safely home (OL 1866).

This change in leadership on the ship possibly created a disturbance amongst the crew. On 17 September, the second mate requested to be discharged from the ship. The following day three of the ablebodied seamen followed suit. It is unclear if the departures of the men was a result of the promotion of their new captain or if they had planned on leaving at Calcutta prior to this time (OL 1866).

After the loss of these men, the ship's crew began to further diminish in size. However, the lost sailors were not discharged by mutual consent, but due to disease. On 21 September, an apprentice and an ablebodied seaman were left at the hospital in

Calcutta. The effects of the seamen left at the hospital were dispatched to the shipping office for the sailors to recover after their illnesses. In addition, when the apprentice was left at the hospital, a written guarantee for his maintenance was received. This was in contrast to the other records of adult seamen without guarantees, whom it was presumed were under their own care. This guarantee was part and parcel with the apprenticeship, which was a legal contract enabling the young boy to be trained as a seaman in return for cheap or free labor (OL 1866).

On 30 September 30 1866, Ablebodied Seaman Henry Jake and Apprentice Thomas Faraker returned from a short stay at the hospital. The doctor thought that a hospital stay was unnecessary and that life at sea would be good for them. However, the doctor also believed that the curative powers of work on a ship in the open seas might not be enough and supplied Jake with medicine (OL 1866).

With its crew returned and a new captain in charge, *Western Empire* left Calcutta on 23 September 1866 for its inbound voyage to Liverpool (*LL* 1866f). This date of the 23 September seems to contradict the return of the seamen mentioned above, but it is likely that the hospital return date was not accurate and represented a bureaucratic after-the-fact addendum.

Unfortunately, the doctor's prescription of sea life for Henry Jake was not a particularly good one. On an unknown date, while in the Bay of Bengal just southwest of Myanmar, Jake complained to Captain Headley that his condition was worsening and that he was experiencing pain and diarrhea. The captain administered the prescribed astringent medicine as well as a mustard blanket (possibly a poultice of some sort) that

was placed on his stomach.

The next report on Ablebodied Seaman Jake's condition comes in the summary for the month of October. Captain Headley wrote that the seaman's condition would fluctuate between healing and ailing, but that he continued to work light jobs as he was able. He also continued to give the seaman astringent medicine and mustard blankets in an attempt to aid in recovery.

On 28 November 1866, while in the Indian Ocean and West of Australia, the captain reported that Jake was doing better and able to return to duty assisting the sailmaker. On 7 December, his condition once again took a turn for the worse, and he was taken off duty. This time, the captain attempted a treatment recommended in the ship's medical guide, which prescribed a bottle of chalk medicine with laudanum to relieve the pain and suffering. While Jake was suffering from his stomach ailments, he was provided with better food, such as beef and rice for meals. Unfortunately, he was not able to enjoy this change in diet due to his worsening condition. On 11 December, while in the South Atlantic northwest of Brazil and southwest of the Ivory Coast, his problems continued to increase, and he was this time treated with a liniment on his stomach and two bottles of pain killers for the same purpose of alleviating his pain (OL 1866).

None of these measures were helpful, and on 13 December he began to convulse in pain and violently struggled against those trying to help him. He was brought to the fore cabin and two men were assigned to tend to him. Mr. Jake was treated with a teaspoon of 'Sp. Sal Volatile' (or spirit of ammonium carbonate, aka smelling salts)

mixed with water and more of the chalk and laudanum mixture (Stedman 1961:1321). The following day his violent actions continued and he had to be placed in restraints to prevent harm from coming to either him or to his attendants. For the next two days his convulsions and violent behavior continued, but on 15 December his health began to improve. His diarrhea was gone, but he remained in a deranged state and talked incoherently about witches, spirits, and mediums. Due to his unbalanced state, he remained under restraints and men once again kept watch over him. Over the next two days, while his physical condition improved, his mental state did not, and he continued to speak incoherently (OL 1866).

Due to his condition, and the necessity to have men watching him continuously, Jake was placed in a cabin made expressly for him. During the day he continued to be guarded, while at night they were able to simply lock the door and leave him alone. During the trip, as the ship moved northwards, Captain Headley made it a point to note that Henry Jake was given excellent care and attention, and when possible, food from the cabin table was offered to him (OL 1866).

Finally, on 23 December, his condition seemed to be improving, this time both in body and in mind. Although he remained under guard, he was assigned some light work, and at night he returned to his locked cabin. The final story of what happened to Jake remains unknown, but judging by his improving state, it is possible that he was able to continue his career, rather than end up in an insane asylum (OL 1866).

With a full cargo and complete complement of crew, *Western Empire* returned to England on 26 January (*LL* 1867a). While in Gravesend, the ship delivered its cargo

through customs, leaving behind another "A Bill" that detailed what *Western Empire* brought back from Calcutta. The bill also reported that Captain Headley was in charge of 30 men and once again the transport of goods was for A. Howden and Company. The main cargo for this trip was linseed and poppy seed, with castor oil, mustard seed, rape seed, buffalo horns, skins, and jute to round out the rest of the cargo (London Customs Bill of Entry "Bill A" [LCBA] 1867). This trip again encompassed the trade of goods that did not fall under the mainstream world of the Eastern tea trade.

Captain Headley gave most of the men a rating of Very Good for general conduct (except for the cook), but he was much stricter in his ratings of their seamanship. He rated nine of the men as Good, and another two he left without a grade, only remarking that it was their first time at sea. Along with the note on the two inexperienced men, Captain Woodnorth made additional remarks on some of the other men, such as that the boatswain was good in rigging work, the sailmaker was an excellent tradesman, and that the steward made good coffee (OL 1866). This was the last direct trip to India for *Western Empire*, as it was sold to the Australian White Star Line and entered the next stage of its life.

Britain – Australia

1867-1868

The next Crew Agreement (1867) marked the first major change in the life of

Western Empire. The ship was sold to the famous White Star Line and sent down to Sydney in New South Wales (modern Australia). In 1867 the White Star Line had not yet become the symbol of high-class passenger cruises that it is known for today. It was merely another unexceptional line of sailing ships that specialized in transporting emigrants to America and Australia as well as participating in trade within the Orient (Gardiner 2001:7). During these early days of the White Star Line, when it was known as the White Star Line of Liverpool and Australian Mail Clippers (Anderson 1964:29), its business fortunes were quickly falling. The owners of the line, Henry Wilson and John Cunningham, were in massive debt and in an attempt to grow their fortunes, they purchased the ships *Western Empire* and *Whittington* in 1866. This was a final effort for the business, but one that was in vain. In 1867, their one supporting bank, which had loaned them over 500,000 pounds, failed. The failure of their principal lending agent brought about the destruction of the shipping company. In an attempt to recover some of the company's debt, 11 of its ships were sold, including *Western Empire*. Although the ship only participated in a single run to Australia under the White Star Line flag before it was sold, *Western Empire* continued to operate in the Australia trade afterwards under another flag (Gardiner 2001:65-66; Oldham 1961:29-30).

According to the crew agreements, 22 men signed on for the only run *Western Empire* would make as a White Star ship. However, three of those men did not actually join the ship and one of the entries was illegible. The average age of the crew (including all of those who signed the agreement) was 26 years old, with the oldest at 40 and the youngest 19. For the first time in the history of the ship, the captain was not the eldest

member on board, and in fact, he was only 24 years old. The circumstances creating this young captain will be discussed later (CA 1867).

Of the recorded crew, 18 were from Great Britain, one was from Nova Scotia, and three were of unknown origin. The young master was discharged in Sydney, but the majority of the crew was discharged in Bombay, except for those who died at sea or were left in jail in NSW (CA 1867).

The voyage commenced sometime around 21-23 March 1867 (*LL* 1867b). The discrepancy in dates lies between the Official Log (1867), which listed the stated departure date as 21 March, and *Lloyd's List* (1867b), which listed the date as 23 March. Adding to the uncertainty of its departure date, White Star placed an advertisement in *The London Times* for its line of Ex-Royal Mail Steam and Sailing Clippers. It listed *Western Empire* as a 1245 ton register vessel of 2,500 tons burden sailing to Melbourne, Australia from Liverpool on 20 March 1867 (LT 1867). Both of the dates listed above were later than the advertised date of departure, and it is more likely that the Official Log was correct.

There were two masters listed in the Crew Agreement for this ship, Thomas Headley (who captained the previous voyage), and J.T. Rogers who was appointed following Captain Headley's death. It must have been a terrible shock to the ship owners to have their ship masters die during consecutive voyages. The details of the captain's death will be explained shortly. Additionally, the Official Log (1867) had a vastly different crew list compared to the Crew Agreement (1867). Not a single man in one document was listed in the other. It is possible that the Crew Agreement made

under the original captain, Headley, would have contained more of the names found in the Official Log, but without that document it remains speculative.

As *Western Empire* now carried passengers, the crew composition went beyond the standard mates, carpenters, sailmaker, cook, ablebodied seamen, and ordinary seamen. There was also a passenger cook, a second steward, an passenger steward, and an engine driver. The introduction of an engine driver also signaled a change in the mechanics of the ship. It now appeared necessary for an engineer to be on board to help with any problems with new steam machinery. However, this does not mean that the ship had added a steam engine for propulsion, but more likely the use of steam was added to help in the lifting of anchors, running of the windlass, and other labor intensive tasks (CA 1867). The integration of steam machinery to aid in the operation of rigging and ground tackle helped to reduce the number of necessary seamen, thus reducing the operating costs of the ship and increasing the profit for the owners (Souza 1998:124). The growing prevalence of steam machinery on wooden sailing ships had a direct correlation with the rise of steam shipping and the decline of the wooden sailing ship (Souza 1998:125). However, while the newer technology was becoming standard, the older still continued to be used, and both *Western Empire* and other wooden sailing ships remained on the water for many years.

Lloyd's List (1867c) announced the departure of *Western Empire* from Liverpool to Melbourne on 23 March 1867, under the command of Captain Headley (see map of voyage in Figure 7). The voyage began with weather difficulties, and on 26 March, a heavy gale arose while the ship was still in the English Channel. During the storm, the

ship labored heavily and the seas were large enough to forcefully wash over the deck. The foreward skylight, hencoops, pigpen, a greater part of the fowls, two sheep, and ten casks of water were all lost to the sea (OL 1867). Fortunately, the ship made it through the storm, albeit with minor losses, and was sighted on 1 April (*LL* 1867d).

Unfortunately for the captain, his troubles did not end when the weather cleared up. He began to show signs of a serious illness on 26 April, while west of Campina Grande, Brazil in the South Atlantic. Captain Headley had symptoms of paralysis and rheumatic fever along with neuralgia, or spasmodic pain along the nerve pathways, on his chest and face. These conditions worsened each day and finally, on 17 June, he died. The following day he was given a seaman's burial and his body was buried at sea. An inventory of his effects was taken to prevent any theft (Table 2) (OL 1867). As the captain's health worsened, one of the men took over his duties. While nothing is noted in the Official Log regarding the change in master, a much later entry (nearly eight months after the death of Captain Headley), states that J.T. Rogers was the captain (OL 1867). The Crew Agreement (1867) lists this captain as being a mere 24 years old, which was very young for a captain. A few months later in this voyage, major issues began to arise between the captain and his crew. It was possible that the captain's age and experience was a factor in this insubordination.

During the days leading up to Captain Headley's death, the ship also suffered ─ not through sickness, but through weather. On 11 May, while on the southwest of the Cape of Good Hope, a strong gale with heavy squalls and lightning blew away the fore and main topsails. The storm continued into the night and the men attempted to set the

mizzen staysail, but it too was blown away. The storm did not abate and six days later on 17 May, the log recorded that the seas continued to rise as the gale increased in force. Once again, waves crashed over the deck, this time opening the seams in the forecastle deck and carrying away the lifeboats, medicine chest, and women's toilet. The ship was heavily strained under these conditions and started to leak badly (OL 1867). Although not noted, the leaks were probably repaired, as the ship did not sink and continued on its voyage.

Ten days later, on 27 May, the log recorded that they had rounded the Cape of Good Hope and moved into the Indian Ocean, with a heavy gale still blowing. Later that day, the wind suddenly stopped and a massive wave crashed down, broke into the fore house, and allowed a large amount of water below deck (OL 1867).

The storms had done a great deal of damage to *Western Empire*, but the most pressing issue was that the fresh water supply was running low. On 6 July, a vessel was sighted bearing west and was signaled in a request for aid. *Western Empire* dispatched a small boat, but its crew did not succeed in boarding as the other vessel held a divergent course. Acting-captain Rogers attempted to run *Western Empire* alongside, but as he neared the other vessel backed its main yard, which forced Rogers to put the helm hard up in an attempt to avoid collision. Unfortunately, they were too close to correct the error and the starboard bow of *Western Empire* struck the port beam of the vessel. *Western Empire*'s flying jib-boom, fore topmast, main topgallant mast, cut-water, and bob stays were all carried away in the collision (OL 1867). There was no mention of damage to the other vessel nor how *Western Empire* was repaired.

At the same time, news reached Liverpool of another sighting of *Western Empire* (*LL* 1867e). However, the sighting occurred on 22 April when the ship was still doing relatively well. News of the loss of the captain, horrible weather, and collision were still unknown to both the passengers' families and the owners of the ship (OL 1867).

The drinking water situation was not resolved, and from 6 to 8 July, in an attempt to keep everyone on board supplied with liquid, porter or beer were dispensed in lieu of water. This may appear a fair trade, but it obviously did not sit well with the crew, who had to work in the summer sun with only beer to rehydrate their bodies. When the ship reached Hudson Bay in Victoria, Australia, at least six of the seamen deserted the ship, including Thomas Wilson (who was later rated as Very Bad) (OL 1867).

Shortly thereafter, *Western Empire* arrived at Melbourne (*LL* 1867f) and then apparently made a round trip between Australia and Bombay, India. The Bombay trip did not appear in the Official Log and was only known from a news item in *Lloyd's List* (1867g), stating that the ship had arrived at Newcastle, NSW on 25 October from Bombay. On 17 October, during the return voyage from Bombay, one of the ordinary seamen fell from a yard while attempting to furl the mizzen topsail during a heavy gale. As he fell, he hit the topsail and went overboard. The second officer immediately ran to the side of the ship to find him, but could not see or hear the lost sailor. Although this occurred during bad seas and in the darkness of night, the second officer attempted to find him by turning the ship about. Unfortunately, the man was never found, and his effects were gathered and inventoried (Table 3) (OL 1867).

On 18 October, one of the ablebodied seamen, a Mr. Foster, was reprimanded by

the chief officer for working too slowly. The sailor took his punishment in stride, but a month later on 19 November, he was once again reprimanded. This time he reacted with a great deal of insolence and insubordination, and the next day Captain J.T. Rogers discussed his conduct with him directly. During their discussion, Foster continued in the same insolent manner, at which point Captain Rogers informed him that if he continued on such a course, he would be forced to place him in irons. Foster replied to the captain that "he did not care a 'Damn,'" and was placed in irons immediately. By doing so, Captain Rogers demonstrated to his crew that insubordination on his ship would not be tolerated (OL 1867).

However, not all of the seamen were disobedient when they refused to work. On 5 October, while at sea east of Melbourne, Ablebodied Seaman Henry Johnson was placed off duty at his request due to pain in his chest and shortness of breath. Captain Rogers made him a medicine as prescribed in the Medical Guide for asthma consisting of garlic, castor oil, and other ingredients, then placed him in the forecastle to rest. Johnson's health did not improve, and he remained off duty through 14 October. Additional medicine was prescribed out of the medical guide, but the details of the mixture were written in an illegible hand, so it remains unknown as to what it contained. When this entry was written, the coordinates that had been determined for the latitude and longitude were completely off, as the ship would have been in the interior of Australia (OL 1867). Although navigation had made major improvements in the nineteenth century, it still remained possible for errors to occur in the calculations.

Western Empire completed its trip to Bombay and returned to Newcastle, NSW

on 25 October (*LL* 1867g). On 5 December, Johnson continued to decline and was given more compounds from the Medical Guide, as well as better food from the cabin. His condition did not improve over the next two weeks, but Captain Rogers made it clear in the Official Log that everything was done to give him nourishment and comfort. By 31 December 1867, the health of Johnson deteriorated, and the captain and crew ran out of possible remedies for him. His caretakers gave up on finding a cure and decided that their only option was to keep him comfortable. They agreed that since the amount of medicine on board was limited, and it did not seem to help his condition, it would be wasteful to use it on him. Johnson died on 2 January 1868 as the ship approached the Western Indian coast line. His body was committed to the sea and his effects were said to be inventoried, but no such list was found in the Official Log (OL 1867).

On 6 January 1868, rebelliousness from the crew returned when the cook refused to obey the chief officer when all hands were called on deck as the ship approached land. The cook denied the accusation, and no further action was taken by either party (OL 1867). Shortly after their altercation, the ship returned to Bombay on or around 14 January 1868 (*LL* 1868a,b,c).

On 15 January 1868, while in Bombay, Third Officer Fawley was reported to be acting in an insane manner. He refused to respond when spoken to and also made irrational expressions. The following day, he continued in the same manner which culminated with him jumping off the ship through the stern windows at noon. A boat was lowered to recover him, and once he was returned safely, he was questioned about his actions, to which he responded nonsensically. Nothing was immediately done, and

on 17 January, Fawley was found walking around the ship bothering sleeping people, and he continued to talk and exclaim in the previous absurd manner. This appeared to be the final straw for his shipmates and he was transferred ashore to the hospital later that day and a list of his effects was made (Table 4).

After a month in the hospital, Captain Rogers visited the lunatic asylum on 28 February and received a certificate from the doctor stating that Fawley would be unable to return to the ship. This was the last entry from the 1867 Official Ship Log before Captain Rogers listed the inventory of the dead sailors and transfer of ship's information from the previous captain (OL 1867).

On 24 February 1868 while in Bombay harbor, the makeup of the crew was altered when a number of the ablebodied seamen were promoted. John Smith, one of the ablebodied seamen, was promoted to carpenter's mate and received a new monthly pay of four pounds per month; Michael Gorman was promoted to the boatswain's mate with a raise to three pounds per month; and another sailor was promoted to quartermaster and given a raise to four pounds five shillings per month (OL 1868). At this point, Captain Rogers completed the Official Log for 1867. Men were discharged and Captain Rogers rated nearly all of the men as Very Good, although some were given only 'Goods', and two of the ablebodied seamen (Frank Antonio and Thomas Wilson) were labeled as Very Bad (OL 1867). The use of Very Bad as a rating was not one of the official sanctioned ratings. Its use may have been common as a means to give a negative rating. At this point, a new crew agreement would have been drawn up for the next year, but none was found. However, the Official Log (1868) does exist for this voyage, as well as information from other contemporary sources.

Western Empire left Bombay on 6 March and sailed to the Gulf of Aden near Ethiopia (*LL* 1868d), where it arrived on 12 April (*LL* 1868e). While at Annesley Bay in Ethiopia, disobedience arose once more on 20 April when the sailmaker, James Daly, refused to assist in helping with the washing, saying that he "did not come aboard the ship to wash decks." Captain Rogers had no patience for such insubordination and immediately placed the sailmaker in irons (OL 1868).

The following day, Daly again refused to work, but it was not clear whether or not he was kept in irons for the duration of the day. On 21 April, he returned to his

duties, but two days later, on 23 April, he once again complained of body and head pain and was attended to by a doctor. The next day, the sailmaker was called by the chief officer to speak both with him and the captain. While they argued, the sailmaker implied that he might harm or kill the captain. Two days after his threat, on 26 April, the sailmaker once again was off-duty sick and attended to by the same physician, with no apparent punishment for his earlier statements. On 28 April, Daly repeated his physical complaints to the doctor, but again, no response was noted (OL 1868).

The problems finally came to a head on 12 May 1868, when Mr. Daly and the carpenter, Henry Cox made a list of three formal complaints to the chief officer. Their grievances were that on Saturday afternoons they should be free of any duties, that they should not be called upon to wash the ship's decks, and that the space allotted to them was not equal to the space directed by the merchant when shipping out. The chief officer responded that the issue of working on Saturday afternoons was up to the captain's discretion, that the deck washing was a reasonable service that they had no right to refuse, and that their accommodations were of the legally arranged dimensions (OL 1868).

Daly was not the only man to complain of ailments during this time, although he may have been the only one to do so under false pretenses. One of the ablebodied seamen became sick with dysentery on 1 May, and his ailment continued through 24 June. His medical treatment was overseen by a doctor and various medications prescribed, such as quinine and various emetics (OL 1868).

The ship returned to Bombay on 11 July from Annesley Bay (*LL* 1868f), after

which *Western Empire* continued trading around the Indies and then back to Bombay. The next report of the ship's location stated that it had returned to Bombay from Callao on 19 August (*LL* 1868g). However, this was likely a misprint, as there was a log entry stating that one of the ablebodied seaman refused duty while at port in Bombay on 16 August (OL 1868).

The one-sailor mutiny occurred at Bombay harbour, and the mutineer was immediately taken before a magistrate and sentenced to 14 days labor in the local house of correction. Six days later, on 22 August, seven more ablebodied seamen refused duty. As with the man before, they were all sentenced to fourteen days imprisonment in County Jail. At the completion of their sentence they were to be returned to the ship continue to their duty. During this period, two more ablebodied seamen were signed to join the ship, but they did not report for duty and had to be brought on board by the police as deserters. On 27 August, after only five days of hard labor in the County Jail, the original seven men were returned to the ship by the police. The chief officers asked if they would now do their duty, and they once again refused and were immediately taken by the police and placed before a magistrate who sentenced them to an additional three days imprisonment. Upon completion of their sentence they were to return to the ship and complete the contract that they had signed in the Crew Agreement. If they refused, then they would be brought back to *Western Empire* under force and in chains. Surprisingly, after their sentence they refused to return and were, as ordered, brought to the ship in irons by the police. To prevent any further attempts at desertion before the ship sailed, the men were kept in chains and placed in the fore cabin (OL 1868).

On 24 August, before the problems of non-working crew described above occurred, one of the recently signed ablebodied seamen was not present on the date agreed upon in the Crew Agreement. He was proclaimed a deserter and rewards were posted for his return. He remained missing for two days until the police found him and returned him to *Western Empire*, although no payment of a reward was mentioned (OL 1868).

When it was time to leave port, *Western Empire* was forced to request assistance from the crew of HMS *Euphrates* due to the confinement of a large portion of the crew. With the help of the borrowed crew, the ship left port on 31 August 1868. Once at sea, the men who were in irons were set free. Not surprisingly, being confined to the ship at sea did not prevent further uprisings amongst the crew. Unfortunately for the captain, problems with the crew were not the only issues that arose.

On 19 October, the mate found two inches (5.1 cm) of water in the bilge, and responded by pumping the ship out while sounding every hour. His soundings determined that the ship was taking on about one and a half inches (3.8 cm) of water per hour. The ship was immediately searched to discover the source of the leak. In the time it took to find the leak, it had increased to nearly 4 inches (10.2 cm) per hour. To assist in pumping the increasingly large amount of water out, a steam engine was attached to the pumps and run every two hours. While it was not specifically mentioned, it was likely that the carpenter fixed the leak and the ship continued on (OL 1868).

On 20 October, the cook requested to be removed from duty as he was sick with biliousness, or abdominal distress caused by the gall bladder or liver. His prescription

from the medical guide was not specified, but he recovered on 26 October and returned to duty. Unfortunately, his cure did not hold, and three days later he relapsed and was re-treated as per the medical guide (OL 1868). While some men were sick with physical ailments, the men who had originally attempted to refuse duty continued to harbor their distaste for working on *Western Empire*.

On 24 October, the second officer was questioned by the captain after giving an order to stop the hoisting of the starboard fore top mast studding sail. He responded to the captain in a loud voice so that all could hear, "'What the Bloody Hell' do you think, that you can pull the 'Bloody Anchor Stock Out'" (OL 1868). The second officer did not deny his statement and was placed off duty until further orders. He remained off duty until 28 October, when he was finally ordered to return. That day, the boatswain reported to the chief mate that while visiting the lookout on the forecastle, he had overheard some of the men saying that if they thought that the officers would go against them, then they would get rid of all of them and take full possession of the ship (OL 1868). This was the first sign of the trouble that was about to occur.

The problems that existed between the officers and the master extended beyond that first altercation with the second officer. At the cabin dinner table on 29 October, the mate began to argue with the captain, which quickly progressed into physical violence. After the fight had been stopped, the mate went on deck and encountered some of the sailors coming aft. According to the Official Log, he let them pass and continued his way forward. When he reached the fore house, the men there informed him that the captain was being murdered on the poop. Upon hearing this, he immediately returned to

the poop deck (OL 1868). It was at this point that the mutiny began. The details will first be outlined as described in the Official Log and then supplemented by the report from the crew's trial in Hobart (modern Tasmania).

When the men first started heading aft, the master was on the deck receiving information from the boatswain that the wind was hauling aft. When Captain Rogers ordered that the yards be squared he noticed that the crew had begun assembling on the quarter deck and were getting violently agitated. He heard them shouting that he was a "Bastard" and a "Son of a Bitch" and threatening to charge the poop deck and "pitch the Bastard overboard" (OL 1868).

Three of the seamen ─ Kellin, Kelly, and McDonnel ─ were leading the mutiny, and it was these men that Captain Rogers first addressed. He began by asking them what their grievance was, but they only continued to curse him and state that they were going to throw him overboard. At this point, Captain Rogers realized his life was in danger and went below deck to obtain a revolver for his protection (OL 1868).

The master returned to the poop, and found that the men were still wishing to mutiny, and he threatened that anyone coming onto the deck would be shot. The seamen, unafraid, rushed up the ladder to the poop deck en masse, with Kellen, Kelly, and McDonnel leading the charge, yelling "Fire and be damned!" (OL 1868).

The master hesitated, and said that he did not wish to shoot if he could avoid it, and during his moment of indecision, Kelly and Kellen rushed the captain and succeeded in striking him. Captain Rogers staggered back and fired his revolver over their heads, thinking that this would stop the mad charge of the mutinous crew. However, his plan

for crowd control did not succeed, and immediately after he fired, the men once again ran after him, knocking him down and disarming him. Kelly and Kellin kicked him, while another seaman, Broughton, held him by the throat with a knife, and prepared to stab him (OL 1868).

At this point, the Official Log (1868) stated that the mate, although probably still fuming from his quarrel with the master at the dinner table, arrived on the poop to assist his captain. With the assistance of the boatswain, he dragged Broughton off the captain and drove the other men back. The men attempted to rush forward once more to throw the captain overboard, but were kept back by the mate, boatswain, and carpenter (OL 1868).

At this moment, Captain Rogers regained his footing and seized a belaying pin in an attempt to fight his way back to the safety of his cabin. However, his own call to arms also agitated the seamen, who once again rushed him. This time, they succeeded in knocking him down and beat him with belaying pins while shouting that they were going to throw him overboard. The mutinous men attempted to knife him, but the mate, boatswain and carpenter were able to prevent them from accomplishing their murderous attempts. Realizing that their plan to murder and dispose of the captain was failing, some men called for the captain to be put into irons, but others still hoped to throw him overboard (OL 1868).

The three loyal officers succeeded in convincing the men that putting the captain in irons was the better choice, thus saving his life (or at least postponing his death). The master, now in irons, was led below by the mate, carpenter, boatswain, and second mate.

Once below, the mate removed the irons from the captain, but almost immediately after freeing him, the mate was recalled to the deck by the men and informed that if the master was not kept in irons, they would throw him overboard (OL 1868).

The situation was further inflamed when four of the seamen stated that they wanted to enter the cabin and remove some of the small arms. Captain Rogers instructed the other officers not to let them do so, as an armed crew would be much more dangerous than an unarmed one. The men requested that the captain be placed in the fore cabin, and if the officers did not consent, they would come down and forcibly take him. The master and his officers refused, as this would have placed the captain in grave danger (OL 1868).

The mate was later called onto the deck where the men told him that if the ship continued on its normal course, they would do no more work. The mate returned to the cabin to discuss this with Captain Rogers. They agreed that that the best option would be keep the crew under control and change the ship's course and head to Hobart Town in modern Tasmania. The crew agreed with that decision, but on the condition that the mate take charge of the ship, leaving the captain confined in irons. Although the mate initially refused to take command, Captain Rogers advised him that the safety of the ship depended on him acting as captain and bringing the ship safely into Hobart Town (OL 1868).

After the mutiny subsided, the cook once again relapsed into sickness on 29 October, and was treated according to the medical guide. Coincidentally, the ship also began taking on water, approximately three inches (7.6 cm) per hour, and the pumps

were constantly going in an attempt to remove the water. It is possible that this was the earlier leak that was fixed, and that it was reopened to help convince the men to bring the ship into port (OL 1868).

On 1 November, *Western Empire* reached anchorage at Hobart Town and 16 of the ablebodied seamen were given over to police custody under the charge of mutiny (OL 1868). The Official Log does not continue with any notes on the mutiny, or its after-effects on the crew and officers, but the newspaper *The Mercury* in Hobart recorded the arrival of the mutinous ship as well as the resulting court case.

The first article, dating 2 November, began with the arrival of *Western Empire*. It explained what occurred after the ship arrived at the harbor. Immediately after setting anchor, the harbor master launched his boat to board the ship. He brought with him a new captain named Harburgh and a boarding officer. Another boat followed which carried a number of constables to help support the three men arriving first. Upon boarding, Captain Harburgh received the captain's report and released him from his cabin imprisonment. Captain Rogers was then taken on shore and no further action was taken at this time against the crew *(The Mercury* [TM] 1868a)

Once Captain Rogers made his statement, the superintendent and a number of detectives and constables returned to the ship to bring the 16 men that the captain had named into custody. In his statement, the captain explained that *Western Empire* was chartered at Bombay as one of the Abyssinian transport ships (No. 140). Their final destination was Callao for this leg of the trip. As we know from the Official Log (1868), a number of men who were directly involved in the mutiny had signed on in Bombay *(TM* 1868a).

The paper continued to retell the story from when the mutinous men first signed their agreements (the paper relied upon the Official Log and interviews with the captain). The captain explained that although the newly signed men had only been on board the ship for two days, they were already refusing to perform their duties. Captain Rogers, frustrated at the attitude of his new hires, took them to the magistrate for a ruling on their actions. The Official Log (1868) did not discuss the proceeding, only the final judgment that the men had to return to the ship and complete the contracts to which they had agreed. However, this was not the solution that Captain Rogers had requested. The captain had brought the men to court hoping that they would be punished and discharged from their service so that he would no longer have these men on board. The magistrate refused the captain's request, citing that the jail was full and that since both the captain and the men had signed a legal agreement, both parties had to fulfill the terms and the men would return to the ship to complete the voyage. The sailors were temporarily placed in the jail until the captain was ready to receive them. However, the captain attempted to evade responsibility and did not make preparations for the return of his

men. The delaying tactic failed and the local constabulary brought the men back on board *(TM* 1868a).

As the court case began, the captain's lawyer, Mr. Graves, reduced the charges on the crewmen to assault, rather than pursuing the greater charge of mutiny. This decision was not based on a lack of evidence, but on the request of Captain Rogers, who did not want to delay his ship any longer *(TM* 1868b). The first day of the trial started with a deposition given by the captain. He restated, in his own words, the events described in the Official Log. However, the dialog reported in the paper also elucidated events that were not described in the Official Log *(TM* 1868c).

Mr. Graves asked Captain Rogers if he had pointed the pistol at Mr. Kelly's (one of the mutinous seamen) ear. The captain denied the charge and continued to say that he never threatened Mr. Kelly by saying, "You – I'll make sure of you." The captain also denied that he struck any of the seamen, saying only that it was they who hit him and that the carpenter did not retrieve another pistol and fire off all of its rounds *(TM* 1868c).

Captain Rogers further explained their arrival at Hobart Town. He said that the men neither wanted him in charge, nor did they want to continue with the voyage. They stated that if the ship continued on its way, that they would not work. The only option available that was agreeable to both the mutinous men and the officers was to arrive at the closest port so that the seamen could leave the service of the ship. Thus, the captain instructed the mate to take command of the ship and bring it into port at Hobart Town *(TM* 1868c).

Contrary to this story, the defense argued that the mate, after his altercation with

the captain during tea, went to the fore cabin to rile the men to his side, return with their aid to the aft cabin, and challenge the captain. Some of the seamen's accounts do not directly indicate that the mate requested help from the men, only that he had gone to the fore cabin for refuge. In this version of the story, the men, upon seeing the condition of the mate, then went aft to discuss the matter with the captain. After they questioned the captain about his actions, Captain Rogers retorted that it was none of their business and began to hit one of the men, stopping only to go below to retrieve his revolver so that he could defend himself from the mutinous sailors *(TM* 1868d).

One of the men, Keenan, had been the first to approach the captain about the altercation with the mate. He claimed that he had been both struck and shot by Captain Rogers, and showed his wounded hand as proof of the attack. Unfortunately for him, no one else on board *Western Empire* could corroborate his story. The mate, and all of the other officers, did not support this argument and they all denied that any such thing would have or could have happened. The defense also argued that the crew had acted in self-defense. Their violent reaction was caused when the captain brandished his firearm *(TM* 1868d).

On 21 November 1868, the court house was filled with curious parties ─ master mariners, seamen, and men interested in the shipping trade ─ to hear the ruling on the case of *Western Empire*. The ruling was likely to set a precedent for mutinous actions on board a ship, so many different people were interested in the outcome of the trial. The judge ruled in favor of the captain and found seven of the men guilty of assault, sentencing them to ten weeks in jail. The magistrate believed that there was a serious

fight between the master and his mate, and that the mate had gone forward to escape further wrath. The men, seeing the mate in this state, were angered and went to confront the captain. The judge explained that that was their major error. If they had been present at the time of the fight, they would have had the right to step in and separate the men. However, as this was after the fact, they should never have become involved. The captain, seeing the men approaching him with looks of anger in their eyes and words of mutiny in their mouths, did what he felt necessary to secure his control over the men and the safety of the ship. Namely, he retrieved his weapon and made a stand to preserve his authority. The magistrate believed that this was the proper response, because the men acted in a mutinous manner by involving themselves in a matter that was not their concern *(TM* 1868e).

While the magistrate sentenced the five men who were most involved to jail, he felt that the others were more likely victims of peer pressure and instructed them to return to the ship with Captain Rogers. The captain, understanding the condition of the men, stated that after returning to the ship, if any man did not wish to remain, he would immediately be discharged with forfeiture of pay. Only three of the remaining men accepted the captain's offer. One of the seamen refused to return to the ship and was immediately placed in irons and returned to the police. The rest of the men were escorted back to the ship (TN 1868e).

Mr. Keenan's case against the captain for maliciously firing upon him was heard the same day as the judgment was given on the first case. A doctor was brought to the stand to assess whether or not the wound was from a gunshot. He began his analysis by

stating that it would be difficult to determine the cause of the wound because three weeks had passed since the injury. The doctor then explained how a gunshot affects the body, as opposed to other types of wounds, and how they each heal over time. He believed that the cause of the wound was most likely not from a gun through his analysis of how the hand had healed. In addition, because there was no bone damage, and since the revolver was fired at such close range, it was unlikely that only a superficial wound would have occurred had it struck the place on his hand that he claimed. After review, the magistrate dismissed the case based on the doctor's testimony *(TM* 1868e).

On 24 November, Captain Rogers prepared his ship for departure to Melbourne. A new crew was needed, and the word went out to all seamen looking for work. Many new hands signed on, and even six of the men that he had discharged (as promised) returned to the ship for duty (*LL* 1868h)

When the ship reached Hobart Town, the issue of leakage was finally addressed. Due to this problem, Captain Rogers stated that the ship would not be seaworthy until it underwent repairs (*LL* 1868h). The ship was assessed by Captain Rogers and a ship's agent who concurred that repair would have to be done before the vessel set sail. Unfortunately, *Western Empire* had to sail to Sydney, as none of the slips in Hobart Town were of sufficient size or strength to repair the 1250-ton ship *(TM* 1868f; OL 1868). Before leaving port, the cook became ill and visited a doctor, who gave him a certified note explaining that the cook was debilitated with hepatitis.

The ship sailed for Sydney on 25 November 1868. The cook remained sick during the short voyage to Sydney, and Captain Rogers ordered that he was to have

anything he needed that the ship could provide. The following day, on 28 November, the cook remained ill, and refused to take the medicine prescribed to him at Hobart Town for his illness (OL 1868). The ship arrived at Sydney on 7 December (OL 1868) and once ashore, Captain Rogers had the cook visit another doctor. The following day it was determined that he needed off-ship medical attention and was sent to the shore infirmary for treatment. The cook eventually passed away on 31 December while in the infirmary in Sydney, and his effects were detailed in the Official Log (Table 5) (OL 1868).

At this point it is unclear what happened to *Western Empire*, but it is likely that the ship underwent repairs for most of the year 1869. There was only one entry in *Lloyd's List* for the year 1869 stating that the ship had been sighted approaching England. However, this sighting was unlikely to be of this *Western Empire*, as all other signs seem to indicate that the ship had not yet departed Sydney. Official Logs or Crew Agreements for the time between January 1869 and November 1869 have not been found, suggesting that the ship was being repaired during this period. On 17 November 1869, a new Crew Agreement was signed to mark the next voyage to London (CA 1869), and a new Official Log (1869) was started.

The Crew Agreement marked changes in both ownership and ship master; introducing John Cuthbert as the new owner and J. Clarke as the new captain. A total of 38 men signed the Crew Agreement, but only 29 men were registered in the Official Log (1869). Seven of the men who signed the Crew Agreement did not appear in the log, and one of the men in the Official Log did not appear in the agreement. While the

disparities in the list of crewmen in the earlier logs did not have any logical explanations, the simple discrepancy of too many men in the Crew Agreement is explained by the fact that those men did not likely ever join the ship. To have men sign and not actually join the ship, while discouraged, probably occurred more often than was admitted and required that new men would have had to be signed to replace them. In addition, there were two Crew Agreements for this voyage. The men listed in each were nearly identical except for two men who did not appear in either list. The information that each Agreement provided, however, was slightly different.

One Agreement (CA 1869a) included the ratings given by the captain in the Official Log, while the other (CA 1869b) detailed the wages and additional notes made by the captain on the seamen. It was in this second Agreement where the captain noted that one of the ordinary seamen was originally a stowaway on the ship, one was discharged due to illness, and another discharged because he was unfit. One man was also discharged at the request of his wife. Additionally, one seaman was promoted while another deserted at Sydney before the ship left (CA 1869b).

The average age of the men was 29.6, with the oldest an ablebodied seamen at 50, and the youngest, the third mate, at 18. Almost the entire crew, 31 out of 39, was from the British Isles, with single representatives from the USA, Borneo, Sydney, Norway, Belgium, and South Lago, as well as two men from Sweden. However, the men from Borneo and Sydney were among those who signed the Agreement but do not show up in the Log (CA 1869a).

The crew, as designated by the Agreement, was made up of a master, first mate,

second mate, third mate, steward, second steward, cook, carpenter, carpenter's mate, boatswain, engineer, a second boatswain (who was not on the Official Log), 22 ablebodied seamen, 4 ordinary seamen, and a cook's mate. There were also some errors in the Official Log (1869). It did not list that the cook's mate and four of the ablebodied seamen did not join. Additionally, one more ablebodied seamen was added to the log who did not sign the agreement. The four who did not join were listed in the Official Log (1869) as missing when the crew was mustered on 17 November. Their absence necessitated the captain to ship four replacements. Other than the missing men, Captain James Clarke obviously liked his men, or was very forgiving in his assessment of their abilities. At the completion of the voyage all of them received reports of Very Good.

The wages for each of the various positions on board were as follows: the first officer made nine pounds per month, the second officer made six pounds, the third officer made four pounds ten shillings with no advance, the steward received six pounds with no advance, the second steward four pounds, the cook made six, the carpenter made seven pounds, the carpenter's mate made four pounds, the boatswain/sailmaker made five pounds with no advance, the engineer made four pounds, a second boatswain earned five pounds (it is unclear as to why there was a boatswain/sailmaker and boatswain), most of the ablebodied seamen made four pounds but some made only three pounds ten shillings, the ordinary seamen made two pounds ten shillings or two pounds, and the cook's mate made two pounds. Before the ship sailed, the carpenter's mate was discharged due to being unable to work because of illness. As mentioned earlier, one of the ablebodied seamen was also discharged because he was unfit (CA 1869b).

The ship left the port of Sydney on 18 November 1869 en route to London (see map of voyage in Figure 8) (CA 1869, LL 1870a,b). The log for this voyage was rather short, which was likely due to a combination of both the new captain's style as well as the short voyage. The next entry listed only that three of the men got sick and how they were treated. The first man had a cough, and was given an unspecified medicine. The second man, the third mate, had boils and was given cream of tartar, while the final man, Nicholson Maurice, was given a quinine mixture and ointment for treatment of an abscess (OL 1869).

The first major mishap of the voyage occurred on 22 January while in the middle of the South Atlantic. One of the seamen fell overboard while the ship was under full sail. The ship turned around and a life boat was lowered in an attempt to save the lost sailor. Luckily, the man was picked up safely and the ship returned to its original course (OL 1869).

On 6 February, one of the cabin passengers approached the captain to report that someone had entered his cabin during the night. The gentlemen, Mr. Arnit, stated that he was asleep outside the cabin door and awoke when someone entered his cabin. Upon hearing this charge, all hands were called and Captain Clarke questioned the men. All of the sailors denied the accusation. Mr. Arnit, still in their presence, restated his complaint, and once again all of the men denied any wrongdoing. Arnit and the second mate began to fight about the issue, and the second mate was struck in the mouth. At the request of the captain, the chief officer stopped the altercation, separating the two men. The captain made no further entries in the Official Log concerning this incident. The

last entry in the Official Log (1869) is that of the demotion of one of the ablebodied seamen to ordinary seaman due to his lack of seamanship, and his wages were docked in accordance with the status change.

The ship approached Falmouth, Great Britain on 18 March (*LL* 1870c) and reached Gravesend on 22 March (*LL* 1870d). The cargo was inspected by Customs in London on 24 March 1870 (LCBA 1870). The "A-Bill" listed the ship as having 32 men and carrying the following cargo: tallow, cotton, ox hides, leather, wool, oil, and copper ingots.

1870-1871

At this point, it appeared that *Lloyd's List* was more accurate about the departure date for ships than the Crew Agreement. It listed the next voyage of the ship on 1 June from Plymouth to Melbourne (*LL* 1870e), while the Crew Agreement (CA 1870) and Official Log (OL 1870) both listed the vessel as having left port on 17 May 1870. However, the first entry in the Log was dated 28 May 1870 (OL 1870) and had the ship still in Plymouth, suggesting that the 2 June departure date listed in *Lloyd's List* was correct.

The Crew Agreement for the 1870 voyage listed a total of 53 men, while the Official Log only had 47. These extra six men listed in the Crew Agreement never joined, and there were no names in the Log that did not match the Agreement.

The average age of the men was 26.9, with the oldest at 47 (the captain), and the

youngest at 14 (the boy) (CA 1870). Of the men who signed the crew agreement, 39 were native to the British Isles, 5 men hailed from Australia, 2 men from Jamaica, and there were single representatives from America, Bermuda, Antigua, and France. Three of the entries were not readable, and thus the origins of those men remain unknown.

The crew listed in the Agreement consisted of the captain, a first mate, second mate, an additional second mate/surgeon, third mate, fourth mate, carpenter, assistant carpenter, boatswain, 4 stewards, cook, engine driver, 22 ablebodied seamen, 4 ordinary seamen, 2 emigrant cooks, a baker, 2 boys, a sailmaker, 3 cooks, an undisclosed number of emigrants, and a stowaway.

The first mate, who was only on board for the run to Plymouth, received 7 pounds per month; the second mate made 5 pounds 10 shillings; and the other second mate/surgeon earned only 4 pounds. The new first mate was paid eight pounds per month. The carpenter made 6 pounds per month, and the boatswain and steward each made 4 pounds 10 shilling. The cook and engine driver both made four pounds per month. The emigrant cook made five pounds per month. The fourth mate was given 3 pounds 10 shillings per month, which was only slightly higher than the 2 pounds 10 shillings given to the ablebodied seamen. However, some ablebodied seamen received four pounds per month. Ordinary seamen received 2 pounds per month, and the carpenter's mate was given just 10 shillings, which was 5 shillings less than the boy. The ship's cook was paid five pounds per month, and the sailmaker received six pounds as his wage.

The ship began its journey in London (see map of voyage in Figure 9), then

proceeded down river to Dungeness and finally on to Plymouth (*LL* 1870f,g,h). While at Plymouth on 28 May 1870, the first ship's cook left the ship without leave and did not return. He was assumed to have deserted and a new cook was found (OL 1870).

While in the North Atlantic, far off the African coast west of Mauritania, four women on board delivered children. On 17 June and 21 June, two girls were born, and on 15 July and 30 July, a girl and a boy were born (OL 1870).

On 6 June, a stowaway was found in the forecastle. He admitted to his actions and explained that he had come aboard in Plymouth with the passengers (OL 1870). The most likely consequence of his actions, as he was aged 18, was that he was put to work on the ship.

The cook hired at the last minute to replace the one that deserted may not have been a good choice. On 19 June 1870, the captain made a certified note that he had often complained of his "Dirty and Bad Cookery." He specifically stated that the poultry that had been made for the cabin had been almost completely burnt and served without any seasoning. Numerous times the cook had also been warned about his dirty galley and unclean cooking utensils. Four days later, the cook received a copy of this entry as a type of formal warning and reprimand (OL 1870).

When he received the note, he was found to be sick with sores in his hand and leg, and one of the ablebodied seamen was sent to perform his duties. One month later, on 23 July, the cook returned to work on the decks. However, the surgeon recommended that he not continue to perform the duties of a cook, due to the disease which he continued to suffer from, which he had contracted before joining the ship. The

captain took the advice of the surgeon and made the cook a seaman, and he permanently assigned an ablebodied seaman as cook (OL 1870).

On 30 June at 3:00 pm, Captain Clarke noticed one of the single female immigrants talking through one of the gratings on the main deck to a man. He at first assumed that she was talking to her brother, but later discovered that she was conversing with one of the ship's men (OL 1870). According to the Crew Agreement:

> Any man found below among the emigrants or having intercourse with them either in conversation or otherwise or molesting them in any way at any time whatever shall forfeit one months pay (CA 1870).

The crewman was warned about his actions and told that if he continued, then disciplinary measures would have to be enforced (CA 1870).

Members of the general crew were not the only ones to associate with the females. On 28 July, the boatswain was discovered to have given a paper puzzle to one of the women. As with the working seamen, the captain warned his boatswain about such inappropriate actions. The boatswain promised not to have any more contact with that woman, or any other women on board the ship. That same day, the surgeon reported to the captain the previous week he had seen one of the quarter masters going into the female hospital. The captain questioned the man, and he denied the charge. After the surgeon investigated the manner, and could find no proof, the quarter master was warned in the same manner as the men above (OL 1870).

Western Empire reached its final destination of Melbourne sometime between 29 August and 11 September 1870 (*LL* 1870i,j). It was noted that while at William's Town Railway pier in Melbourne on 19 September, one of the ablebodied seamen was taken off the ship by police officers, but returned on 23 October after having been acquitted. No details of his charge were discussed in the Official Log (1870).

While in Hobson's Bay, the boatswain and cook (who had since recovered from his illness enough to return to duty) had an argument that led to physical violence. Afterwards, the cook went aft and asked permission from the captain to go ashore to see a magistrate. The captain agreed to the request and on 5 October, the cook went on shore, providing another opportunity for the seaman who had previously replaced the cook to be promoted for a day. On 6 October, the cook, Thomas Parry, once again requested to go ashore to see the magistrate, and again the request was granted. However, this time, a different sailor was appointed to be the temporary cook. Mr. Parry did not return for nearly 25 hours, and upon his return publicly told the captain and ship's officers that he "cant and wont" return to duty as cook, although this threat appeared to be only a bluff (OL 1870).

During this period, *Western Empire* was cleared from Melbourne to head to Geelong, Australia, and eventually to London. The situation with the cook did not end with the above complaint, and three days later on 14 October, after a short voyage to Geelong, Mr. Parry was cited for keeping both himself and his galley in a filthy state. The citation was read to the cook on 24 October while in Geelong, and he repeated his statement that he would cook only for the emigrants, not for the ship's company. On 23

October, Captain Clarke received a letter from a lawyer stating that Mr. Parry's wages should not be paid until he arrived at the final port of destination, London. Upon hearing this, Mr. Parry asked permission to go ashore to see his magistrate, but as he has abused this privilege in the past, Captain Clarke did not grant it (OL 1870).

Upon arriving at Geelong, two of the ablebodied seamen were instructed to pull the boat ashore. Instead of remaining by the boat, they deserted the ship once they had reached shore. The insubordination did not stop with the desertion of these men. On 24 October, another ablebodied seaman struck the second officer while the two were in the hold, and was immediately handed over to the police (OL 1870).

Western Empire left Port Philip, Australia, on 30 November to make its return trip to London (*LL* 1871a). The first entry during the return trip was on 11 February, and it stated that one of the ablebodied seaman was excused from duty due to a sore and ulcerated leg. The treatment for this, as with many of the previous maladies, was dictated by the medical guide but not described. Two days later, on 13 February, the seaman recovered and returned to duty (OL 1870).

The next entry detailed an error made by one of the ordinary seamen, and the consequences of such a mistake. When the ordinary seaman was letting the reef out of the main sail, he was hailed by the chief mate and asked if all of the reef points were clear. He responded with an affirmative, but when the reef tackles were released, the sail tore at the reef point. This was a new mainsail, only about ten days old, and the captain considered this to be a case of carelessness and ordered that the cost of fixing the sail be charged to the ordinary seaman. The final entry, on 19 March 1871, while only

ten days away from shore, stated that one of the women on board delivered a baby boy (OL 1870). The ship arrived at Deal on 29 March (*LL* 1871b) and at Gravesend the following day (*LL* 1871c).

The Customs A-Bill (LCBA 1871) for this voyage lists the cargo as wool, wine, tallow, bone, horns, rabbit skins, phosphate, basils, and leather. However, the majority of the cargo was made up of wool, totaling over 5,000 bales.

1871

Unfortunately, there were no logs for the next three voyages of *Western Empire*. They can only be reconstructed from the Crew Agreements and the articles in *Lloyd's List*. This is quite regrettable, as the next two years were a turning point for the ship as it finished its career in the Australia trade and began its final stage as a timber hauler in the Americas.

The Crew Agreement of 1871 listed 49 men and one apprentice as having signed on for its final Australia run. The average age among these men was 27, with the oldest man an ablebodied seaman at 46, and the youngest an ordinary seaman at 16 (CA 1871).

The crew was made up of a master, first mate, second mate, third mate, carpenter, sailmaker, steward, cook, 31 ablebodied seamen, an engine driver, 5 ordinary seamen/butchers, a passenger's cook, baker, 2 ordinary seamen, and an apprentice (CA 1871).

The mates were paid as follows: the first mate received 8 pounds per month; the

second mate was paid 5 pounds 10 shillings per month and asked for 3 pounds 10 shillings in advance; and the third mate was paid 3 pounds 10 shillings per month. The carpenter was paid 6 pounds, the steward received 5 pounds 10 shillings, and the sailmaker, cook, and passenger's cook each earned 4 pounds 10 shillings. The engine driver received five pounds per month and took a two month advance. It appears as though not all seamen were treated equally, as some men of similar rank were not paid an equivalent amount. The ablebodied seamen who joined in Plymouth were paid 2 pounds 10 shillings per month, while the men who joined in Melbourne were paid 4 pounds per month. There were also a number of men who signed on in Plymouth, but were discharged in Melbourne. The Crew Agreement listed these men as being paid only 10 shillings. The men who were listed solely as being ordinary seamen were paid two pounds, and they did not request any of their wages in advance. The five men who were listed as sharing duties between an ordinary seamen and a butcher were paid anywhere from 10 shillings to 2 pounds. The cause of the discrepancy between these wages for the same position is unknown (CA 1871).

The ship reached its destination of Melbourne some time around 14 September 1871 (see map of voyage in Figure 10). Before it left England, while at the port of Plymouth, three ablebodied seamen deserted the ship. Once in Melbourne, the sailmaker, seven ablebodied seamen, the engine driver, two of the ordinary seamen/butchers, the boy, passenger's cook, and baker all received their discharge papers (CA 1871).

The details of the voyage are missing, and the entries in *Lloyd's List* specify that

the ship sailed from Gravesend on May 25 and that its destination was Melbourne (*LL* 1871d). *Western Empire* arrived in Melbourne on or around August 8 (*LL* 1871e). It left Melbourne for its return to trip to London on November 15, 1871(*LL* 1872a). No arrival information is given for the ship, but the crew was discharged on 1 April 1872 (CA 1871).

Britain – Americas

1872 – Voyage 1

This voyage marked the beginning of the final stage in *Western Empire*'s career. The ship was sold to a new owner, George Cairns, and given a new master, John Totherick. It was no longer making trips to Australia and now settled into trade in the Americas. As with the previous voyage, no Official Log was found, and the information on this first trip to North America was culled from the Crew Agreements and *Lloyd's List*.

The Crew Agreement (1872A) for this voyage stated that the master had the right to immediately replace any sailor who signed it but did not report for duty on the agreed date. It also stated that the full complement of the ship was 19 and that additional men would be extra. In apparent opposition to the Official Log, the Crew Agreement listed a total of 40 men (including the master and two substitutes), which was far above the full complement of the ship described earlier.

The lack of an Official Log for this voyage is frustrating, as it probably describes an incident that caused nearly the entire crew hired in London to desert the ship. There was also a discrepancy within the Crew Agreement. One of the ablebodied sailors, Peter Barkwist, was listed as a deserter at Quebec, but he was also named in the section for "Wages and Effects of Seamen and Apprenticed Deceased During The Voyage." This suggested that he did not desert, but that he died during the voyage (CA 1872A).

Since nearly all of the sailors that signed the agreement participated in at least part of the voyage, the following statistics will include all of them. The average age of the men was 30 years old, with the eldest the master at 51, and the youngest an ordinary seaman of 16. Fifteen of the men were from Great Britain, seven from Sweden, six from Norway, four from Canada, three from Finland, and single representatives from the USA, Germany, and Prussia. Unfortunately, the last origin entry was illegible.

The crew consisted of the master, his mate, 3 cooks, a steward, the steward's mate, a carpenter, a boatswain, the boatswain's mate, 28 ablebodied seamen, and 3 ordinary sailors. The mate earned seven pounds per month and did not request any money in advance. The carpenter earned 5 pounds 10 shillings and asked for half of that amount as an advance. The boatswain received 5 pounds per month, and requested an advancement of 2 pounds 10 shillings, and his mate received 4 pounds per month. Some of the ablebodied sailors received three pounds five shillings and asked for half of that in advance, while others received only three pounds per month. The cooks and stewards each earned 3 pounds 10 shillings per month and the ordinary seamen earned one pound and five shillings, although one only earned one pound per month. The steward's mate

also earned one pound per month.

Western Empire left the port of Gravesend, England on 3 May 1872 (see map of voyage in Figure 11) (*LL* 1872b), and passed through Deal, England on 10 May on its way to Quebec (*LL* 1872c). The ship arrived in Quebec on 8 June (*LL* 1872d), where 16 of the sailors deserted. Two more men were signed for the return voyage to Plymouth, England, bringing the crew total to 21, which was much closer to the 19 men prescribed in the Agreement. *Western Empire* returned to England on 1 August (*LL* 1872e).

1872 – Voyage 2

Once in Plymouth, the crew that was hired in London was discharged, and a new set of men were signed to complete the next voyage. John Totherick remained ship's master, and five of the men from the first part of the voyage remained for the return trip. The new crew numbered 29 men, but one of the ordinary seamen and two of the ablebodied seamen did not join the ship as agreed. Removing these men from the ship's roll left a master, a first mate, second mate, steward, carpenter, boatswain, cook, 15 ablebodied seamen, and 7 ordinary seamen. However, a number of these men were left behind in Quebec. Seven of the ablebodied seamen deserted and one of the ordinary seamen was discharged. In addition, another ablebodied seaman died at sea on 22 November 1872, about one month after the stop in Quebec (OL 1872B).

The men who signed the agreement were paid as follows: the first mate received 7 pounds per month, with an allotment of 3 pounds 10 shillings; the second mate

received 5 pounds 10 shillings and asked for no advance; the steward earned 4 pounds 5 shillings per month and also did not ask for an advance; the carpenter received 4 pounds 10 shillings, with a 2 pound 5 shilling advance; the boatswain received 4 pounds per month; and most of the ablebodied seamen and the cook all received 3 pounds 10 shillings per month. The ordinary seamen received payment between 15 shillings and and 1 pound per month. The men averaged 30.6 years of age, with the oldest an ablebodied seaman at 55, and the youngest an ordinary seaman at 18. Nearly all of the crew (17) hailed from Great Britain. There were also two men from Canada, one from Germany, and one from Prussia. Seven of the entries were not readable (CA 1872B).

All of the men signed their agreements at the port of Plymouth, which suggests that this was the port of departure for the next voyage to Quebec (CA 1872B). No departure date was reported, but *Western Empire* arrived at the St. Lawrence River on 3 October (see map of voyage in Figure 12) (*LL* 1872f), and reached its destination of Quebec one day later (*LL* 1872g). From Quebec, the vessel returned to Great Britain and arrived at Cardiff with a load of timber on 30 November (*LL* 1872h).

1873-1874

From 1873-1874, *Western Empire* voyaged from England to Canada, where it then operated out of Quebec as it traveled around North America picking up goods before returning to London. During the first part of the year, the ship went from Bristol to Quebec with an Agreement (CA 1873a) signed by 37 men, not including the captain.

Once again, there was a disparity between the Crew Agreement and Official Log (1873a), which listed only 32 men, not including the captain. The Crew Agreement (1873a) also listed six ablebodied seamen and two ordinary seamen who did not appear in the Official Log (1873a), which listed eight ablebodied seamen and one ordinary seaman that were not in the Crew Agreement. The Official Log (1873a) also contained a note from the captain about this error, in which he explained that the names of five crew members were omitted, and that because of this, there was a discrepancy in the total crew count (37 and 32).

The average age of the men on board was 21.3, with the master the oldest at 52 and an ordinary seamen the youngest at 15. Once again, the majority of the crew (27) was from Great Britain. There were also two sailors from Canada and Australia, and single representatives from Belgium, USA, and Austria. Three of the entries were illegible.

Most of the crew members joined while the ship was in Bristol, and they included a mate, second mate, second boatswain, carpenter, carpenter's mate, steward, cook, six ablebodied seamen, and three ordinary seamen. An additional ten ablebodied seamen and a first mate joined in Quebec to fill out the remainder of the crew. It is interesting to note that a second boatswain was listed on the crew agreement, yet no first boatswain. The Official Log (1873a), however, listed 2 first mates, a second mate, a boatswain, a carpenter's mate, a cook, a steward, 23 ablebodied seamen and 2 ordinary seamen.

The mate was paid 13 pounds per month and received 4 pounds in advance, while the other mate was paid only 7 pounds per month and requested an advance of 3

pounds 10 shillings. The carpenter was paid six pounds six shillings with half of that as an advance, and the steward was paid five pounds with a three pound advance. The second mate was also paid 5 pounds, and the cook and second boatswain were each paid 4 pounds 10 shillings. All of the seamen that signed at Bristol were paid 4 pounds, except for two who were paid 3 pounds (with no advance) and 2 pounds 10 shillings. The ordinary seamen were paid different amounts: one was paid 2 pounds 10 shillings, another 15 shillings, and the last 10 shillings. The ablebodied seamen that joined in Quebec were paid 10 pounds per month, which was more money than any of the officers were paid, except for the first mate, indicating a high demand for sailors. (CA 1873a).

Western Empire left Bristol and arrived at Kingroad, near Bristol, on 4 April 1873 (see map of voyage in Figure 13) (*LL* 1873a) on its way to Quebec. On 7 April, while in the Brider Channel, one of the ablebodied seamen was discharged and returned to shore by his own consent (OL 1873a). The details of this decision were not legible in the Official Log.

On 15 April, while in the North Atlantic east of St. John's, Newfoundland, an ablebodied seaman fell overboard while working on the jib and drowned. There was a note in the Official Log from the Department of Seamen (DoS) that found fault with the captain for not describing any rescue attempt for the seaman, and also for not providing a statement describing the dead seaman's effects or wages. Thirteen days later, another ablebodied seaman was removed from duty due to sickness and remained off duty through 16 May (OL 1873a).

According to *Lloyd's List* (1873b), the ship arrived in Quebec on 21 May.

However, this date is suspect as the Official Log (1873a) recorded that on May 10, approximately eight of the men deserted the ship, which would have placed the ship at sea, making desertion difficult. This record of desertion matched the Crew Agreement (1873a).

On 13 May, two of the men were officially discharged with wages fully paid, even though they did not complete the voyage back to England. The ablebodied seaman listed above, who was sick through the end of the voyage, was discharged on 3 June to the hospital in Quebec. He, too, was paid his wages before the ship left port. On 7 June, eleven more men were signed to replace those who had deserted or left for other reasons. All of the above named seamen received a five pound advance in wages, yet none of them showed up the following day until nearly 12:30 PM (OL 1873a).

When they did join the ship, they appeared drunk, and began to quarrel and prowl the deck, with one of the men brandishing a knife. Nothing more was noted as to the consequences of their actions. One of these men was also the newly signed Chief Mate Heny Blair, but the Official Log (1873a) noted that he arrived approximately 30 minutes before the fighting began and fell asleep on the deck, apparently missing the altercation. Three days later, the same ablebodied seaman who previously had brandished his knife on deck returned once more to the ship drunk and repeated his attempt to stab a fellow seaman (OL 1873a). No other notes were made regarding this seaman or his punishment for his drunken violence.

The following two entries relating to the state of the ship were not given a specific date, and it was only noted that they occurred in June while the ship was

navigating the St. Lawrence River in Canada. Captain Totherick complained that the men whom he had shipped at Quebec were very difficult to get onto deck and participate in the ship's work. He also stated that the newly signed chief mate was found to be unable to perform his duties and added that he was "filthy dirty" (OL 1873a).

The ship left the port of Quebec on 7 June (*LL* 1873c) for Liverpool. On 17 June, it became apparent that three of the ablebodied seamen were not able to complete their duties as this was their first voyage and they had no seafaring skills. The captain reduced their wages by 50 percent because they could only do part of their work (OL 1873a).

Three days later, the chief mate's previous inability to work was repeated, but this time action was taken against the man, and his wages were reduced by 50 percent. This was not the end of the problems with the Chief Mate Blair. On 12 July, one day before the ship arrived at Sunderland, England, Henry Blair remained in bed throughout the day, reporting that he suffered from back pain and was unable to work. Captain Totherick noted that no one believed him, and that Chief Mate Blair refused to leave his bed although he was aware that the ship was only one week out of port. The captain also wrote that the situation made it very difficult for him to manage his ship. However, he was able to maintain control, and the ship finally returned to Quebec where he off-loaded his ill-acting crew and officers (OL 1873a).

The DoS also took issue with the captain for not making an entry discussing the desertion of a seaman, nor the failure of three others to join. The captain also failed to list the vessel's draught of water when leaving Quebec.

The master declined to rate many of the ablebodied seamen, as well as the mate and cook. He also gave indifferent ratings to the other first mate and five of the ablebodied seamen. These ratings were intended to display his great dissatisfaction with the crew. The rest of the men received Very Goods for both General Conduct and Seamanship (OL 1873a).

As stated earlier, in 1873, *Western Empire* made two trips to Quebec, and the second voyage contained its own set of Crew Agreements (CA 1873b) and Official Log (1873b). The Crew Agreement and Official Log each contained nearly identical crew lists. The documents stated that there were either 26 or 25 men, and only 2 of the men from the Crew Agreement did not appear in the Official Log. Additionally, the Crew Agreement had two first mates, but the Official Log only listed the man added later, suggesting that the first man was either insufficient or that he did not join the ship.

The average age of the crew, as determined from the Crew Agreement, was 32.3, with the first mate the oldest at 60 years old, and the youngest an ordinary seamen at 15. The majority of the crew (22) hailed from England, and there were single seamen from the US, Finland, Sweden, and one of unknown origin. The ship was organized as follows: a mate, first mate, boatswain, steward, cook, carpenter, carpenter's mate, 15 ablebodied seamen, and 3 ordinary seamen (CA 1873b).

The mate received the largest monthly pay with seven pounds and earned a monthly allotment of three pounds ten shillings. The carpenter received six pounds six shillings monthly with a two pound ten shilling advance, while his mate received three pounds ten shillings monthly with a monthly allotment of three pounds nine shillings.

The first mate earned five pounds ten shillings with an allotment of two pounds fifteen shillings and no advance, while the steward received five pounds five shillings with a two pound monthly allotment and no advance. The cook and boatswain each earned five pounds, and neither of them requested an advance in wages. The ablebodied seamen received four pounds five shillings, with advances and allotments varying slightly from a full month advance, to a half month advance, to nothing. Two of them received monthly allotments, and one of them earned five shillings more than the rest per month (CA 1873b).

All of the items in the Official Log (1873b) date from before the ship left port at Sunderland. Whether or not there were additional entries after this is unknown, and thus a gap is left in the historical record. Between 30 July and 1 August, the crew signed their articles and committed to joining the ship on 4 August. However, a number of the seamen were absent on this date, and many did not show until 7 August, when the ship prepared to leave.

On 7 August, the ship left port (*LL* 1873d) with a laden draft of 14 feet 8 inches (4.5 meters) foreward and 14 feet (4.3 meters) aft (see map of voyage in Figure 14). It arrived in Quebec on 16 September (*LL* 1873e) and returned to London on 14 October (*LL* 1873f). On 25 November, the ship arrived at Gravesend (*LL* 1873g) and completed its voyages for 1873. All of the men received ratings of Very Good upon discharge. With no comments on their conduct throughout the voyage, Captain Totherick was obviously very happy with his crew on this voyage (OL 1873a).

1874

This year marked the beginning of the final stage in the life of *Western Empire.* The ship added a new destination to its travels, Pensacola, Florida, and while the second voyage of 1874 shows a return to Quebec, the runs to Pensacola indicate that a new business opportunity for the ship had presented itself. Unfortunately, it was a voyage from this new port that ultimately ended its career.

Western Empire gathered its next crew at the end of December of 1873. The Crew Agreement (CA 1874A) listed 48 men as having signed on, and the Official Log (1874) matched this number and the list of names.

All of the calculations and information about the crew will be based on the entire Crew Agreement (1874), including those that deserted the ship. The average age of the men was 29.6 years old, with the oldest an ablebodied seaman at 55 years old, and the youngest also an ablebodied seamen at 17 years old. The captain, in comparison, was 53 years old. Interestingly, there was another ablebodied seaman who was 50 years old, and an ordinary seaman who was 45.

England was the homeland for 15 of the crew, but there were also 11 Swedes, 6 Finns, 5 Norwegians, 5 Germans, 2 Danes, and single representatives from Amsterdam, and France. This left one man whose origin was unreadable (CA 1874A).

Given that we know which of these men deserted and how they were replaced, this information will be used to develop a hierarchy of the crew. *Western Empire* employed a first mate, boatswain, carpenter, boatswain's mate, steward, cook, 14

ablebodied seamen, and 4 ordinary seamen. The first mate was paid seven pounds per month, with a three pound ten shilling advance, and a three pound ten shilling monthly allotment. The carpenter received the next highest compensation with a monthly wage of six pounds five shillings, while the boatswain and steward each made five pounds per month. The boatswain's mate received a slightly smaller salary at four pounds fifteen shillings with a monthly allotment of two pounds seven shillings six pence per month. The cook who completed the voyage received four pounds per month, which is less than the salary of the cook who was originally hired at four pounds five shillings. The ablebodied seamen received three pounds ten shillings per month, except for one who was only paid two pounds per month. Three of the four ordinary seamen were paid three pounds per month, except for the 45-year-old gentlemen, who was given three pounds ten shillings, which was the rate for an ablebodied seaman (CA 1874A).

The Official Log (1874A) started with an entry on 27 December 1873 stating that the crew had signed their Articles agreeing to be on board 31 December, and that 21 of those who had signed were not present. Every day between 31 December and 8 January contained an entry simply stating, "The within named...not on board to duty" (OL 1874A). On 9 January, the Official Log announced that five of the crew had deserted and that the ship had sailed. This implied that the other men listed above arrived at the ship on 9 January, but both the Official Log and Crew Agreements agree that only 5 men, and not 21 had deserted at this point. That same day, the ship arrived in Gravesend and signed five more men to replace the deserters. The map for this voyage can be found in Figure 15.

Problems persisted when the crew refused to do any duty until 10 AM, which was not an auspicious beginning for the voyage. No resolution was listed for this conflict, but the ship arrived in Gravesend on 10 January and stayed overnight before proceeding to the Downs on 11 January. While in the Downs, "thick heavy weather" rolled in which forced a delay in departure. *Western Empire* was not alone in this situation, as the captain noted that there were "many ships in company" (OL 1874A). *Lloyd's List* stated that the ship had sailed for Pensacola on 10 January from Gravesend (1874) and on 11 January from Deal (1874), but the log states that an accident occurred in the Downs on 11 January, which kept them in England longer than expected (OL 1874A).

The log also recorded the incident, and identified the other vessel involved in the collision as the schooner *Europa* (*LL* 1874b). It was unclear to the captain which way they were passing, as both red and green lights were seen. When attempting to clear the passing ship, *Europa* struck *Western Empire* across the port bow, causing damage. In an attempt to avoid further collisions and check to see if the other vessel needed aid, Captain Totherick tacked the ship and let the fore yard lay back so that his ship could be near the schooner, and then sent up rockets calling for assistance to other boats nearby (OL 1874A). After the collision, *Europa* started sinking and offloaded its crew and cargo onto *Western Empire* (*LL* 1874b).

Western Empire returned to the Downs to land the crew of *Europa* and to assess and repair any damage. The ship remained in the Downs, and on 19 January, 17 of the crewmen refused to do any work (OL 1874A). The Crew Agreement listed those men as

having deserted, but *Lloyd's List* (1874c) reported that they were landed for refusing duty and that new men were shipped in their place. The following day's entry confirmed this and lists that a new crew had signed while in the Downs and was now on board.

After all of the crew changes, 24 men were signed on or around 27 December 1873, and almost immediately five of those men, including the ship's cook, deserted. Approximately two weeks later, four of those men were replaced, including the cook. Unfortunately, these new hires did not stay long, and two weeks later, four of these men deserted along with 14 other ablebodied seamen. The captain once more returned his crew to a full complement by signing 17 new men to replace them (CA 1874A).

It is not clear when the ship finally left England, but on 25 February, it appeared that they had done so. On that day, one of the ablebodied seamen had a case of "scurvy in the legg" that he had suffered from the time of joining the ship. He remained sick and off duty through 10 March, when the next entry lists that he was given a double allowance of lime juice and fresh provisions in an attempt to counteract the scurvy (OL 1874A).

The ship arrived in Pensacola, Florida, most likely to obtain a cargo of pitch pine, sometime around 18 March, and the scurvy-sick seaman was taken to a doctor on land to receive advice and treatment. Two days later on 20 March, two more of the seamen deserted with all of their effects from the ship. These men were not replaced until 27 April 1874.

On 14 April, while two of the seamen were arranging cargo in the hold, they sawed through a spar log. It was not explained whether this was a ship's spar or cargo,

and no punishment was listed for their actions.

On 15 April, the scurvy-sick seaman once again requested to see a doctor, and was allowed to do so. The ship completed her lading on 27 April 1874 with a draft of 20 feet 10 inches (6.4 meters) aft and 20 feet (6.1 meters) foreward. This was a much deeper draft than had been listed on an earlier voyage of only 14 feet (4.3 meters). This heavier load may simply be a heavier cargo, or an indication that the ship was starting to take on more than its normal capacity (OL 1874a). That was the last entry in the log, but the ship left Pensacola on its return trip to Sunderland, England, on 27 April 1874 (*LL* 1874d) and arrived at its destination port on 9 June 1874 (*LL* 1874e). Captain Totherick rated the men who completed the voyage with Very Goods, and those who left the ship were simply listed as deserters (OL 1874A). No customs information was available for the cargo from this voyage.

The second voyage of 1874 began in Sunderland and saw a return to Quebec (see Figure 16 for a map of the voyage). The Crew Agreement (CA 1874b) had 19 men and 1 apprentice listed, which was vastly different than the Official Log (OL 1874b) which listed 32 men. However, all of the men that were listed in the Crew Agreement, except one, were also found in the Official Log, and in a nearly identical order. The extra 13 men were added on to the end of the list of names that were in the Official Log. There were no mass desertions as with the previous voyage, although two men did desert at the outset of the voyage and one more was discharged. Unfortunately, the Official Log does not explain why so many men were signed.

The average age of the signed crew was 33.4 years old, with the oldest being the

captain at 53 and the three youngest were 20 years old (the boatswain and 2 ablebodied seamen). Although 11 of the crew were from Great Britain, that was only 30% of the total crew. There were six men from Finland, five from Norway, five from Germany, two from Denmark, and single men from Canada, Amsterdam, and France. As with most of the other Crew Agreements, two of the origins for the men were not legible. These men composed a crew of a mate, second mate, carpenter, steward, boatswain, cook, and 13 ablebodied seamen with no ordinary seamen (CA 1874b).

The mate was paid seven pounds and did not ask for an advance, and was given a monthly allotment of three pounds ten shillings. The second mate received slightly less at six pounds, and the carpenter received six pounds six shillings with a three pounds three shilling monthly allotment. The steward received five pounds ten shillings, and the cook and boatswain each received five pounds per month and requested half their monthly wages in advance. All of the ablebodied seamen received four pounds five shillings, and two of them did not request anything in advance (CA 1874b).

The Official Log (1874b) began on 15 July 1874 with the discharge of an ablebodied seaman who was sick and judged to be unfit to continue on the voyage. The following day the log listed four men as deserters, and four more were shipped in their stead (OL 1874a). None of these desertions were marked in the Crew Agreement. Only one of the newly signed men was listed in the Crew Agreement for this voyage.

It was likely that the ship also left port on 15 July, as *Lloyd's List* (1874f) reported that *Western Empire* "Arrived at Sunderland from Quebec," but it probably should have stated that the ship departed Sunderland for Quebec. Its departure draft was

listed at 16 feet (4.9 meters) aft, 15 feet (4.6 meters) foreward (OL 1874b).

The next entry was while the ship was in Quebec on 3 September. It listed the draft at 20 feet 8 inches (6.3 meters) aft and 19 feet (5.8 meters) forward (OL 1874a). *Lloyd's List* (1874g) confirmed the arrival of *Western Empire* into Quebec on 1 September. That same day, two of the ablebodied seamen were sent to the hospital and discharged from the ship. It was also noted that during the evening, the cook, while drunk, jokingly hung a jacket up in the rigging. The following day, one of the ablebodied seamen was sent up to retrieve it and fell from the foreyard onto the deck. The HMS *Bellerephon* was docked nearby and a request was sent to their doctor to assess the condition of the fallen seaman. No broken bones were found, and the doctor merely prescribed some medicine for the hurt sailor. The next day, the doctor returned and re-examined the patient. He likely discovered that the injury was greater than initially thought, and he immediately sent the man to the shore hospital (OL 1874b).

While at port, problems with the crew, both old and new, began to arise. On 8 to 9 September, two of the crew disappeared onto shore and returned the next morning drunk and unable to perform their duties. The following day, three of the ablebodied seamen were observed being disorderly and throwing coal around the deck. One of the coal pieces struck the captain in the head, and he accused one of the men of purposefully attacking him. The sailor denied the act, but said he knew who did it. Later that evening, one of the other sailors who was caught throwing coal deserted with all of his effects. It is likely that he was the culprit who threw the coal at the captain (OL 1874b).

On 12 September, another sailor was forced off duty due to drunkenness, and

Captain Totherick wrote that he had to employ six men from shore to move the ship because a part of the crew was off duty. Two days later, another crewman could not commence work in the morning due to being hung over and did not return to work until later that day. The next day, another crewman fell ill from the same problem and was taken off duty. On 16 September, another crewman deserted with all of his effects (OL 1874).

Throughout the week of 22-28 September, four more men were taken off duty on various days due to drunkenness (OL 1874a). The ship left Quebec for Newcastle on 5 October 1874 (*LL* 1874h) and arrived at Shields, England, on 10 November (*LL* 1874i). While in Shields, Captain Totherick was relieved of his duties and a new captain, Hobbs, was hired to return the ship to Newcastle on 29 April (*LL* 1874j). Once again, Captain Totherick proved to be an easy-going man and rated all of his crew as Very Good upon their discharge.

1875 – The Demise of Western Empire

Unfortunately, there were no more Crew Agreements or Official Logs found for the final voyage of *Western Empire*. The information for this voyage was therefore culled from entries in *Lloyd's List* as well as newspaper articles recounting its fate. The map for the following voyage can be found in Figure 17. The ship left its home port of England on 6 March 1875 (*LL* 1875a) and turned its bow towards the coast of Brazil and the port of Rio de Janeiro. No date was given for its arrival in Rio, but it left that city on

7 June and headed to more familiar waters and the port of Pensacola on 7 June (*LL* 1875b).

The ship arrived in Pensacola on 16 August (*LL* 1875c). One month later, on 8 September, the new captain of *Western Empire*, a man named Hobbs, died shortly after loading his ship, and the mate, David Bertie, was promoted to captain (*LL* 1875d). The day after the captain died and the mate was promoted, the ship left Pensacola en route to Grimsby in England (*LL* 1875e).

The first news of the demise of *Western Empire* was reported on 27 September 1875 in *Lloyd's List*. A short note was written that the ship had been abandoned and that only a part of the crew was saved. However, this was only a short description of the end of the long career of the ship, and more news was not to become widely available until 6 October 1875 in *Lloyd's List*. It stated that the ship had left Pensacola on 11 September with a load of timber. Seven days later on 18 September, while only 135 miles (217.3 km) south of Pensacola, the ship became waterlogged and was subsequently abandoned and seven men were drowned.

The reports of what happened to ship after it was abandoned are somewhat confusing. *Lloyd's* recorded that the ship was left derelict and waterlogged south of Pensacola with the water at deck level during hurricane conditions. The masts were broken off, and the ship appeared to be sinking along with its cargo of timber. After this report, additional information arrived that does not appear to be logical.

On 21 October, *The City of New York* arrived in New York and reported that it had passed *Western Empire* approximately 30 miles (48.3 km) north of Jupiter, Florida,

where it was seen dismasted, waterlogged, abandoned, and anchored (*LL* 1875f). Jupiter lies on the East coast of Florida, which meant that the ship, without masts and dragging its anchor, would have had to have made the trip around the southern tip of Florida and back up the eastern coast. While this is the direction that the Gulf Stream flows, it is highly unlikely that a ship in such a condition would have stayed afloat long enough to make such a long journey, and all the while dragging its anchor.

Another statement, from the ship *City of San Antonio*, which also arrived in New York, said that the ship *Empire State* was seen timber-laden, waterlogged, and dismasted with only the mizzen mast and cabin stove seen rising above the deck near Jupiter, Florida (*LL* 1875g). It is possible that *City of New York* misidentified *Western Empire* as another old timber hauling ship. This was corroborated by another vessel, *H.D. Stover*, which also arrived in New York. It reported passing the same dismasted, waterlogged and abandoned ship 20 miles (32.2 km) east of Jupiter. However, no ship name was given, suggesting that the earlier identifications by *City of New York* and *City of San Antonio* as either *Western Empire* or *Empire State* were conjectural. While the final whereabouts of the vessel cannot be ascertained from contemporary records, the fate of the crew was well documented.

It was the *New Orleans Times-Picayune* that first told the story of the loss of the ship and some of the crew. It reported that the ship sprung a leak the night of 13 September, as a storm was just beginning to ravage the Gulf coast. Located 135 miles (217.3 km) from shore, the ship began to capsize and had lost any ability to steer. The masts were cut in an attempt to gain control over the ship, but a large deckload of timber

made it impossible to regain control. The crew abandoned *Western Empire* and took to its two boats. They remained next to the ship throughout the night, but eventually left after they saw that it was breaking up and that nothing could be saved. The smaller of the two boats could not remain afloat in the storm and the men in it joined the rest in the larger boat. With an overload of 24 men in the longboat, the boat capsized only two miles (3.2 km) from St. Vincent's Island, Florida (near Apalachicola on the mainland). Seven of the men did not know how to swim and subsequently drowned, while the rest hung onto the keel until they drifted ashore. The paper estimated the value of the ship and its cargo at $62,000 (*New Orleans Times-Picayune* 1875a).

Once the men had returned to safety the British Parliament quickly investigated the loss of the ship on 6 January 1876 (British House of Commons, Inquiries into Wrecks, &c. Page 222). The inquiry resulted in the acceptance of the chief mate's account and acknowledged that the abandonment of *Western Empire* was justified. The inquiry also gave another detailed account of the final days of the ship, including the loading details of the ship that likely contributed to its sinking. It began by reporting that the final cargo of the ship was pitch-pine timber, and that it was not just the hold that was loaded, but the deck as well. A tier and a half of logs was put on the deck from the topgallant forecastle bulkhead on each side of the hatchways, and ran under the poop to within 20 feet (6.1 meters) of the rudder head. It was secured by chains and wedges, shores amidships, and was only six inches (15.2 cm) below the main rail. The placement of the timber was also within two inches (5.1 cm) of the handles that worked the flywheels of the ship's two iron pumps.

After the ship left Pensacola, the weather appeared good and it proceeded on its way to home. However, on 13 September 1875, the wind began to pick up and sails were taken in to help control the ship. As the storm increased in severity, the ship began taking on water, with the pumps working fifteen minutes every two hours. As night went on the leak increased, and by the morning there was six feet (1.8 meters) of water in the hold, and the ship was leaning so heavily to the starboard side that the main rail was in the water. The hull continued leaking and water in the hold to 10 feet (3 meters). At this point the covering board was submerged and water began to flow onto the deck, lifting the pitch-pine that was stored there and loosening the shores and wedges. With the deck cargo now adrift, some of it shifted the two inches (5.1 cm) necessary to stop the pumps from working. Those timbers were removed and jettisoned overboard, but there was still little room for the men to work the pumps, and it became dangerous to do so as more of the timber began to wash around the deck. The remaining crew that was not working the pumps stood on the timber to help prevent the movement of the wood. This allowed the other men to do their job, but the water could not be stopped from gaining entrance into the hold. At 4 PM on 14 September, the chief mate (now captain) turned the vessel around before the wind to return to Pensacola. It was able to make headway for a day and passed the vessel *City of Liverpool* on 15 September, who offered to receive the crew. However, the master and his crew considered it possible to return to port with 20 feet (6.1 meters) of water in the hold. Two days later, on 17 September, *Western Empire* became completely unmanageable and was once again listing strongly to starboard. It was at this point that the masts were cut, which helped right the vessel

and the anchors were released to create drag and keep the ship's head to the sea while the boats were launched. With the ship's masts cut and anchors dragging, the upper deck remained under three inches (7.6 cm) of water, and the cargo on the deck was now working itself free. The ship was about 120 miles (193.1 km) from Pensacola in the early morning hours of 18 September when the ship's master and crew got into the long boat and cast off from the sinking vessel. They proceeded under sail until 19 September, when their boat capsized near the island of St. Vincent, Florida. Twenty-four men were thrown into the sea and only 17 reached the island (Inquiries into Wrecks, &c. 399-400).

The storm reported in *Lloyd's* and in the inquiry that forced that abandonment of *Western Empire* did not go unnoticed by others. The local papers in New Orleans reported that a hurricane which had been seen near Cuba found its way towards the Gulf of Mexico and hit Galveston on 14 September. It had been blowing steady gale-force winds along the coast line from Texas to Florida, and had done so with equal or greater force as it had traveled up from Cuba. Reports from Galveston had even called it a "perfect hurricane...[with] the waves running very high and washing in some places over the wharves" (*New Orleans Time-Picayune* 1875b). In Galveston, the storm caused extensive damage to the city and many lives were lost. The storm made landfall and continued on its destructive path, flooding Houston with nearly 20 feet (6.1 meters) of water and destroying bridges. It was an amazing feat for the men of *Western Empire* to have survived such a storm and was a testament to the hardiness of the crew.

Through careful analysis of primary documents such as the Crew Agreements,

the Official Log, and entries in both local and trade papers, the story of *Western Empire* has been brought back to life. These first hand accounts not only give us details of the routes the ship sailed, the cargoes that it carried, and information on the men that sailed it, but also tell of struggles and hardships that they endured while at sea. From birth to death, sickness to health, promotions to mutiny, the story of *Western Empire* truly allowed a glimpse back into the past.

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CHAPTER IV

SURVEY

The survey of *Western Empire* was undertaken as a joint project between the Minerals Management Service (MMS), Deep Marine Technologies (DMT), and Texas A&M University (TAMU). The MMS first became aware of the wreck in in the early 1980s from the results of a remote-sensing survey for Shell Oil but the significance and identification of the wreck remained unknown for nearly 20 years.

The summer of 1999 provided a unique opportunity for nautical archaeologists. Exxon had accidentally placed a new pipeline directly across the middle of another wreck in the Gulf of Mexico. That boat is currently identified as the Mica Wreck, due to its position in the gulf within the Mica oil field. However, Exxon's error in pipeline placement was fortuitous for nautical archaeologists by providing an opportunity to study a wreck in deep water. In 2002, the MMS, DMT, and TAMU returned to the Mica site with the research vessel *Rylan T*. Their primary focus was the identification and assessment of the wreck, but after that was completed, they had an opportunity to continue using the survey tools on the way back to dock. In addition to the tools necessary for a deep water survey, the MMS also brought with them a newly completed Geographic Information System Database of shipwrecks. This database contained the record of the possible shipwreck found during the Shell survey in the early 1980s, and the researchers decided that they would use the extra ship-time during their return voyage to investigate the site.

Along with the crew and vessel, a number of tools for looking at vessels in deep water were brought. They included a modified Max Rover ROV system from Deep Sea Systems International, Inc. and a DeepWorker 2000 submersible from Nuytco. Both of the systems included 675 kHz scanning sonar systems which acted as their primary means to visualize the undersea environment. The vessels used an ultra-short baseline (USBL) tracking transponder combined with a LinkQuest acoustic modem to determine their absolute positions as well as determine where the vessels were in relation to each other. USBL tracking is an advantageous system because its operators can use it essentially out of the box, without having to deploy anything on the sea floor to assist in positioning. However, there are some accuracy issues with the system due to the high level of calibration required and dependency on external sensors to complete the positioning calculations (Vickery 1998:4).

The Max Rover was equipped with a wide angle color TV camera with variable speed electric pan and tilt, four MAX 150-watt quartz halogen lights, HMI daylight color lights, a high-resolution video camera, and a Schilling Orion Manipulator system.

The DeepWorker 2000 submersible is a single person submersible that was equipped with incandescent lights, a digital still camera, and a Hydro-Lek 5-function manipulator. Communication was possible between the operator of the submersible and RV *Rylan T* through the LinkQuest acoustic modem. As this was not a pre-planned mission, the procedures of the investigation were created on the fly while over the potential site. Using the geographic coordinates in the MMS database, the MaxRover ROV was lowered first into the water and used to find the true location of the site. The

Minerals Management Service database entry on the ship stated that it was supposed to be 100 feet (30.5 meters) in length and sitting in nearly 1,500 feet (457.2 meters) of water. The lack of an onboard echosounder on RV *Rylan T* prevented the researchers from confirming the bottom depth, and thus they had to assume that the depth was accurate and used the number as a basis for determining length of cable to let out for the ROV. The operators were startled when the scanning sonar on the vehicle picked up the shipwreck at about 100 feet (30.48 meters) shallower than was expected. Unfortunately, this did not provide enough time for the operators to stop the winch, and the ROV crashed into the seafloor, but luckily no damage occurred. Once the team recovered from the shock of an early landing, the ROV was sent on its way to investigate the wreck. During its initial survey of the ship, it became apparent that the bottom depth of the wreck was not the only miscalculation about its status. The ship turned out to not be 100 feet (30.48 meters) in length, as described in the MMS database, but nearly 200 feet (61 meters) and in a state of very good preservation. Sending the ROV down alone was also done in order to determine the extent of the wreck, survey the debris field, and assess any entanglement hazards for the DeepWorker 2000. Once the site was initially investigated, the submersible was sent down.

According to Brett Phaneuf, one of the archaeologists on site, the ROV began its survey by first discovering the starboard side of the ship at approximately midship and then working its way towards the bow, and then back to the stern. After this initial pass, the ROV continued following the vessel line from bow to stern to assess any interesting features. The submersible was sent down after this initial work had been completed and

the area had been assessed for any hazards. It took approximately 30 minutes for the DeepWorker2000 to reach the 1,350-foot (411.5 meter) bottom, and once there it, too, followed the hull along both the starboard and port sides of the wreck. The two vessels worked together and continued scanning the outside of the hull as well as looking into the main hold and concentrating on the bow and stern ends of the wreck. Still images as well as video footage were captured during the several hours spent on the site. However, because this was not an extensively pre-planned survey, the exploration of the site was somewhat random, it difficult to subsequently render a complete image.

The Video Survey

The video footage of the wreck shows it lying on an east-west axis on the sea floor with its bow pointing towards the west (Figure 18). The wreck itself is in good condition, and there does not appear to be a large field of debris. It is lying nearly upright in the silt, with both stem and stern posts intact. Frames, deck beams, and ceiling are all visible in the video, but they can not be accurately mapped from the video. Unfortunately, there are no visible artifacts such as pottery or glassware to aid in the identification of the wreck.

From a biological perspective, the site is teeming with life. Shrimp of various types are seen floating everywhere, and crustaceans, eels, and fish can be seen swimming through and around the wreck. The visibility within the water column was low, which was caused by both the high volume of sea life as well as a large degree of

suspended silt. Problems with visibility were more apparent when the lights of the ROV were used, as much of the light was diffracted back towards the camera. When the ROV was working in conjunction with the submersible, the off-center lighting provided clearer views.

Construction Features

As the camera first approached the side of the ship, frames could be seen rising above the sea floor. Unfortunately, with no laser scale incorporated into the ROV, it was impossible to obtain measurements of the frames or the spacing between them. However, there were other more general assessments that could be made using the video alone.

Western Empire was heavily constructed with double frames and had minimal space between each frame set (Figure 19). While this was not unusual in a merchant ship, that heavy style of construction was more often seen in wooden warships where hull strength was a necessary for both supporting the weight of cannon and providing protection from enemy attack. Interestingly, being able to see the frames suggests an incongruity with the record of the ship in *Lloyd's Register*. Although the ship was registered as having last been sheathed in 1870 (LR 1874), neither planking nor sheathing could be seen in the video.

While the lack of copper sheathing casts doubt on the identification of the wreck as *Western Empire*, it has a plausible explanation in its stripping, just as the heavy

construction does not negate the possibility that wreck was a merchantman. The strength of those two arguments against the wreck being *Western Empire* is further weakened when one looks at the last known location of the wreck and its cargo. Although the location of the wreck is confidential MMS information and cannot be provided in this thesis, it is near the position where it was abandoned in 1875, and is the only known wreck within the area. The lack of any visible cargo suggests that it was carrying something perishable like timber, which further supports the likelihood that this is *Western Empire*. In addition, the historically-known length of the vessel matches the length as determined by the sonar record.

Although there was little outer planking seen, a large percentage of ceiling planking was visible on the interior of the frames. As the camera moved around the wreck, intact and broken deck beams appeared, but due to the movement of the ROV their exact location within the hull was impossible to determine. However, both the stern and bow of the ship were identifiable.

The stern of the ship appears to be preserved up to the level of the lower transom (Figure 20). No rudder was seen attached to the ship nor was it found as the ROV moved around the stern. Closeups of the stern post did show two of the gudgeons in relatively good condition, although no makers' marks could be seen on the metal (Figure 21). Due to major deterioration of the stern post, the after end of the keel could also be seen (Figure 21).

Although the ship was over 1,200 feet (365.8 meters) beneath the sea, it was not safe from modern intrusions. Both fishing nets and their cables were draped over bow,

where they had gotten snagged (Figure 22). What appears to be the ship's windlass with some associated chain can be seen in the bow area (Figure 23), presumably a short distance abaft the inner face of the stem. Close to the windlass and chain was an upright structure whose function remains unknown (Figure 24). It appeared to have a smooth, even top, with no visible encrustation or corrosion. The sides are wrapped in iron and riveted to the structure. Due to its proximity to the windlass, this was originally thought to be a boiler for the donkey engine. This was a likely possibility because it was known that *Western Empire* had a donkey boiler, and that they were typically located near the windlass or other machinery that they powered. Donkey engines were small, auxiliary steam engines used to run deck machinery. However, without any sort of visible outlets on the sides or top of the structure to release the steam, the boiler theory is not certain (Figure 25). Another possibility is that it was a bollard, or an iron-sheathed wooden post used to guide anchor chains, etc. However, the structure looks too large to be a bollard. Unfortunately, this feature can only be identified by a closer inspection.

While some of the major features of the ship could be discerned from the video, an overall understanding of the wreck on the sea floor is not possible with the current footage. Although the footage was sufficient to assist in the identification of the ship, a set of general guidelines for ROV operators to aid them when surveying a deep water wreck on the fly is necessary.

CHAPTER V

ON-THE-FLY DEEP WATER SURVEY STRATEGIES

Before beginning a survey on a deep water wreck, it must be stated that any of the strategies discussed below should only be done if there is no risk of disturbing the site. Information that could be gained from getting close to the wreck would be lost if it damaged the site. Therefore, it is imperative that the operator of the ROV insure that neither the vehicle itself, nor its cables or tether, contact with either the wreck or the sea floor. Keeping the sea floor clear is important because artifacts or debris that may not be visible on the surface, but could nevertheless be damaged should something heavy sweep across them.

Prior to bringing the ROV directly to the wreck, the operator ideally will assess the site to determine how safe it is to operate the vehicle. This is often done using side scan sonar, which may show potential snagging points which would endanger the ROV. In addition to performing this initial task, the operator can also use this opportunity to determine the total area of the site, including a possible debris field. Once the site has been deemed safe by the operator, and the site limits determined, the tether management system (TMS) can be deployed and set up over one side of the wreck. The TMS should not be placed directly above the wreck, as this endangers both the safety of the ROV and the wreck site. Preferably, the operator should deploy the TMS on the side that would allow the greatest degree of access to the wreck without the risk of catching the tether or dragging it over the site. Once this has been decided, the ROV can proceed closer to the

wreck for its survey.

As the ROV approaches the wreck, it should be possible for the operator to get an overall length and breadth measurement using the ROV's side scan sonar. When the ROV is close enough for the operator to switch to video, the visual survey can begin. It is vitally important for the ROV operator to maintain a consistent and constant view with the video camera, which allows an archaeologist to later create a photomosaic of the wreck site. Shutting the camera on and off or changing the angle of view while moving around the hull makes it difficult to relate the wreck's features to one another. The operator should begin by flying slowly over the wreck as close as safely possible with the camera pointed straight down. As the camera passes over the wreck, the operator should make every effort to keep the path of the ROV steady and not deviate from a steady course. Specific objects that appear during this pass can be looked at later. Bobbing from side to side to get close-ups at this points tends to fragment the survey images and make assessment of the wreck more difficult.

Once the top view has been completed, the operator should then attempt to fly along each side of the vessel, from one end to the other, maintaining a 90 degree camera angle to the wreck. If time is limited, the operator should take the footage from the best preserved side of the ship. After the sides have been recorded, any time remaining should be spent looking at the debris field as well as diagnostic features on the wreck.

The first major feature that the operator should record is the construction material of the wreck. This will aid both the ROV operator and any later archaeologist who will assess the wreck. Operators should note whether it is constructed of wood, iron, or a

combination of the two. Determining construction material type will help narrow down the range of diagnostic features that need to be analyzed. Next, operators should look for propulsion type by moving the ROV over the midship and stern section, noting any evidence of masts, boilers, propulsion screws, wheels, etc. Iron rods or chains grouped along the outside of a hull are likely to be chainplates; they indicate the location of masts, and can provide significant clue to the type of rig the vessel carried.

Diagnostic features on wooden ships include masts and mast locations, the shape of the bow, rudder, frames, and sheathing on the outside of the hull. The rudder hinges bolted to the sternpost (gudgeons) can tell us how the rudder was hung, its approximate size, and often its approximate date. Modern ships have different features that would help in identifying the ship or the era in which it was built. The profile of the superstructure of the vessel as well as the shape of the bow can help in identification. Time should also be spent looking at the stern of the vessel, where the name of the ship might still be legible. Diagnostic artifacts such as ceramics, glassware, pieces of anchor chain, or pieces of machinery either in the hull or a debris field should be more closely examined.

The ROV operator should be able to complete these suggestions in under two hours, depending on the size of the vessel and visibility of the water column. By gathering this data, an archaeologist will have a much easier time identifying the time period the wreck was from and possibly more. However, while gathering the data is important, it is of even greater importance that nothing is done which might jeopardize the integrity of the site (Robert Church 2005, pers. Comm.). Removal of artifacts

without the supervision of an archaeologist and without an established plan for preserving them must be avoided.

CHAPTER VI

CONCLUSION

The life of *Western Empire* followed the trends of wooden shipping during the last third of the nineteenth century. It was built during a time of hope for Quebec shipbuilders. They believed that wooden sailing ships could still compete in overseas trade, but they were soon proved wrong, and by the 1870s the cost of constructing a ship of wood became greater than building a ship of iron (Souza 1998:11). The development of coaling facilities for steam ships further hastened the decline of the wooden sailing vessel. During the initial years of its life, *Western Empire* participated in the trade with India. However, as the supply chain for steam vessels grew, steam-driven ships increasingly became popular for the Indian trade route. Their larger capacity and reliable shipping times became more attractive to shipping firms. Although *Western Empire* was sold before the opening of the Suez Canal in 1869, it is likely that the canal's completion initiated a decline in the employment of wooden sailing ships in that region. The canal shortened the sailing time for steam vessels, but wood sailing ships could not use it, and they soon disappeared from the Indian trade routes.

Western Empire was then sold to spend the next part of its life sailing to Australia. This period was rather short, although it occurred during a rush of emigrants to this continent. The Australian gold rush was ending, but people still believed that opportunity was to be found in the land down under. Many vessels were chartered to bring new people to the land and return carrying loads of wool and hides. *Western*

Empire was no different and showed that it was a ship capable of making trip the efficiently and quickly enough to remain profitable for its owners.

As the ship began to age, it was sold to a firm in the timber shipping trade. This was a rough business, where profits were low and the voyage was dangerous. The cargo of heavy timber was often loaded on their decks, sometimes against British shipping regulations, and many vessels sank beneath the waves in an effort to squeeze another penny of profit. *Western Empire* tempted fate in 1875, when it carried a deck load of timber across the Gulf of Mexico. Captain Bertie believed the storm had subsided (as indicated by refusing assistance and continuing on his voyage to Grimsby), and his mistake cost the ship, its cargo, and the lives of seven sailors. The ship sank, but only after 13 years of working successfully alongside faster clipper ships and new steam-powered iron vessels.

Western Empire was an excellent example of a wooden sailing ship from this period. The trades it engaged in over its life were common for such vessels when the introduction of iron and steam and the capacity and speed increases they brought with them saw iron hulled sail and steam vessels taking over trade in the more lucrative commodities. The agreements and logs provided the first-hand information that shed light upon the life of the vessel and its daily activities, allowing its story to be retold and proving that the wooden sailing ship remained profitable enough to be competitive and useful during this time of technological change.

With the suggestions included in the previous chapter, ROV operators should be able to collect data on wrecks that archaeologists can later analyze off-site to help

determine what period the vessel is from and possibly identify it. Although the methodology is still being perfected for deep water surveys, it is actively being improved by those involved in the commercial and scholarly fields. While an archaeologist would ideally be on board for every survey, that is not always possible, and the guidelines suggested above provide instructions for someone to quickly gather data on a wreck site that may be helpful to off-site scientists.

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1867 (a 28 January, b 15 March, c 25 March, d 16 April, e 7 July, f 23 August, g 16 December). Maritime History Archive. Memorial University of Newfoundland, St. John's Newfoundland. Canada. Microfilm.

1868 (a 20 January, b 24 January, c 20 February, d 31 March, e 4 May, f 10 August, g 22 September, h 28 December). Maritime History Archive. Memorial University of Newfoundland, St. John's Newfoundland. Canada. Microfilm.

1870 (a 14 January, b 24 January, c 19 March, d 23 April, e 2 May, f 19 May, g 20 may, h 21 May, i 4 October, j 1 November). Maritime History Archive. Memorial University of Newfoundland, St. John's Newfoundland. Canada. Microfilm.

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1872 (a 20 January, b 4 May, c 11 May, d 25 June, e 2 August, f 16 October, g 23 October, h 2 December). Maritime History Archive. Memorial University of Newfoundland, St. John's Newfoundland. Canada. Microfilm.

1873 (a 7 April, b 21 May, c 26 June, d 9 August, e 1 October, f 29 October, g 26 November). Maritime History Archive. Memorial University of Newfoundland, St. John's Newfoundland. Canada. Microfilm.

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APPENDIX A

FIGURES

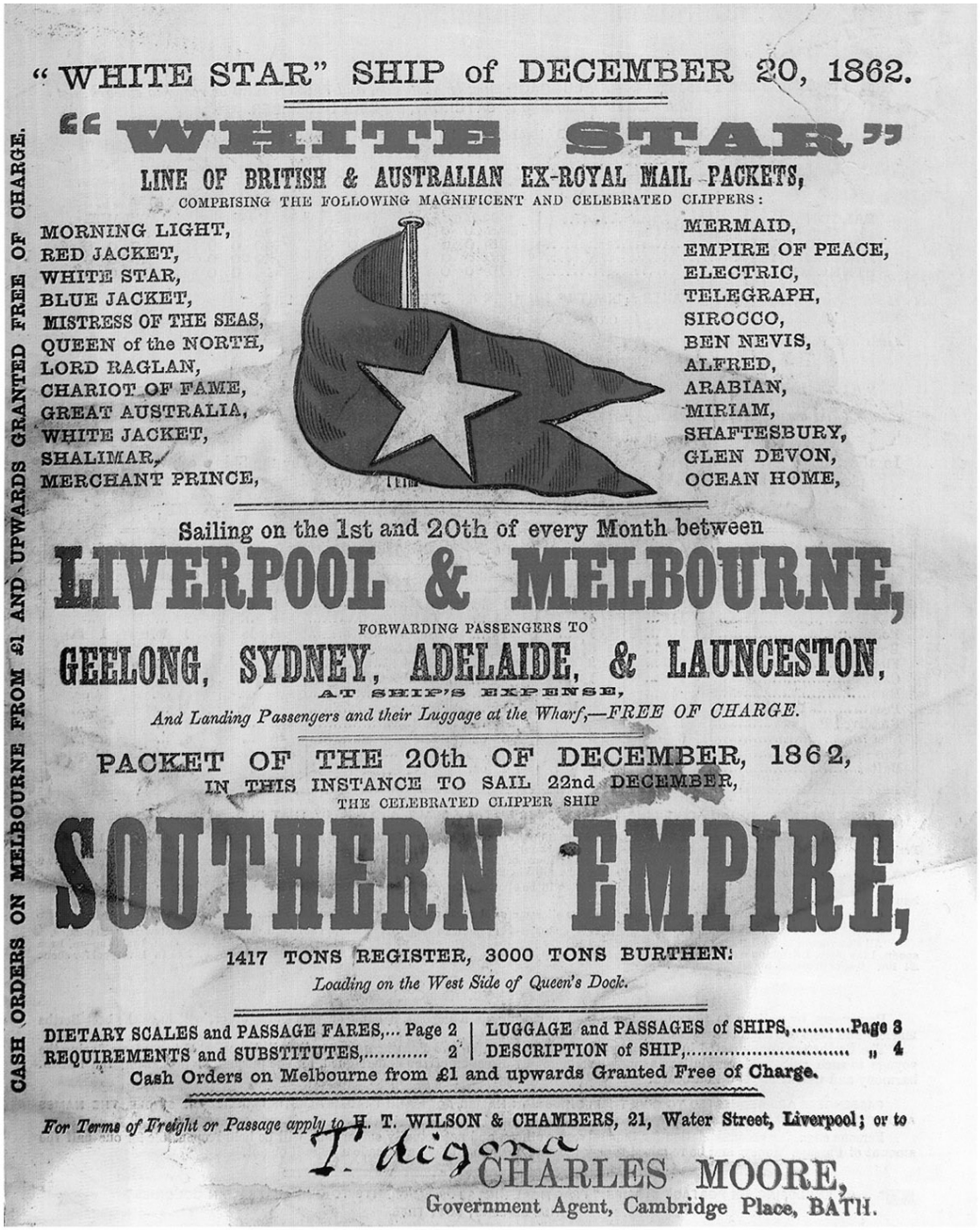


Figure 1*: Southern Empire* Advertisement (From Louden-Brown 2001:12)

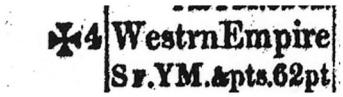


Figure 2: Maltese Cross (From *Lloyd's List* 1863)

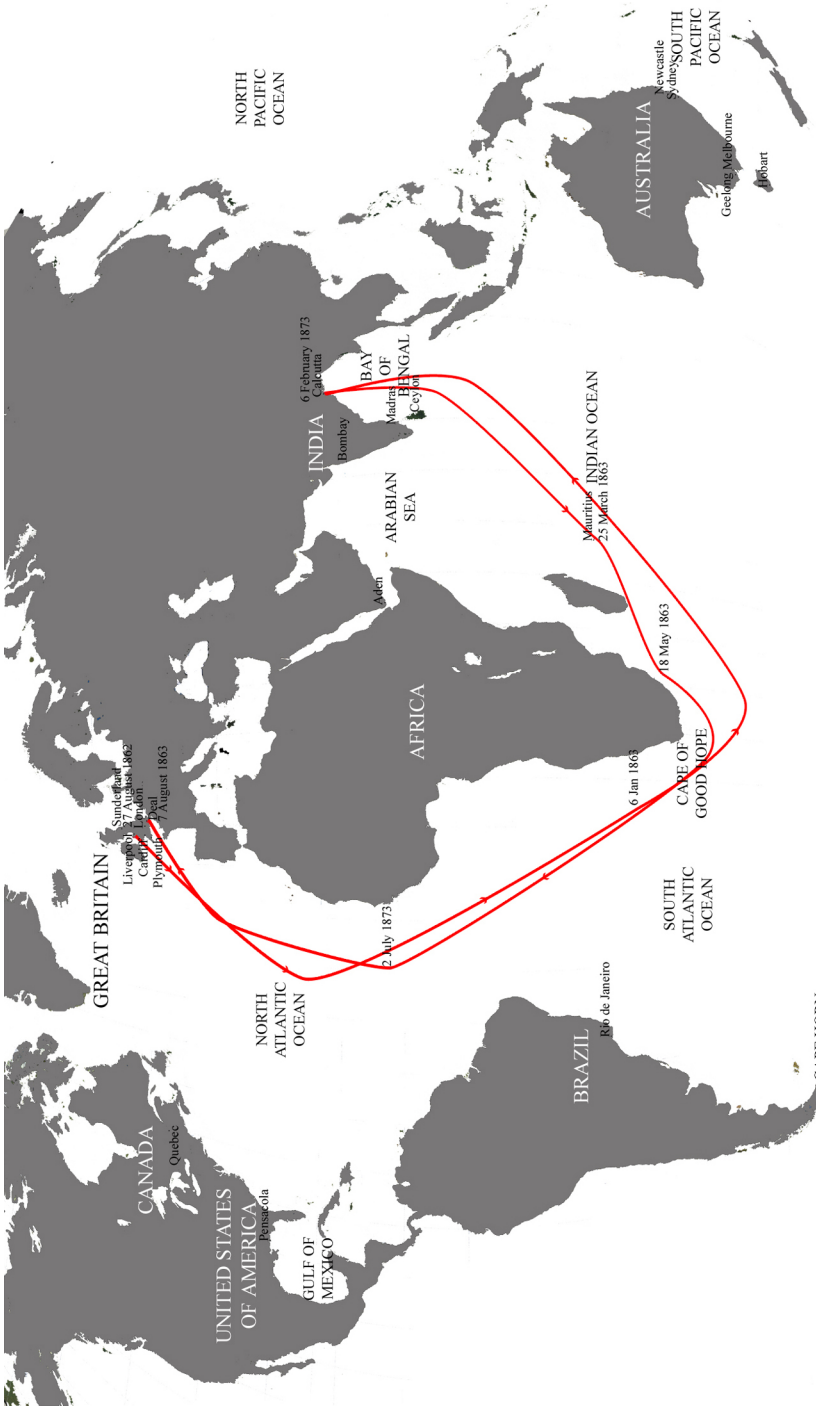


Figure 3: Map - 1862-1863 Voyage

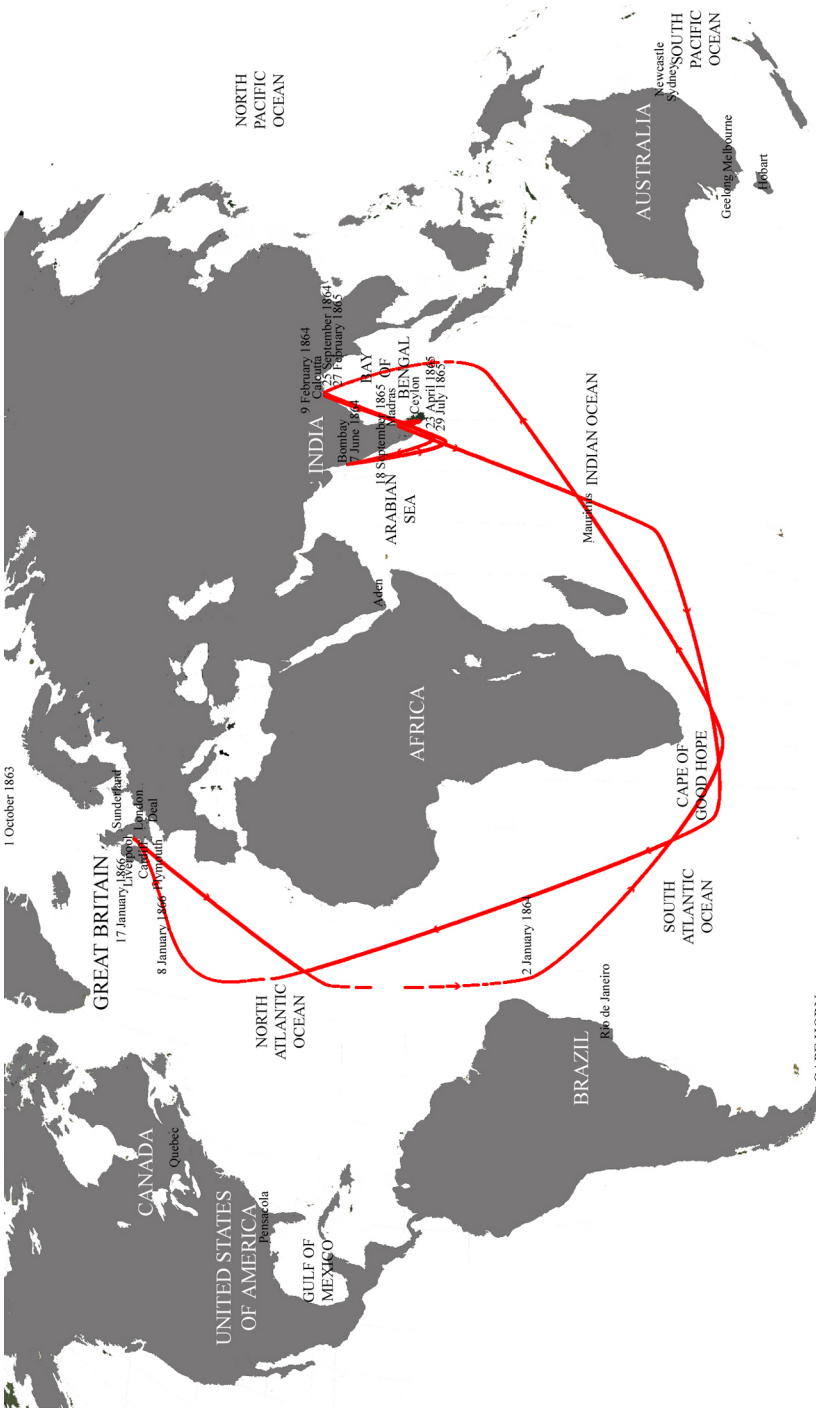


Figure 4: Map - 1863-1866 Voyage

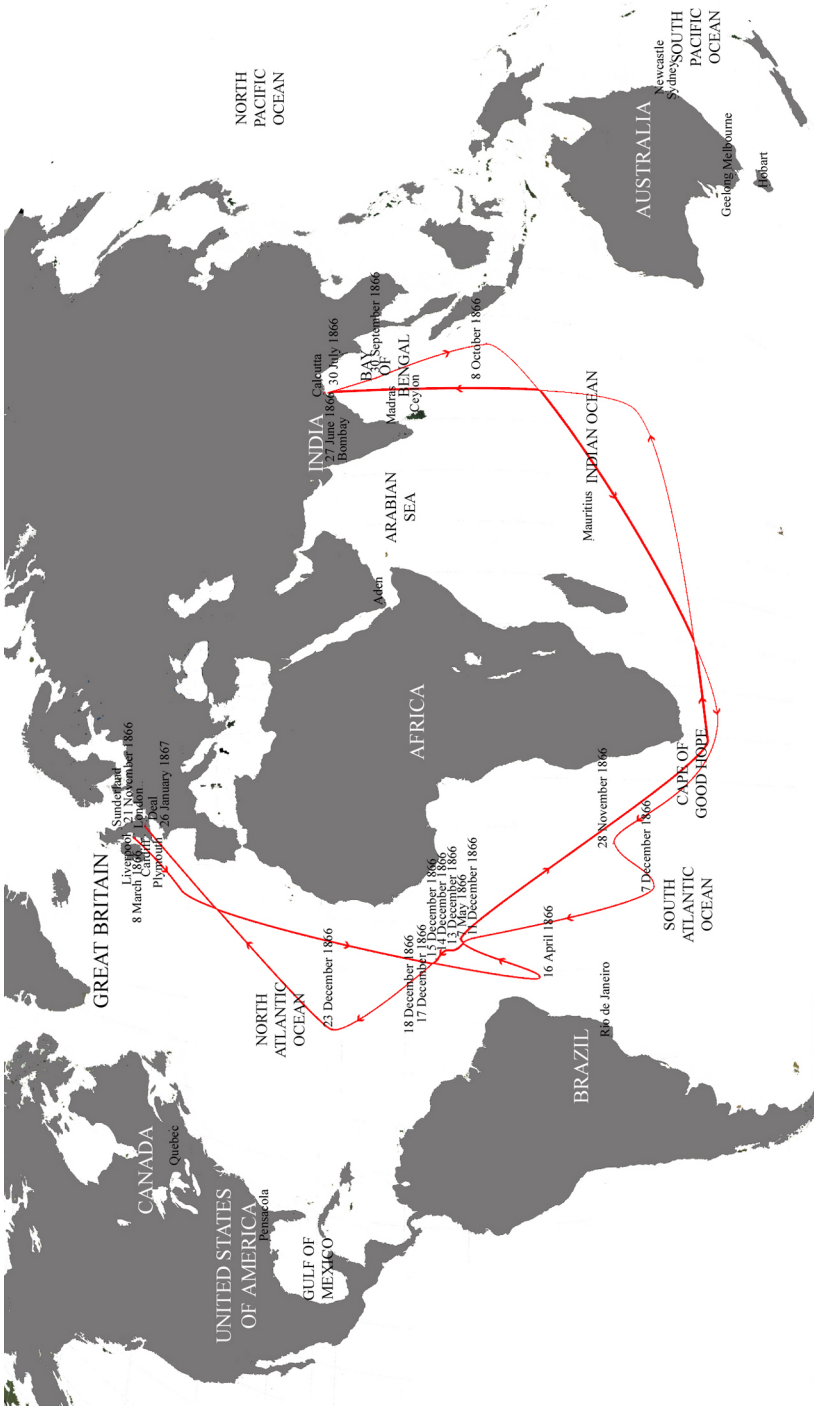
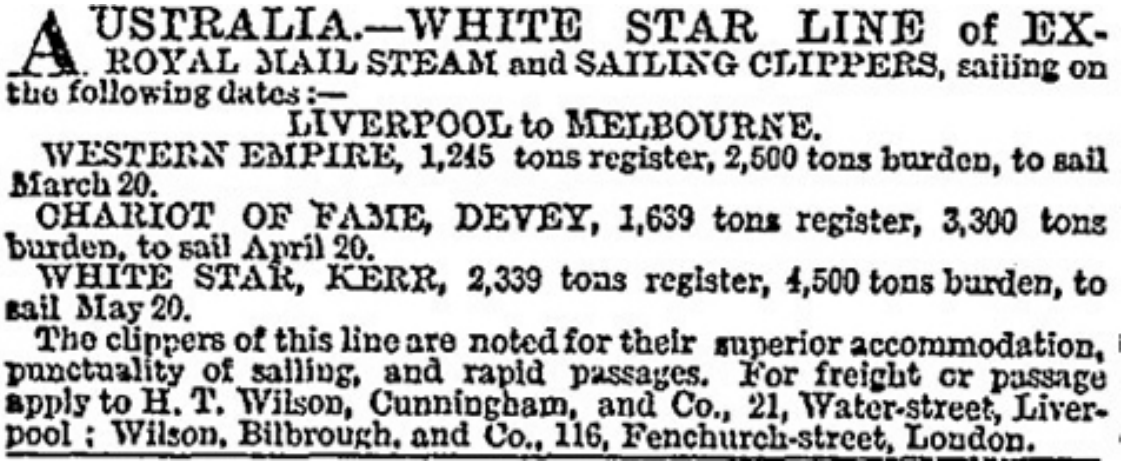


Figure 5: Map - 1866-1867 Voyage



AUSTRALIA.—WHITE STAR LINE of EX-ROYAL MAIL STEAM and SAILING CLIPPERS, sailing on the following dates:—

LIVERPOOL to MELBOURNE.

WESTERN EMPIRE, 1,215 tons register, 2,500 tons burden, to sail March 20.

CHARIOT OF FAME, DEVEY, 1,639 tons register, 3,300 tons burden, to sail April 20.

WHITE STAR, KERR, 2,339 tons register, 4,500 tons burden, to sail May 20.

The clippers of this line are noted for their superior accommodation, punctuality of sailing, and rapid passages. For freight or passage apply to H. T. Wilson, Cunningham, and Co., 21, Water-street, Liverpool; Wilson, Bilbrough, and Co., 116, Fenchurch-street, London.

Figure 6: *Western Empire* Advertisement (from *London Times* 1867)

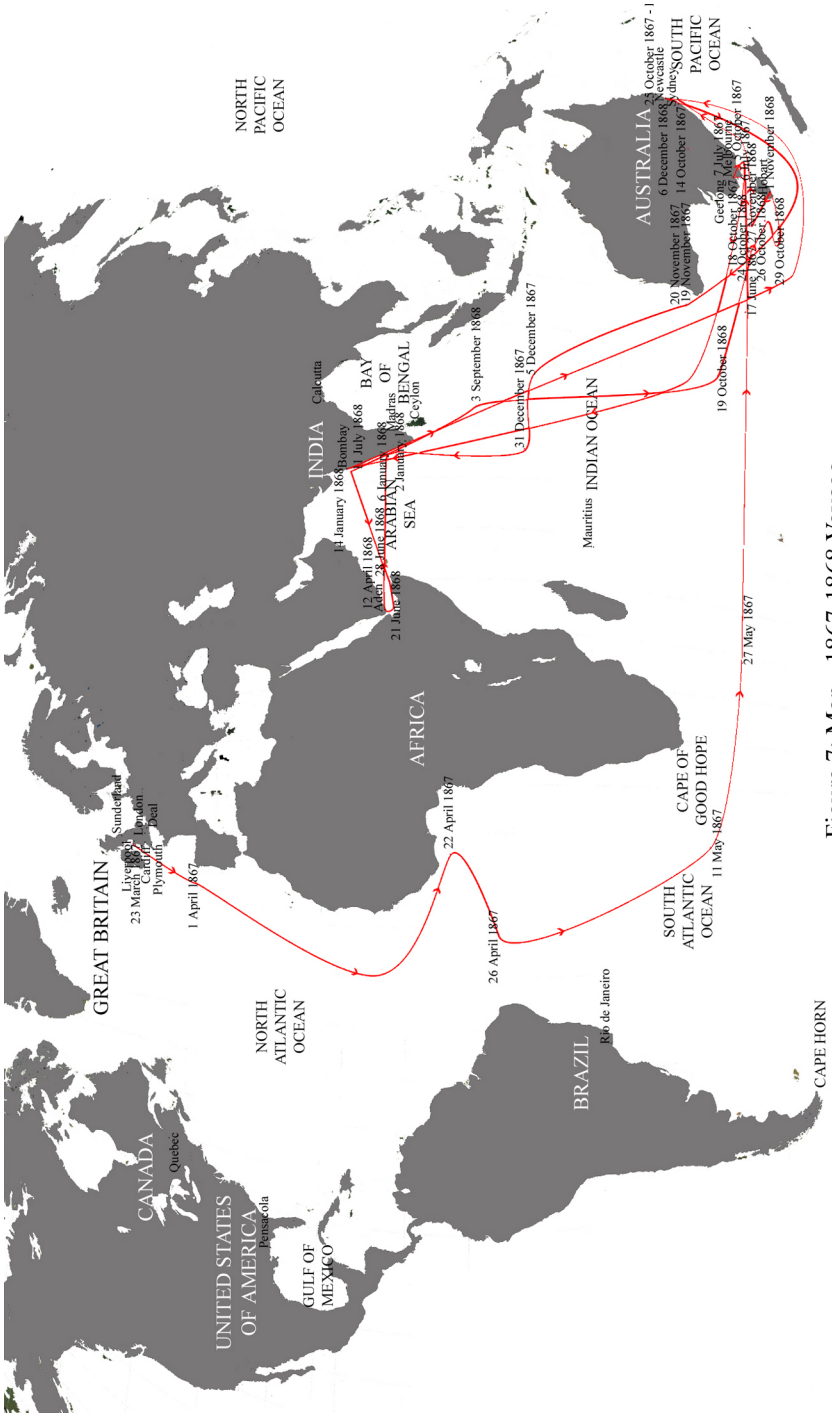


Figure 7: Map - 1867-1868 Voyage

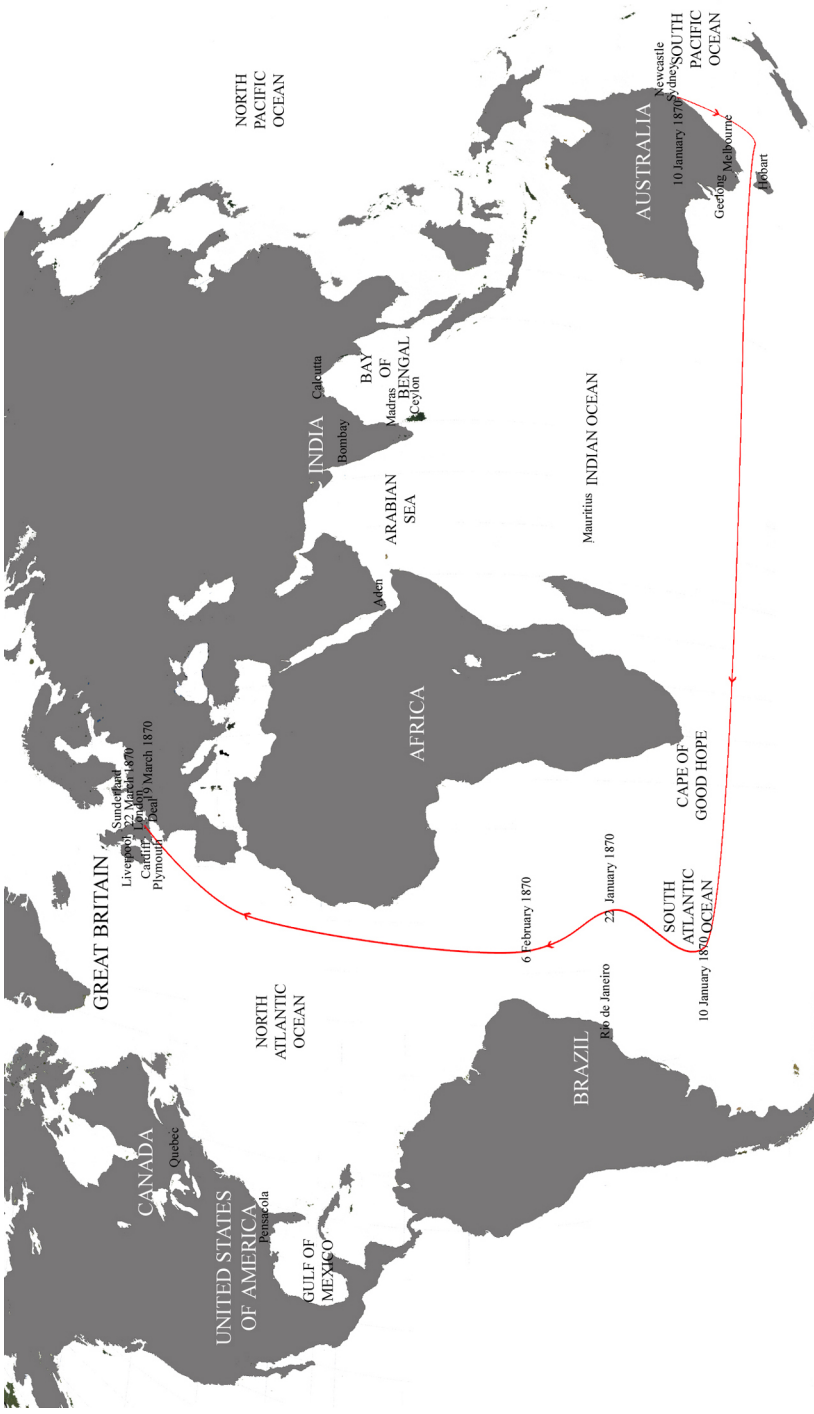


Figure 8: Map - 1869-1870 Voyage

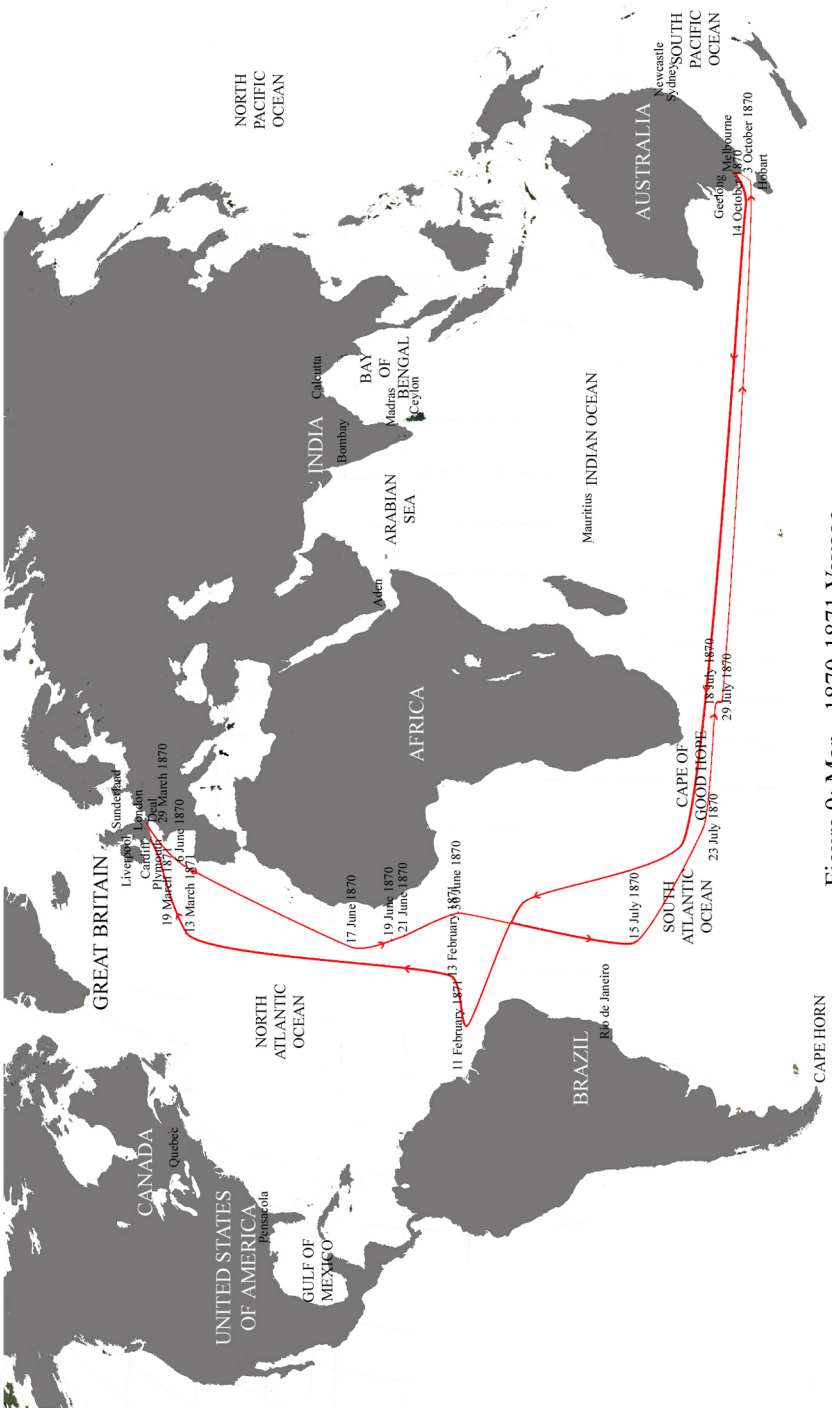


Figure 9: Map - 1870-1871 Voyage

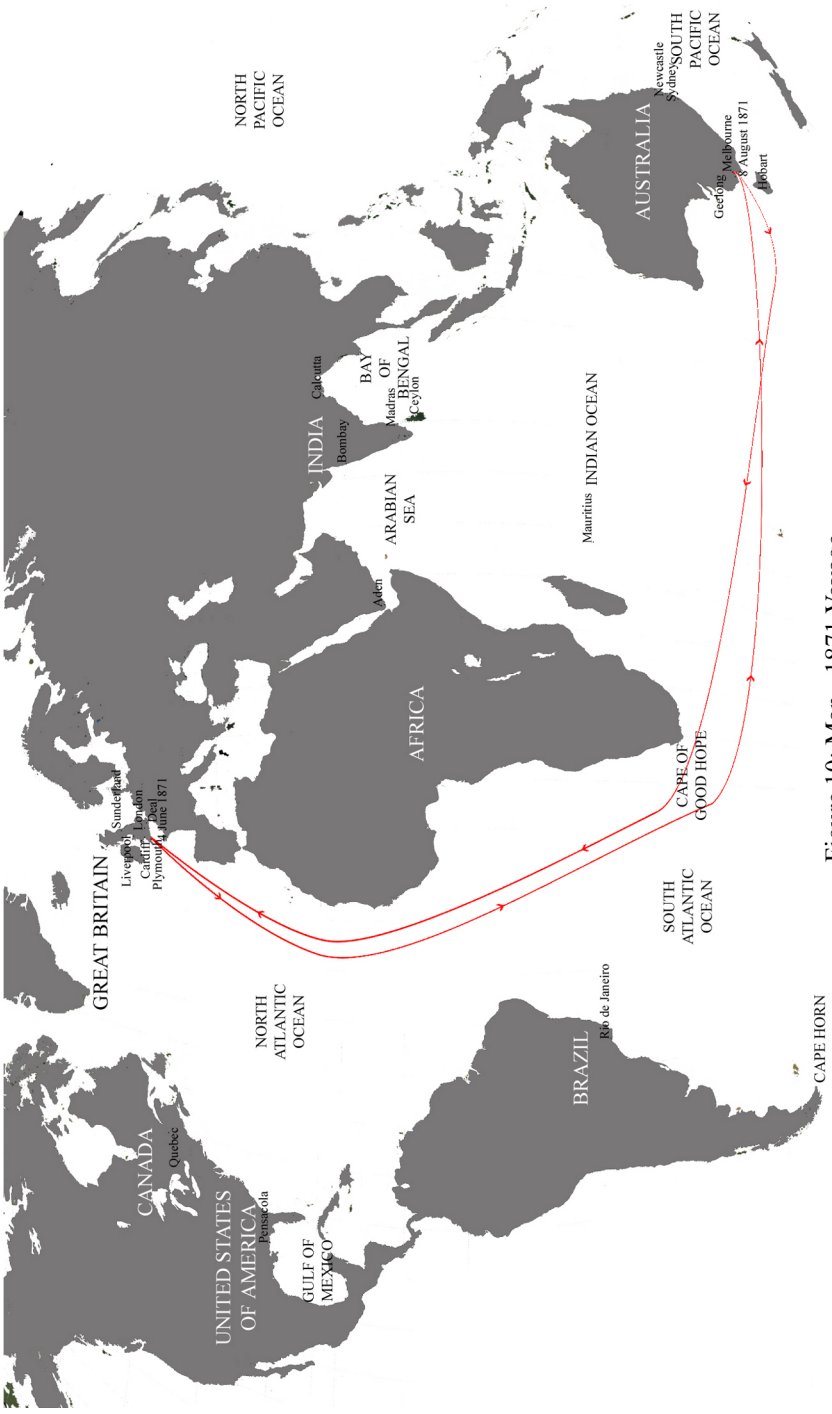


Figure 10: Map - 1871 Voyage

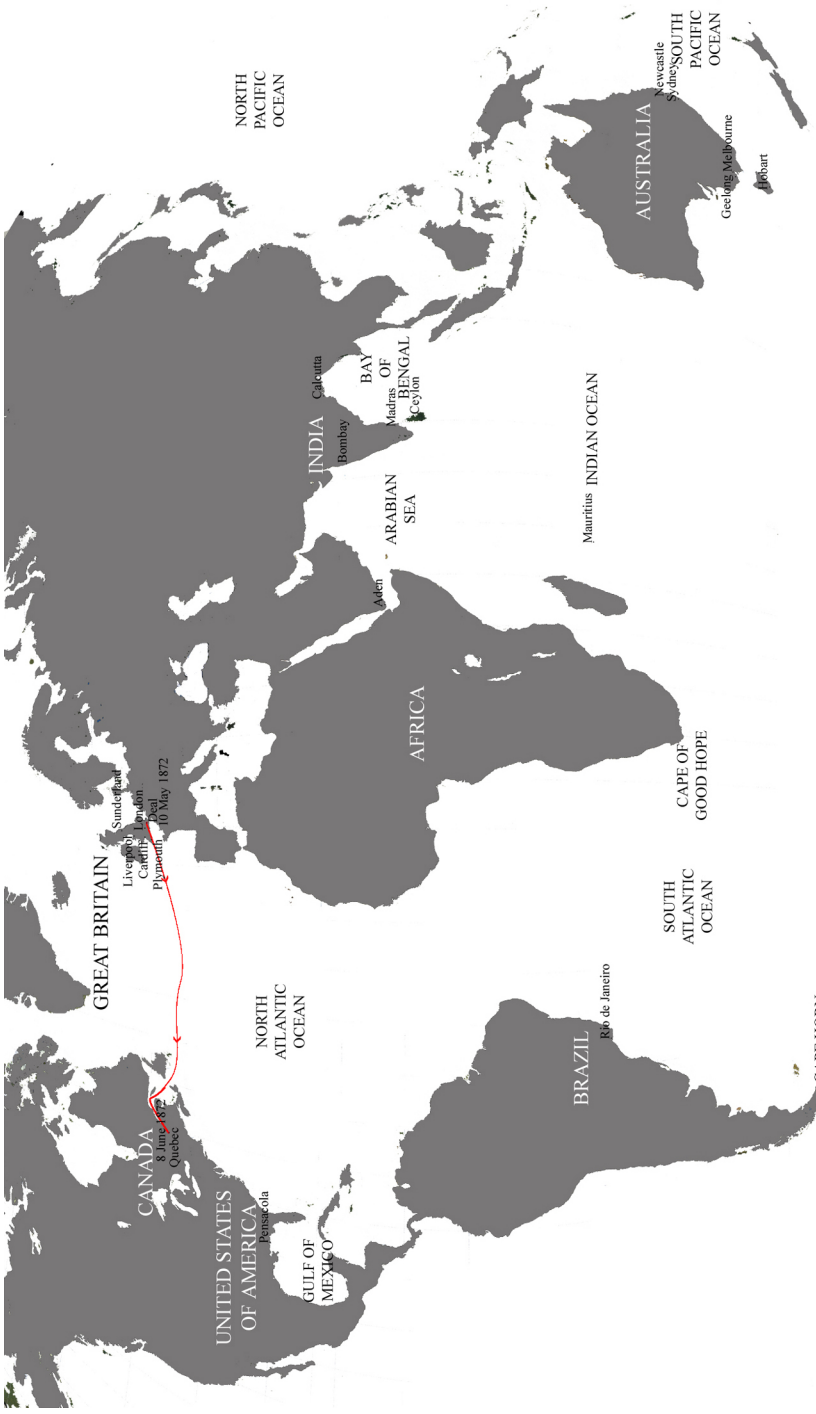


Figure 11: Map - 1872 Voyage (1)

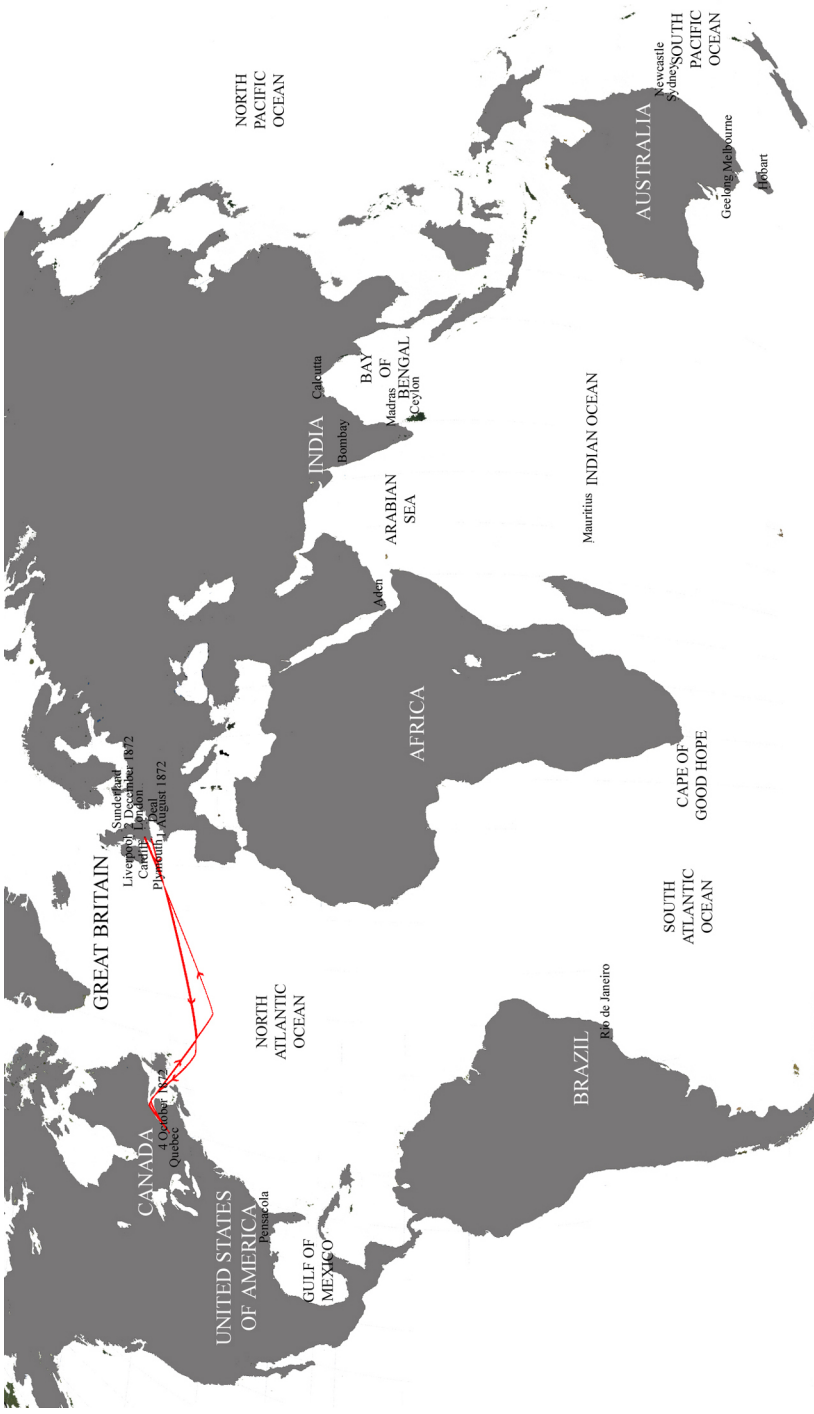


Figure 12: Map - 1872 Voyage (2)

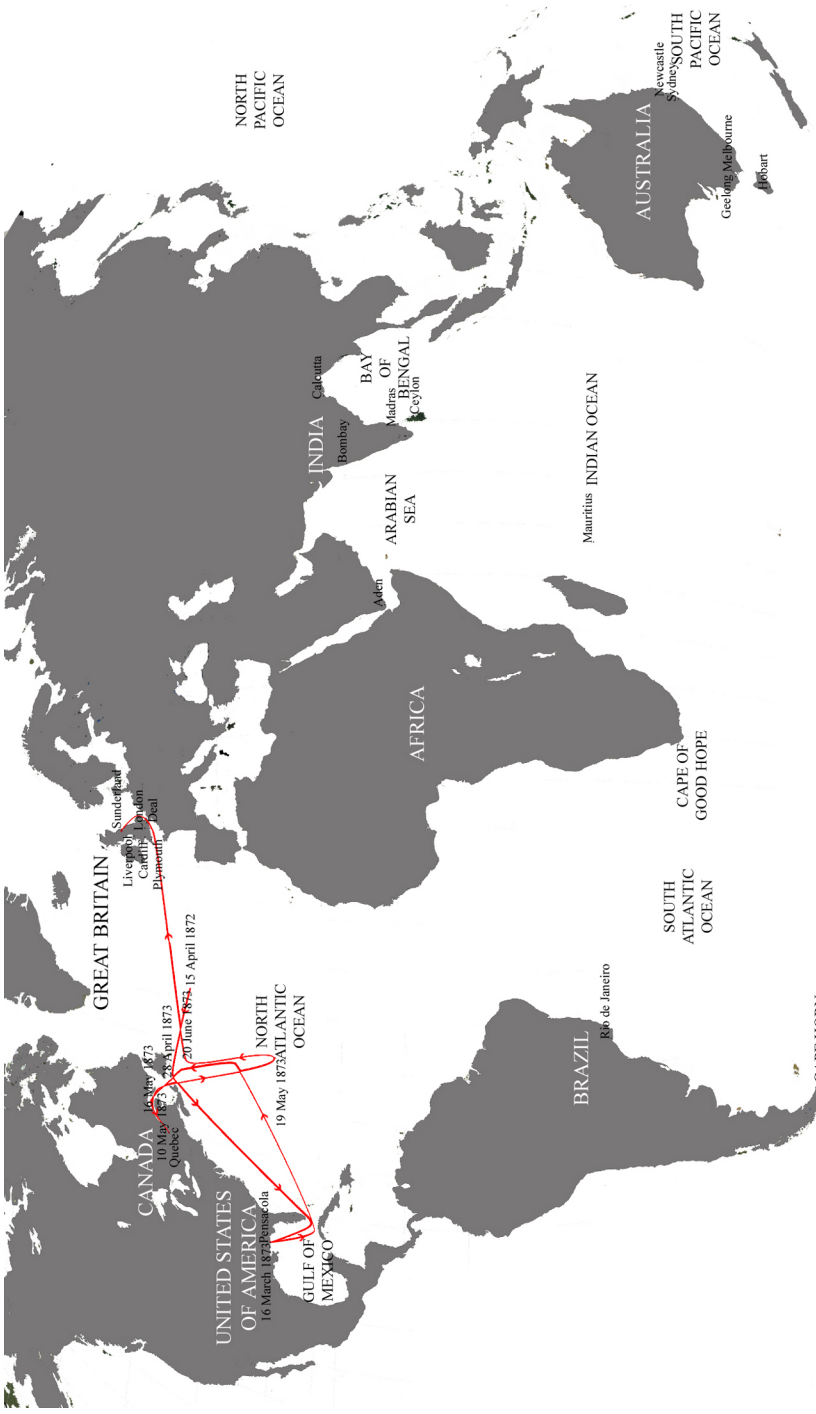


Figure 13: Map - 1873 Voyage (1)

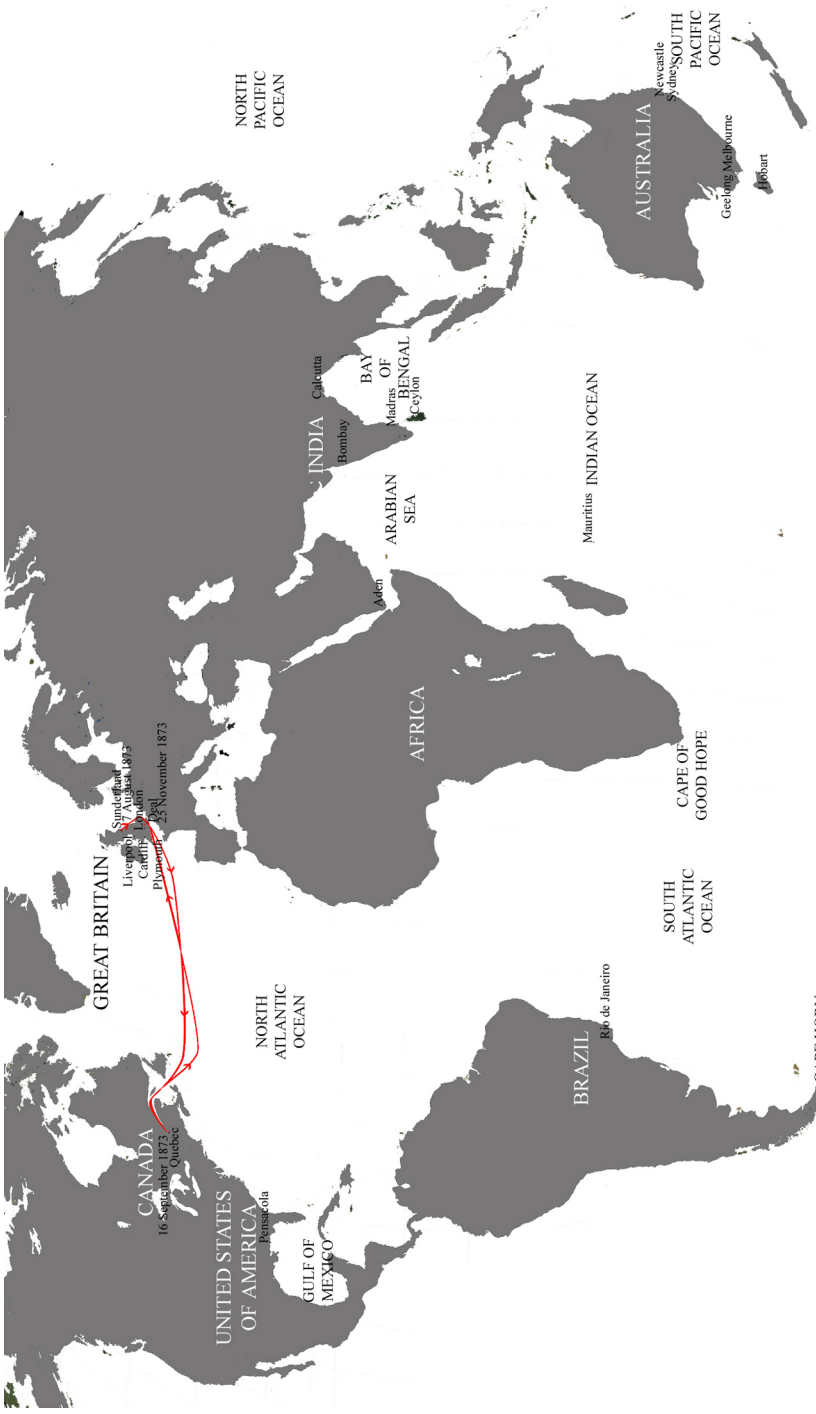


Figure 14: Map - 1873 Voyage (2)

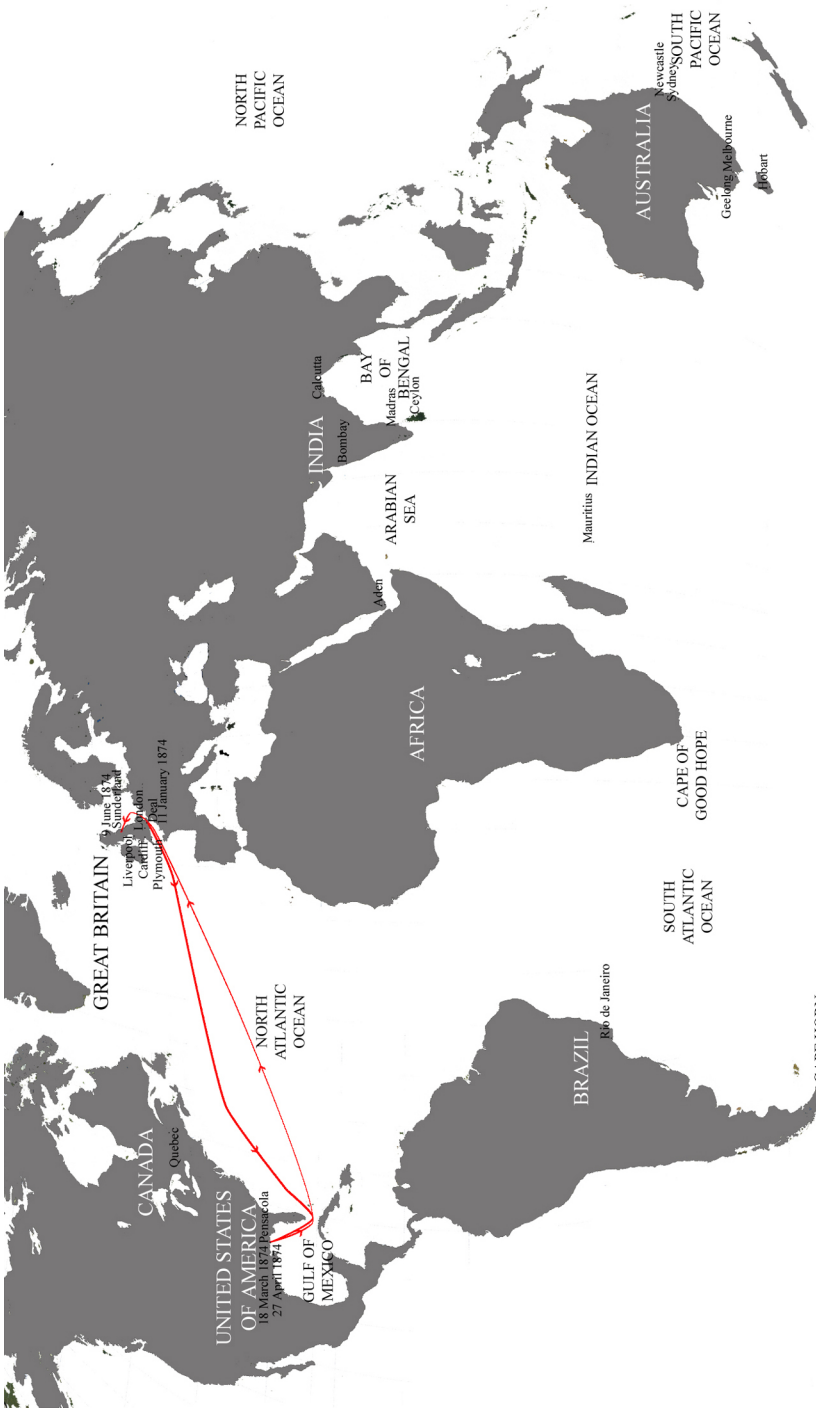


Figure 15: Map - 1874 Voyage (1)

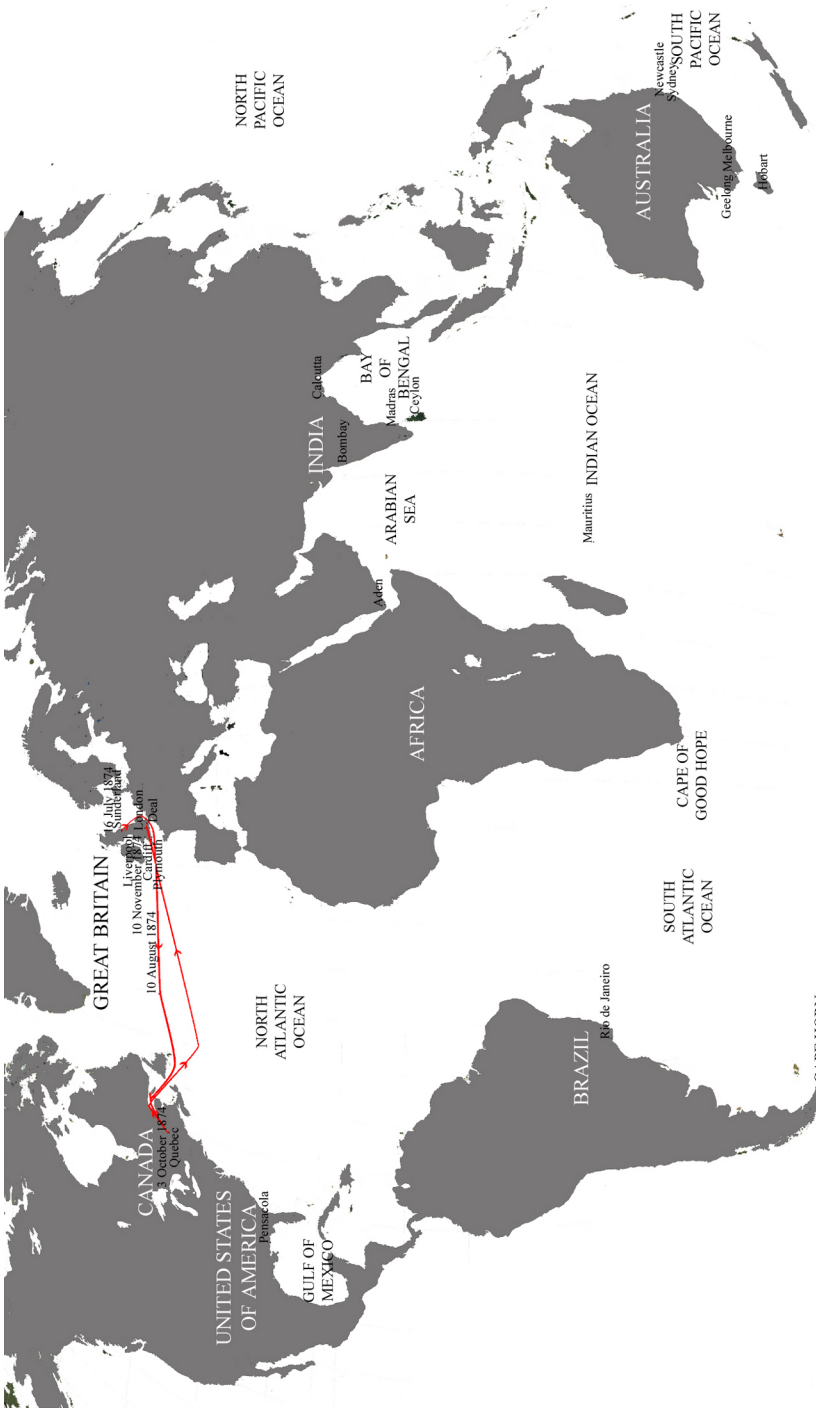


Figure 16: Map - 1874 Voyage (2)

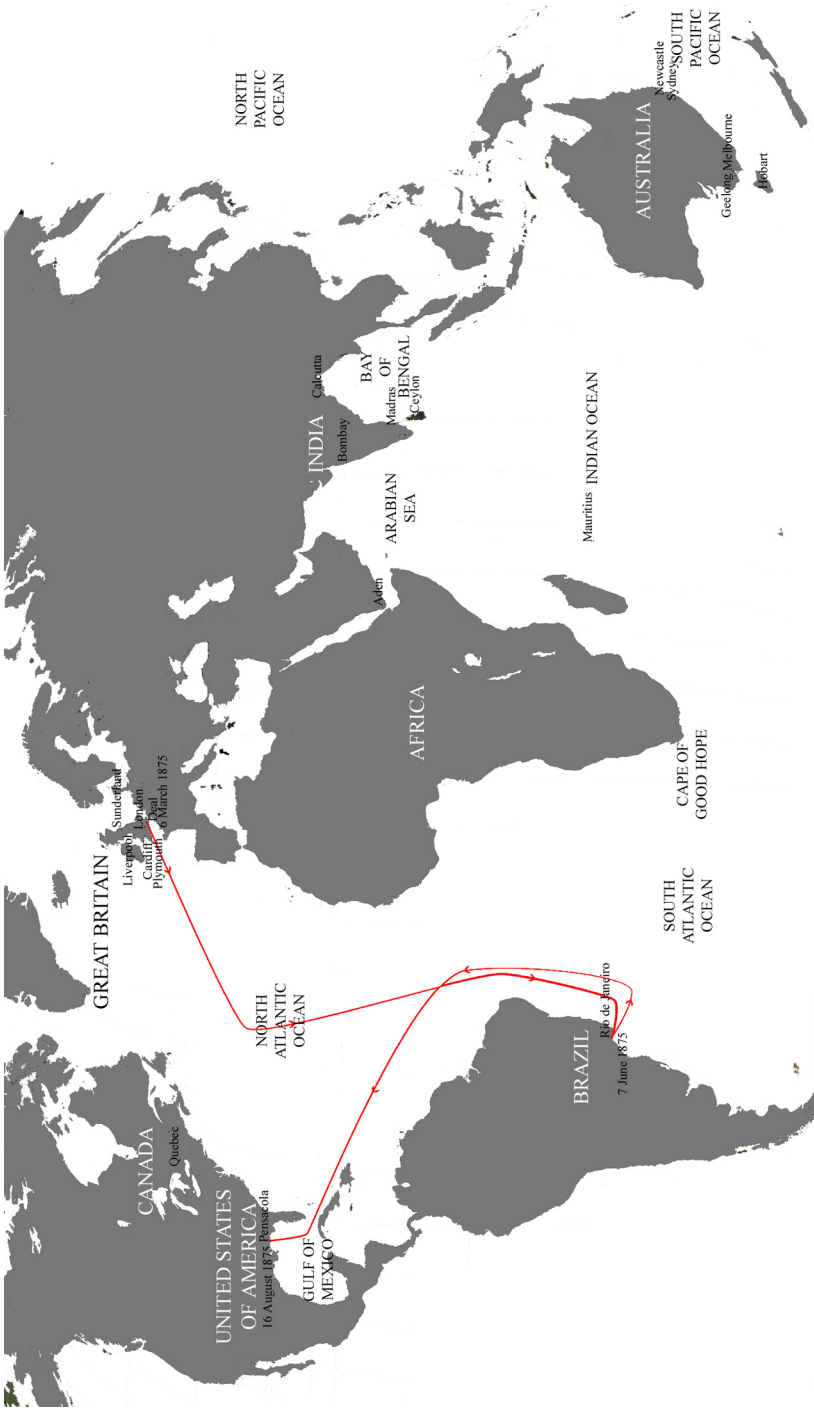


Figure 17: Map - 1875 Voyage

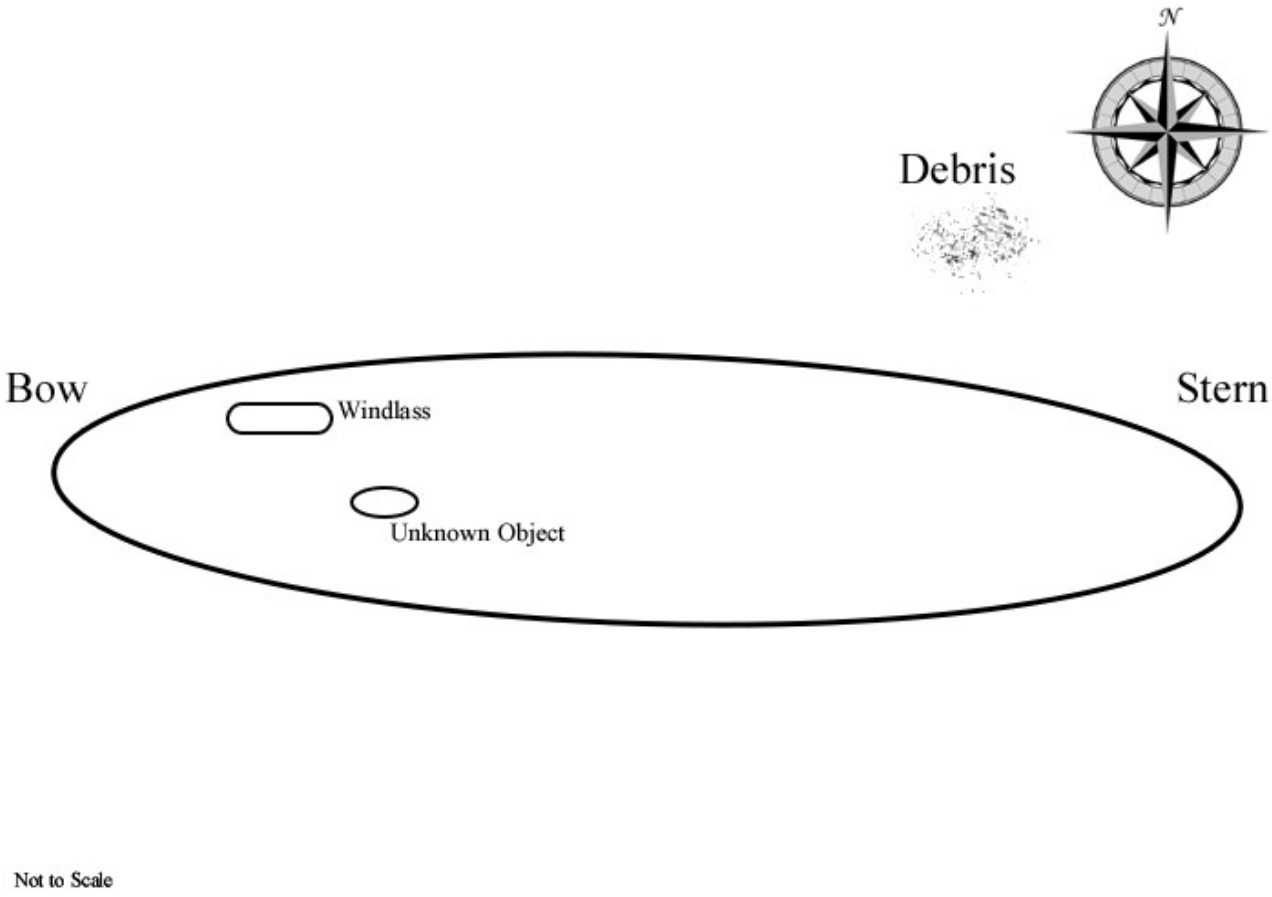


Figure 18: Site Map

Figure 19: Double Frames (Courtesy of Deep Marine Technology)

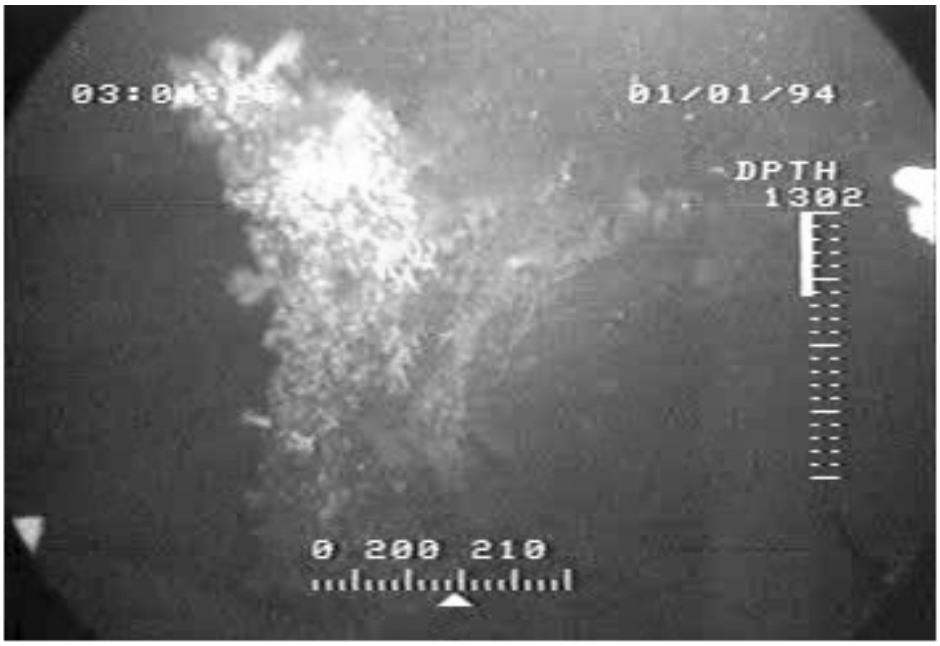


Figure 20: Sternpost (Courtesy of Deep Marine Technology)

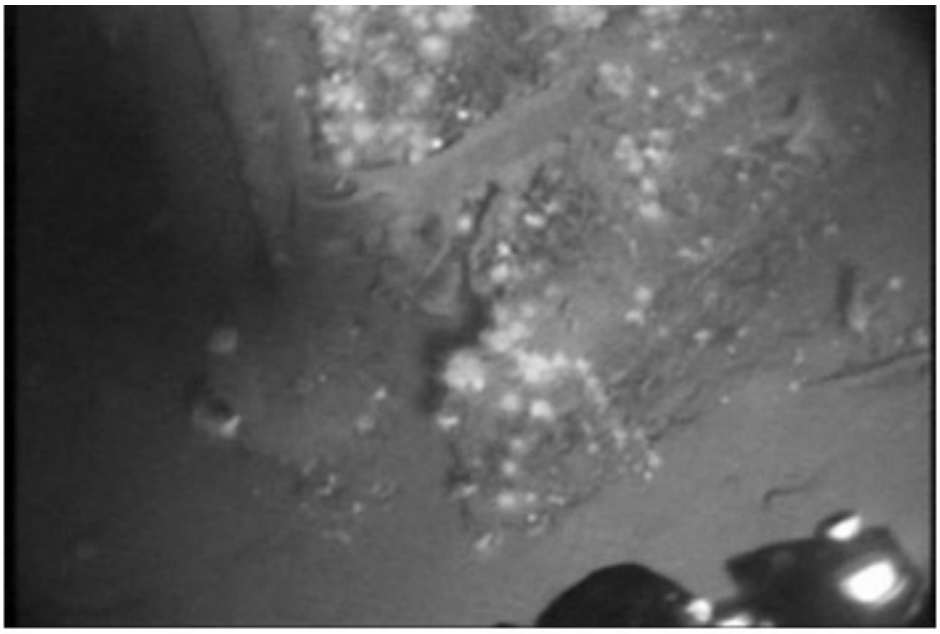


Figure 21: Gudgeon and Keel (Courtesy of Deep Marine Technology)

Figure 22: Nets Draped Over Bow (Courtesy of Deep Marine Technology)

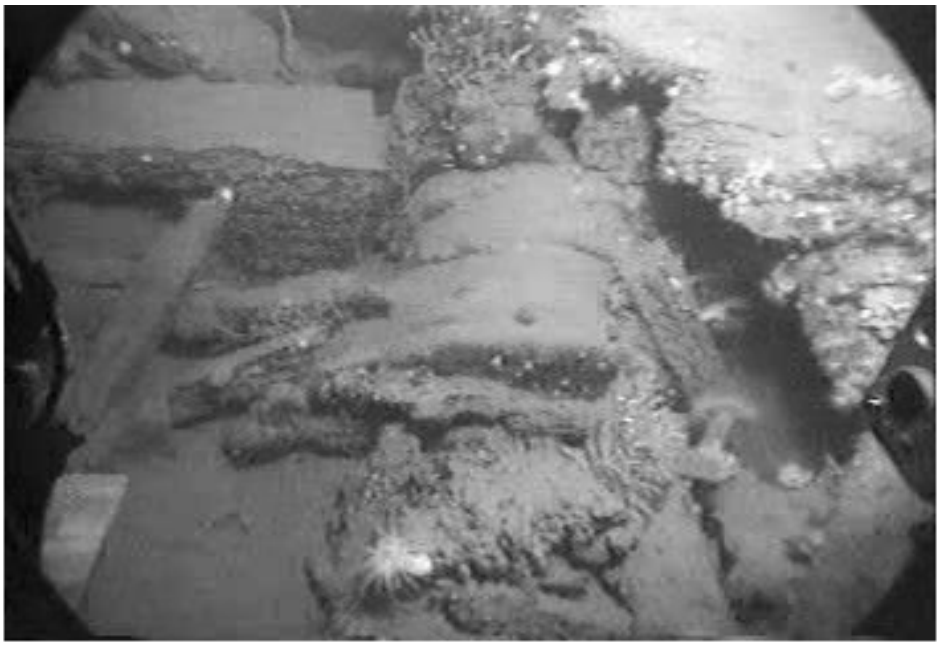


Figure 23: Windlass (Courtesy of Deep Marine Technology)

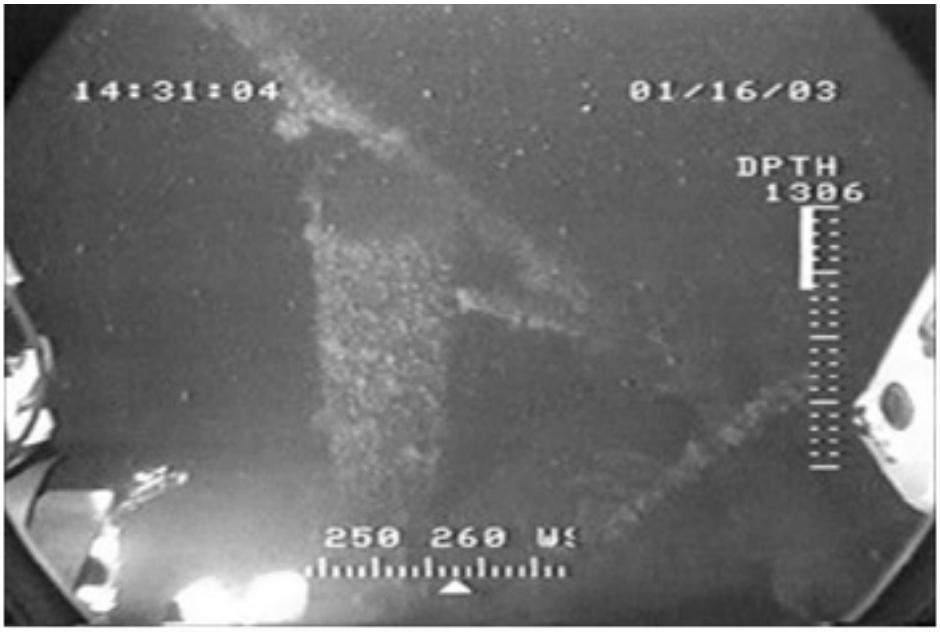


Figure 24: Unknown Object (Courtesy of Deep Marine Technology)

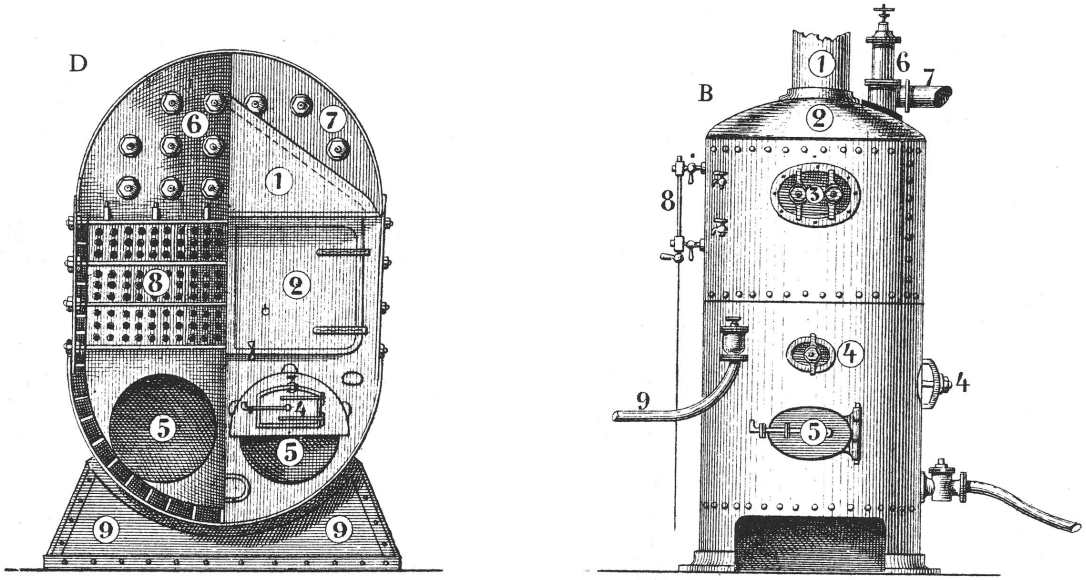


Figure 25: Donkey Boilers (Tryckare 1986:242)

APPENDIX B

TABLES

Table1. Comparison with Downeasters

SHIP	Ship Type	Tonnage	Length	Width	Depth		Length/Width	Length/Depth
Western Empire	??	1250	190.8	38.1	22.9		5.01	8.33
St.Lucie	Downeaster	1283	194.4	37.4	24		5.2	8.1
Seminole	Downeaster	1442	198.5	41.8	25		4.72	7.86
Oneida	Downeaster	1180	188	36	23		5.17	8.09
Yosemite	Downeaster	1104	183	37.2	23.5		4.92	7.79
Highlander	Downeaster	1352	190.3	38.8	24		4.9	7.83
Cutty Sark	Clipper	983	212.5	36	21		5.9	10.12

Table 2. Personal Effects of Captain Headley (deceased 1867)

Clothing:	22 pairs of drawers, 13 Serge shirts, 9 caps, 4 comforters, 13 pairs of mittens, 5 pairs of stockings, 5 crimson shirts, 13 pairs of dungaree trousers, 2 jumpers
Sundries:	One hat box with two black hats, one pith hat, two pairs of parallel rules, three small compasses, one box of linen collars, one umbrella cover
Books:	two copies of Limpeili Bar, two copies of Nautical Almanac, mercantile magazine, Gordon's Tables, Little Sanctuary, Rules of Backgammon, Student's Pocket Dictionary, Bible, church service, Dublin University magazine, arithmetic, Thomas Libbs, Glossary of Hindostanu and English, Robinson's Navigation, Reid's Law of Storms, Chromata Companion, Bridges Navigation, Kelsey's Book Refining, Dictionary of Atlantic and Indian Ocean, Ned Frack's Successful Merchant, Treatise in Rigging, two copies of London Reader, Cassel's Family Paper, Frank Farleigh, Nories Meisner, Crawle's Whist, Australian Directions, Elements of Navigation
Charts:	Irish Channel, South Atlantic, North Atlantic, Indian and Pacific Ocean, South Africa, North Sea, Coast of Brazil, Track Chart of Indian Ocean.

Table 3. Personal Effects of Edward Gomm, Ordinary Seaman (deceased 1867)

Two canvas bags.

Bag one:

Clothing:	Five Crimean shirts, one pair of dungaree trousers, one pair of duck trousers, one cloth waist coat, one buckskin jacket, one jumper, two caps, two pairs of stockings, one scarf
Sundries:	Three pieces of soap, broken comb, fishing line

Bag two:

Bedding:	One blanket, one counterpane.

Table 4. Personal Effects of Third Officer Fawley (hospitalized 1868)

All goods were contained in a single Seaman's Chest.

Clothing:	5 cloth coats, 2 cloth trousers, 3 cloth waist coats, 2 white waist coats, 3 white shirts, 2 white trousers, 6 flannel shirts, 5 singlets, 1 pair of flannel trousers, 1 pair pajamas, 5 pairs of socks and stockings, 10 linen collars, 1 cap, 6 pairs of linen cuffs, 3 pairs of shoe, 1 comforter
Sundries:	One double blanket, three pillow slips, one pillow, one tin case containing thread and other sewing materials, one looking glass, one portmanteau
Books:	One seaman's manual, several letters, two Cornhill magazines

Table 5. Personal Effects of Samuel Sweate, Cook (deceased 1868)

Two Sea Chests

Chest One:

Cloths:	Two checked shirt, one old crimson shirt, one old waistcoat, two old pair of trousers, one pair of dungaree trousers, one pair of checked trousers, one old wide whale hat, one pair of bottom cotton drawers, one apron, one old checked shirt, one pair of Gingham trousers, one old cap, one skull cap, one black necktie
Sundries:	two razors, one comb, one brush, four spoons, three pieces of soap, one small tin of soda
Bedding:	One pillow case, three pillows, one blanket
Food:	Three bottles of chutney, two demijohns of bombay mission, three bottles of curry

Chest Two:

Clothing:	One cotton coat
Sundries:	Six knives, four forks, two spoons, one packet of scented soap
Bedding:	One pillow, three blankets

Table 6. Ship's Gear

List of Ship's Gear (1867)

Rigging:	1 spare bower anchor, 2 stream anchors, 90 fathoms stream chain, 1 kedge anchor, 1 spare topmast, 1 spare lower yard, 1 spare jib boom, 1 spare flying jib boom, 3 stump topsail mounts, 1 spare topgallant yard, 3 rough spars for booms, 1 topmast, 1 lower studding sail yard, 4 topmast studding sail booms, 3 topgallant studding sail booms, 2 iron yard arms, 8 irons bands, 2 tacks, 4 sheets, 5 m. Manila, 1/11-inch hawser, 1/10-inch hawser, 1/9-inch band for hawser, 1/11-inch tow rope, 1/8-inch tow rope, 15 fathoms 5 inch bolt rope, 45 fathoms of 4.5 inch hemp, 18 fathoms 2 1/4 inch Manila, 1/4 inch cord sheet rattine, 16 fathoms 2 3/4 inch hemp, old rope, 2 cat blocks, 1 treble fish block, 1 double fish block, 7 double funchale blocks, 5 single purchase blocks, 2 top blocks, 4 7-inch single blocks, 6 6-inch single blocks, 1 6-inch double block, 2 11-inch single blocks, 8 sheet blocks, 1 double 11-inch iron block, 2 double 9 inch iron blocks, 4 jib sheet blocks, 2 lines of studding sails, holyhead blocks, 2 lower studding sail tack blocks, 2 topmast studding sail masthead blocks, 2 topmast studding sail yard arm blocks, 4 topgallant studding sail yard arm blocks, 2 bulls-eyes, bulls-eye chain hook, 1 rigging screw
Pumps, etc.:	9 capstain bars, 4 bells Houschine, 4 bells onertime, 1 spare pump, spear, 4 India rubber suckers, one entire set of pump gear, brake and handles
Paints, etc.:	5 large paint brushes, 3 small paint brushes, 1/2 skin of signal holy, 2 1/2-gallon tanks of lamp oil, 1 15-gallon tank of boiled oil, 1 15-gallon tank of oil, 3 tins of black paint, 1 tin of line paint, 1 56-pound tin of white lead, 1 5-pound tin of Bombay red, 2 10-gallon tins of saw oil, 5 25-gallon drums of fish oil, 1 5-gallon drum of boiled, 1 5-gallon drum of sperm oil, 1 1-gallon tin of turpentine, 1 28-pound tin of blue paint.
Tanks:	2 1000-gallon tanks, 4 500-gallon tanks, 6 400-gallon tanks
Misc:	4 dozen birch brooms, 13 buckets, 1 duck scrubber, 1 deep sea rod and reel, 1 long line reel, 2 life buoys, 1 cabin stove, 2 casks pitch, 1 cask of resin, 1 cask coal, 1 cask of varnish, 6 coal shovels, 6 coal baskets, 1 harpoon, 4 bundles of oakum

Table 6. Continued

Cloth:	2 painted covers for rooms, 3 bolts of number 2 canvas, 3/4 bolt of number 3 canvas, 10 bolts of number 4 canvas, 2 3/4 bolts of number 5 canvas, 13 bundles of sewing twine
Weapons:	1 gun and carriage, 6 muskets and bayonets, 6 cutlasses
Sails:	One flying jib, two inner jibs, three foreyard topmast staysails, one mizzen topmast staysail, one mizzen staysail, one main topmast staysail, one main royal staysail, one main skysail, two foresails, three fore supper topsails, one fore lower topsail, three fore topgallant sails, two fore-royals, w main sails, 2 main upper topsails, two main lower topsails, two main topgallant sails, two main royals, one main topgallant staysail, one crossjack sail, two mizzen topsails, one mizzen topgallant sail, one mizzen royal, two pankeres, one windsail, one poop awning, two fore topmast studding sails, two lower studding sails, three topgallant studding sails
Boats:	One launch with eight oars, one mast, one yard, one boom, one boat hook and a spare lug One pinnace with six oars, one mast, one gaff and one boat hook-jib One pinnace with six oars and one boat hook One gig with five oars, one boat hook and five spare oars
Stores:	2 cases preserved soup, 4 kegs of butter, 9 bags of flour, 12 casks of flour, 4 bags of rice, 6 boxes of raisins, 12 casks of peas, 4 casks of oatmeal, 1 cask of lime juice, 3 tins of mustard, 37 tins of preserved vegetables, 2 casks of preserved fruits, 2 casks of cabin bread, 1 1/2 casks of sugar, 1 cask of crew sugar, 26 bottles of pickles, 2 chests of tea, 1 cask of vinegar, 3 pounds of arrowroot, 44 tins of preserved beef, bread
Papers:	Ships Log Book, Official Log book, Ship's Register, Surveyors certificate of final survey on 22 March 1867, Liverpool Clearance, Lloyd's certificate 23 Sept 1862, health certificate from Liverpool, Letters of Instructions, Passengers Muster Book

VITA

After graduating Brandeis University in 1998 with a Bachelor of Arts degree in Psychology, Joshua Levin had an eclectic series of jobs in public relations and internet production before continuing his education at Texas A&M as a Nautical Archaeology student. Joshua's interest in archaeology began in his last two years at Brandeis while taking courses in the archaeology of Ancient Rome and Greece. After matriculating, he worked a summer in Caesarea on an underwater excavation, and this experience led him to enroll in the Nautical program four years later. While at Texas A&M, Joshua participated in both archaeological excavations and surveys in Florida, Oklahoma, Delaware, and Turkey. He received his Master of Arts degree from Texas A&M in 2006.

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