

Abstract

J. Travis Snyder. WASHINGTON, NORTH CAROLINA'S 19TH CENTURY COASTING TRADE AND THE HISTORICAL AND ARCHAEOLOGICAL INVESTIGATION OF THE SCHOONER *STAR*. (Under the Direction of Dr. Lawrence E. Babits) Department of History, May 2006.

The importance of the coasting trade's impact on the nation's antebellum economy is described. Specifically discussed is the rise of Washington, North Carolina, as an economically vital North Carolina port, and the role one vessel, the schooner *Star*, played in Washington's most profitable era, 1840-1860. The archaeological investigation of the schooner *Star* is documented, adding significant data to a small data set of 19th century North Carolina-built vessels.

WASHINGTON, NORTH CAROLINA'S 19TH CENTURY COASTING TRADE
AND THE HISTORICAL AND ARCHAEOLOGICAL
INVESTIGATION OF THE SCHOONER *STAR*

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J. Travis Snyder

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This thesis is dedicated to the memory of my father, Mark Snyder.
Dad, I take comfort in knowing that you are in everything I do.

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Introduction

This thesis examines the 19th century coasting trade by looking at the port town of Washington, North Carolina, and one vessel in particular, the schooner *Star*. The investigation is concerned with the following questions. First, what impact did the coasting trade have on the nation's antebellum economy? By narrowing the focus of this question to the port town of Washington, North Carolina, the second question emerges. What can be gleaned about Washington, North Carolina's 19th century seaborne economy by tracing one vessel's life, the schooner *Star*, and the Washington merchants that owned the vessel? Third, what can the archaeological data collected on site 0014PUR, thought to be the schooner *Star*, tell us about 19th century North Carolina-built vessels?

Chapter I chronicles the growth of America's coasting trade from 1789 to the mid 19th century. Congressional laws enacted between 1789 and 1819, and their affect on the coasting trade's growth is discussed. These laws bolstered the coasting trade, and eventually led to its preeminence in America's 19th century economy. At the center of this commerce boom were merchant capitalists. Without their investment in trade ventures, the coasting trade would have collapsed. Merchants were reliant on trustworthy vessel masters and small coasting vessels. Their vessel of choice was the schooner.

Chapter II narrows the coasting trade focus to the port town of Washington, North Carolina, and its rise in North Carolina's 19th century waterborne economy. The town's early years are discussed, but the chapter focuses on the years 1840-1860, Washington's most profitable period. Chronicling the life of one Washington merchant schooner, the *Star*, illuminates this observation. The *Star* regularly sailed from Washington between

1842 and 1860. By looking at this one vessel, continuity is established, linking several prominent Washington merchants. These merchants' enterprises are discussed and evaluated. Several connections are drawn between Washington merchants beyond purely financial interests. Several of these men were pillars of the community, and sought both economic and social advancement. Some *Star* owners maintained financially profitable enterprises; at least one lost everything.

Chapter III discusses the Civil War in North Carolina, from Hatteras' capture to Burnside's closing of the Pamlico Sound. The end of Washington's profitable 19th century waterborne economy is discussed. This chapter also investigates the *Star*'s final days by using the last official record of the vessel in the *Official Records of the Union and Confederate Navies in the War of the Rebellion*, as well as the local oral history surrounding the vessel.

Chapter IV gives an overview of archaeological investigations conducted on shipwreck site 0014PUR, a submerged vessel in the Pungo River, Hyde County, North Carolina. In 2003, students and faculty of East Carolina University's Maritime Studies Program investigated the site, locally considered to be the schooner *Star*. The 2003 investigation's research hypotheses and methodology are detailed in this chapter.

Chapter V describes the structural findings of the 2003 investigation. Structural remains of the port bow, midship, stern, and upper hull are described. The vessel was determined to be 74 ft 6 in (22.5 m) long, with a 20 ft 8 in (6.3 m) beam. Wood samples taken during the investigation along with the vessel's construction indicate a 19th century North Carolina-built vessel. Two mast steps were located, both of which fall within

range of mast step locations found on similar sized schooners investigated in North Carolina waters. Vessel 0014PUR is a two-masted schooner.

Chapter VI describes the artifactual findings of the 2003 investigation.

Artifactual remnants range from rigging elements to a partial coconut shell. Several brass roller bearings that have also been found on other mid-to late 19th century vessels investigated in North Carolina were present. This chapter cites 1847 as the earliest known date for these bearings. Bilge pump components present on site are indicative of a 19th century pump type. The artifact assemblage on site 0014PUR is indicative of a 19th century coasting vessel.

Chapter VII revisits the 2003 research design, and refutes all possible research hypotheses. The remaining hypotheses are collectively considered. It is concluded that site 0014PUR is the *Star*. Recommendations for future archaeological investigation are discussed.

This thesis closes with a collection of twelve appendices. Appendices I – VII form a database of known historical information surrounding the schooner *Star*, its owners, and its masters. Appendices VIII – XII contain additional information relevant to the archaeological investigation.

I. The 19th Century Coasting Trade

American maritime literature often overlooks the early to mid 19th century coasting trade. The topic is pedestrian in nature. Vessels engaged in the coasting trade were not romantic. The average sloop or schooner was not celebrated in news articles like the large trans-Atlantic square-riggers, and coasting vessels did not compete in highly publicized races. Instead, they went virtually unnoticed while conducting a trade without which the American economy would have crumbled.

Domestic commerce gradually became the most important economic factor in the nation's growth. From the end of the Revolutionary War until circa 1815, the new nation struggled to create a sustainable domestic commerce not reliant on European trade. Congress enacted laws that stimulated American commerce by standardizing shipping regulations, while squeezing out foreign interference. From this early legislation rose a strong and independent maritime commerce based in the foreign and coasting trades. The latter soon eclipsed the former, becoming the most important factor in the nation's seaborne economy. At the heart of coastal commerce were merchants who invested capital in coasting vessels, as well as intrepid, skillful masters who sailed these vessels in and out of Atlantic coast ports, delivering and procuring profitable cargo. The burgeoning coasting trade was conducted almost exclusively via sloops and schooners, with the schooner numbering approximately 50 percent of all merchant vessels. These small, swift vessels provided the speed necessary to maximize profitable trade, and were agile enough to navigate the East Coast's shallow inland waters. Their versatility in the

coasting trade instigated the growth of smaller inland ports, and ultimately the nation's economy.

During the colonial period, seaborne commerce prospered. However, a period of economic instability followed the American Revolution, as the war years severely interrupted shipping, and left several nations with large quantities of stockpiled goods. When this surplus moved to market, a period of overselling destabilized an American economy already wrangling with the tremendous war debt (Johnson 1922: 133-134). States adopted tariffs and duties to combat this instability, but the laws varied from state to state, making a unified solution to the economic problems impossible. The limited congressional authority under the Articles of Confederation exacerbated the problem. Commerce between 1783 and 1788 was, consequently, handicapped.

After New Hampshire ratified the Constitution in June 1788, a regulated coasting trade emerged. Congress dissolved the ineffective maritime regulations of the Articles of Confederation, prohibiting individual states to "lay any Imposts or Duties on Imports or Exports...or Duty of Tonnage" (U.S. Constitution, art. 1, sec. 10.) without congressional consent. In July 1789, Congress enacted its authority to levy and collect taxes by passing the first law directly affecting coastwise trade. Introduced by James Madison as one of two bills to raise revenue (Keiler 1913: 26), *An Act imposing Duties on Tonnage* levied six cents per ton duties on all ships or vessels built in the United States that belonged to a United States citizen. This rule extended to any vessel not built in the United States, but owned by a United States citizen on or before 29 May 1789. American vessels employed in the coasting trade were only required to pay this duty once per year. Any ship built in

the United States belonging to someone of a foreign nation, however, was imposed a thirty cents per ton duty. Vessels not covered under the above descriptions were charged the rate of fifty cents-per ton. The once per year rate did not apply to the latter two vessel types (Peters 1848, I: 27-28).

The ramifications of this act are readily apparent. While a United States owned vessel paid a single six cents per ton duty per year, its foreign counterpart was forced to pay thirty cents or higher at every port of entry. A one hundred ton ship cost an American owner six dollars annually, while his foreign counterpart paid thirty or fifty dollars each time his vessel entered a port. Congress understood that recovering pre-Revolution maritime commerce levels could only come from curtailing or eliminating foreign competition in the coasting trade.

The *Act Imposing Duties and Tonnage* was followed by a measure establishing districts and ports for regulating duty collection. *An Act to Regulate the Collection of the Duties imposed by law on the tonnage of ships or vessels, and on goods, wares and merchandise imported into the United States* divided States into districts, each of which contained designated ports of entry (Peters 1848, I: 29). The act divided the states into the following number of districts: Massachusetts, 20; Virginia, 12; Maryland, 9; Georgia, 4; Connecticut, New Jersey, and South Carolina, 3 each; New York, 2; and New Hampshire, Pennsylvania, and Delaware each constituted a single district. In 1790, additional districts were created after North Carolina and Rhode Island were admitted into the Union (Peters 1848, I: 30-35).

In September 1789, Congress passed *An Act for Registering and Clearing Vessels, Regulating the Coasting Trade, and for other purposes*, which stipulated that any ship of twenty tons burthen or greater, built in the United States and owned by a citizen, or not built in the United States but belonging to a citizen on or before May 16, 1789, could be registered for trade and “other purposes” (Peters 1848, I: 55). The masters of such vessels were required to be United States citizens. Additionally, vessels employed in the coasting trade between United States districts were to be “enrolled and licensed” for domestic trade. Vessels less than twenty tons burthen were to be “licensed” for domestic trade. Any United States vessel found trading between districts without an active license or enrollment certificate was subject to the same duties imposed on a foreign ship as set forth in the *Act Imposing Duties and Tonnage*.

Vessel registration required completing a standardized form containing the owner’s name, vessel name, vessel type, vessel size, number of decks, when and where it was built, and the name of the present master. No certificate was granted until the owner gave a sworn oath before the customs officer attesting to the accuracy of the information. Certificates were granted, however, in cases where the owner resided in another district. This required transmitting an “in lieu of” registration from the granting port to the vessel’s homeport, where the vessel would be properly registered. In order to curb illicit trade, masters of registered vessels were required to purchase bonds from the district customs collector, guaranteeing that their license would not be “sold, lent, or otherwise disposed of” (Peters 1848, I: 55-63). Selling or altering a vessel required registration or enrollment renewal. Licenses were renewed annually.

The law also contained instructions for masters of trading vessels. First, masters outbound for foreign ports were required to deliver a manifest to the collector of the district they were leaving, and await proper clearance. If the master failed to obtain clearance, he or the owner would be charged two hundred dollars per offense. Secondly, masters trading between United States districts were required to provide duplicate manifests of all items shipped if, “having on board goods, wares or merchandise of foreign growth or manufacture, or the value of two hundred dollars, or rum or other ardent spirits exceeding four hundred gallons” (Peters 1848, I: 62). They were also required to swear an oath that their cargo was in no way defrauding United States revenue. When satisfied, the collector allowed the vessel to proceed.

The *Tonnage and Duties* law was revised in 1790. Duties imposed the year prior on vessels entering from any foreign port remained. After September 1790, however, six cents per ton duty would be paid on United States vessels entering a district of one state from a district in another, “other than an adjoining state on the sea-coast, or on a navigable river, having on board goods, wares and merchandise taken in one state to be delivered in another state” (Peters 1848, I: 135-136). United States ships were still only required to pay this duty once a year. Any non-United States ship was required to pay fifty cents per ton. It was further enacted that restitution be made for United States vessels previously trading while not registered, “which from impracticality in some cases of obtaining licenses in due season, and from misapprehension in others, has operated to the prejudice of individuals; and it being proper that relief should be granted in cases

where the strict operation of new laws may have occasioned hardship and inconvenience” (Peters 1848, I: 136). This act repealed the 1789 duty and tonnage act.

In 1793, the registration and enrollment act of 1789 was completely revised, providing more explicit instructions governing enrollments and registrations. The revision stipulated that after May 1793, only vessels greater than twenty tons enrolled and licensed in accordance with the act, or vessels twenty tons or less licensed in accordance with the act, “shall be deemed ships or vessels of the United States, entitled to the privileges of ships or vessels employed in the coasting trade” (Peters 1848, I: 305). The act further stipulated that vessels could exchange enrollment for registration (for foreign trade), and vice versa, as long as the former document was surrendered. In addition to the license, vessels five tons or greater required bonding. Licenses were still active for one year as long as the vessel was owned and employed in accordance with the law, but no license remained active if the vessel was sold, altered, or used in another endeavor not covered by law. Any vessel that did not surrender its enrollment or license, and obtain a proper registration prior to a foreign voyage, was liable for seizure and forfeiture of cargo. The portion of the 1789 law pertaining to surrendering manifests by vessels carrying foreign goods remained the same (Peters 1848, I: 305-318).

By 1793, the coasting trade was firmly established under congressional maritime legislation. The shipping laws were conducive to organized growth and expansion of the coasting trade. With competition from foreign vessels virtually eliminated, the coasting trade bloomed. “Foreign commerce became active once more, and the coastwise shipping found employment in the distribution of imported wares and in the collection at

the large seaports of the commodities to be exported abroad, while the interchanges of domestic products gradually increased in volume” (Johnson 1922: 332). Between 1789-1794, recorded annual coasting trade tonnage grew from 77, 669 to 167,228. By 1800, coasting tonnage had increased to 272,492 (U.S. Bureau of Navigation 1908: 184) (Figure I-1).

Although bolstered by congressional legislation, the early post-Revolution coasting trade period experienced strains. The economic quagmire created by the French and English wars of the late 18th and early 19th centuries threatened to stall foreign merchant commerce. Hostilities to American vessels by France and England, as well as the embargo and non-intercourse acts of the Jeffersonian era, furthered the negative impact on foreign seaborne commerce (Johnson 1922: 334-335; Keiler 1913: 32-42). The decrease of imported goods slowed the coasting trade. The War of 1812 exacerbated the problem. For a period, the British blockade of the eastern seaboard and the 1813 congressional embargo closing all American ports limited seaborne commerce. The overland wagon trade established as a compensatory measure was inefficient and expensive. “It was with a feeling of great joy that the people witnessed the end of the war and the return of trade to its normal channels” (Johnson 1922: 335). The coasting trade continued to grow albeit slower than in previous years. By 1814, enrollment and licensed coasting tonnage totaled 466,159 (U.S. Bureau of Navigation 1908: 184).

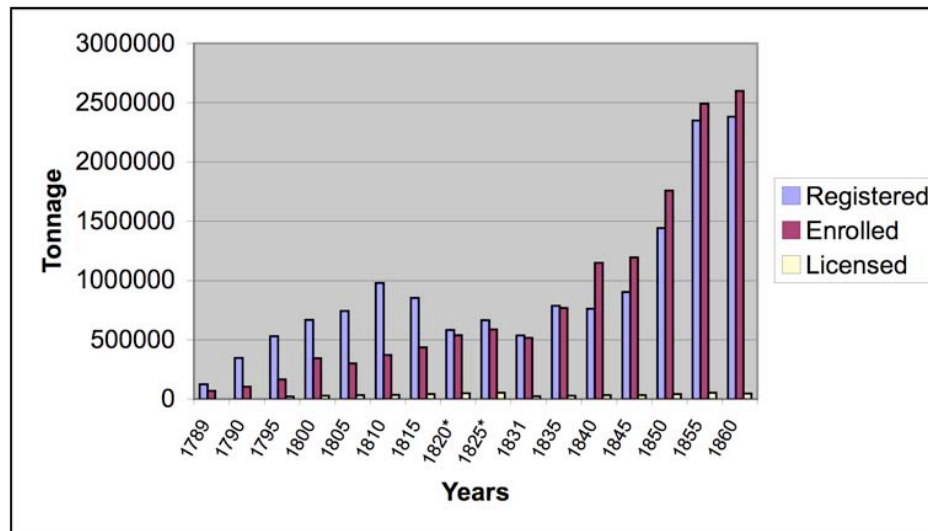


Figure I-1. Documented Tonnage of the United States Merchant Marine, 1789-1860. Data compiled from the *Annual Report of the Commissioner of Navigation* (U.S. Bureau of Navigation 1908). The compiled chart represents data from 1789, 1790, and every five years thereafter. Data from the period 1818-1829 contained flaws in the original report and should be ignored as evidence of any statistical trend.

At the end of 1814, it was apparent that creating a more economically self-sufficient nation required stronger measures. Delays in overseas shipping during the previous years had taken their toll on the American economy.

The encouragement of manufacturing industries which could consume raw materials of domestic production and supply at least a portion of the commodities for which it had been customary to rely entirely upon foreign producers, the construction of roads and canals by which internal communication could be carried on, and the building of a navy large enough, at least, to protect the coasting trade – these projects in particular appealed to political leaders as wise measures to be taken for the defense of the people, in case a conflict with a foreign power should again occur (Johnson 1922 : 335).

As greater diversification of industry became the primary focus for the United States, a policy toward self-sufficiency by developing domestic commerce and creating home-based markets for domestic products was adopted (Johnson 1922: 336). Accordingly, Congress enacted the tariff law of 1816, followed by the navigation act of 1817.

In March 1817, the Fourteenth Congress of the United States passed *An Act concerning the navigation of the United States*. This act affected both foreign and coasting trades. To the former, it banned importation of goods on vessels from other nations, unless the vessels belonged to the nation in which the cargo originated. The policy did not extend to nations that did not adopt a similar policy. The measure was undoubtedly a reach for reciprocity. All other imported goods would be carried solely by United States ships belonging to United States citizens.

And it be further enacted, That no goods, wares, or merchandise, shall be imported, under penalty of forfeiture thereof, from one port of the United States to another port of the United States, in a vessel belonging wholly or in part to a subject of any foreign power; but this clause shall not be construed to prohibit the sailing of any foreign vessel from one port to another port of the United States, provided that no goods, wares, or merchandise, other than those imported in such vessel from some foreign port, and which shall not have been unladen, shall be carried from one port or place to another in the United States (Peters 1848, III: 351).

The act further stipulated that the six cents per ton rule continued to apply to coasting vessels as long as the crew was three-fourths American citizens. Otherwise, the duty would be fifty cents per ton. Ramifications of this act on the coasting trade were significant: foreign vessels could offload their cargoes, but were officially banned from carrying American goods, produce, or previously landed wares between United States ports. “Building up of a merchant marine owned by domestic capital and manned by [American] citizens was insured” (Johnson 1922: 336).

Another law regarding the coasting trade was enacted in 1819. *An Act supplementary to the acts concerning the coasting trade* established two large districts in place of the several smaller districts created by the 1789 law. The 1819 law divided

existing shipping districts into “two great districts; the first to include all the districts on the seacoast and navigable rivers, between the eastern limits of the United States and the southern limits of Georgia, and the second, to include all the districts on the seacoast and navigable rivers between the river Perdido and the western limits of the United States” (Peters 1848, III 493-493). Trade from one customs district to another in the same great district, as well as trade from a state in one great district to an adjoining state in another great district, was subject to regulations set forth in the 1793 law. Vessels trading from a state in one great district to a non-adjoining state in another great district were subject to the 1793 regulations governing ships trading from one state to another non-adjoining state. This act applied to all enrolled ships twenty tons or greater. Vessels were free to travel within a single great district without reporting their arrival or departure as long as they did not carry any commodities enumerated in the 1793 act (Johnson 1922: 337). In 1822, newly annexed Florida was designated a third great district.

Legislation enacted between 1789 and 1819 created an effective environment for coasting trade growth while generating national revenue. Although stifled at times by global affairs, the coasting trade increased annually. During these years, annual coasting tonnage rose from 68,607 to 525,030 (U.S. Bureau of Navigation 1908:184; see Figure I-1). Burgeoning trade fueled the United States merchant commerce as well as the related naval stores and shipbuilding industries. Several acts affecting the coasting trade followed in the coming decades, but the period of 1789 to 1819 created the necessary foundation for an economically strong coasting trade.

The period of 1815-1860 has been termed *The Transportation Revolution* (Taylor 1958). The drive for national economic and political independence created industries ripe for advancement. Economic interests turned from developing foreign trade, to creating an internal trade based on American industries and agriculture. Following the depression of 1818-1819, the American people began to realize “that their paramount economical and political problems were internal and not external; that their absorbing interests were at home and not abroad” (Johnson 1922: 337). The Monroe Doctrine marked a retreat from the political problems with Europe, while westward expansion created new resources and transportation needs. “The completion of the Erie Canal, and the introduction of the steam locomotive evidenced the beginning of a determined effort to develop the resources and industries of the country” (Johnson 1922: 337).

The boom in manufacturing and agricultural development stimulated domestic commerce. The population greatly increased, as did its concentration in major cities. This was especially the case along the Atlantic coast, where the coasting trade was the primary means of commerce and communication between port cities. The value of the coasting trade during the 1820s and 1830s was greater than the value of the traffic transported via railroads, rivers, lakes, and canals (Johnson 1972: 338). In 1831, the coasting trade registered more tonnage than foreign trade, a trend that continued throughout the 19th century (Figures I-2 and I-3).¹

¹ The *Annual Report of the Commissioner of Navigation* shows that the coasting trade tonnage was greater than that of the foreign trade from 1821 onward. There was, however, a discrepancy in these records, which resulted in an errant listed decrease in foreign tonnage during the years of 1821-1829.

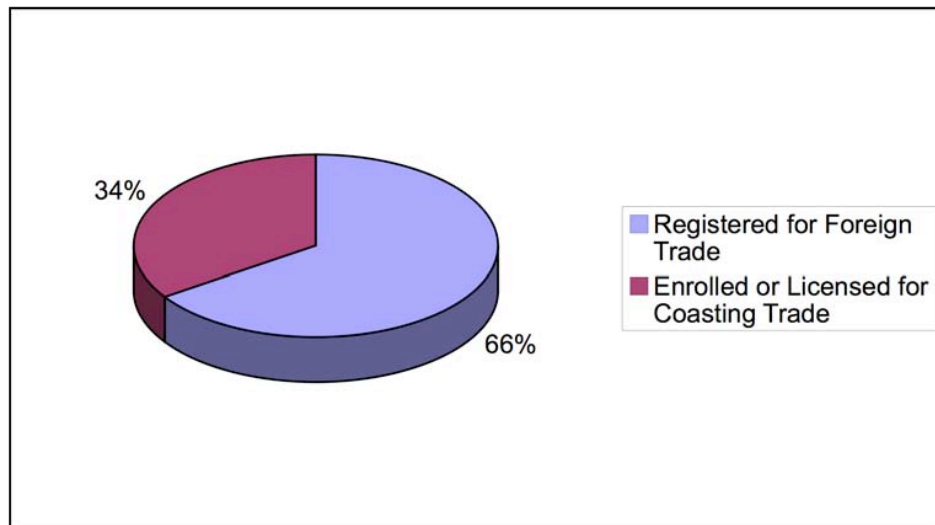


Figure I-2. Percentages of Vessels Registered for Foreign Trade and Enrolled or Licensed for Coasting Trade, 1789-1815. Compiled from *The Annual Report of the Commissioner of Navigation*, (U.S. Bureau of Navigation 1908: 184-186).

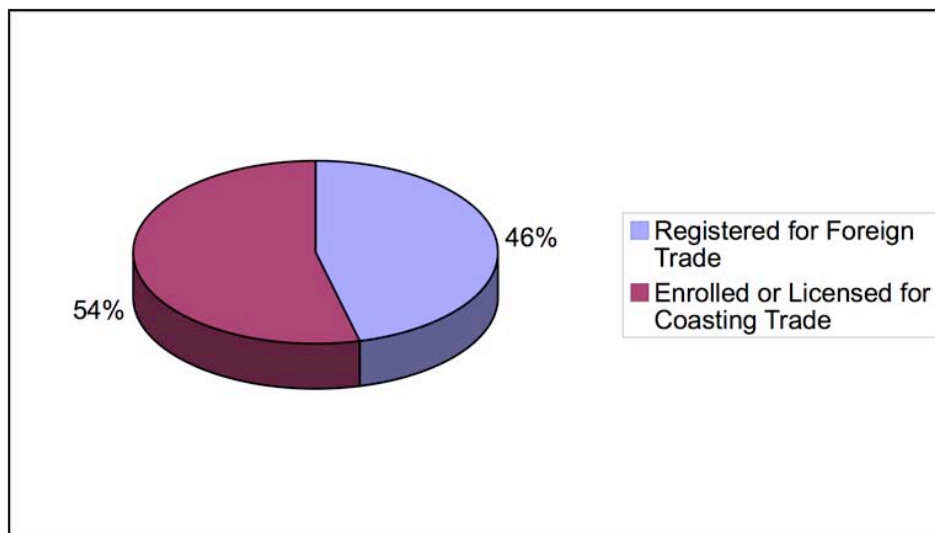


Figure I-3. Percentages of Vessels Registered for Foreign Trade and Enrolled or Licensed for Coasting Trade, 1831-1860. Compiled from *The Annual Report of the Commissioner of Navigation* (U.S. Bureau of Navigation 1908: 184-186).

By 1820, over half of the urban population was concentrated in the ports of New York, Philadelphia, Baltimore, Boston, New Orleans, and Charleston (Taylor 1958: 6). Although these were not the only commercially important cities along the Atlantic and Gulf coasts, they represented the majority of the deep-water access ports. Many smaller ports flourished within the sheltered bays and inlets along the Atlantic coast. North Carolina's rivers and sounds boasted several thriving port towns. Washington, New Bern, Beaufort, Portsmouth, and Elizabeth City all played significant roles in the Atlantic coasting trade.

The ubiquitous wharves, warehouses, and stores of port towns characterized the 19th century urban landscape. Vessels of all types and sizes loaded and offloaded cargo. "In 1815 every city seemed to face the sea, the direction from which came not only the needed products of every land but the news of distant nations and markets" (Taylor 1958: 10). The coasting trade reached from Maine to New Orleans. Cotton from the South Atlantic and Gulf states constituted the key exported raw material to northern ports. It was closely followed by tobacco, naval stores, and lumber. Sugar and molasses from Louisiana, as well as large quantities of produce from the Mississippi Valley were also shipped north. These raw materials were converted to manufactured goods, then transshipped west and abroad. Manufactured goods and merchandise constituted the majority of shipments south (Johnson 1922: 338). Coasting vessels were often registered for trade to the West Indies, where naval stores were exchanged for sugar, molasses, fruits, and spirits. Coal became a significant portion of the coasting trade following the

advent of steam power. East-coast ports were, in essence, the economic face of early 19th century America.

At the center of this seaborne commerce were the merchant capitalists. These men organized and directed United States coasting and foreign trades. Congressional laws passed in the last decade of the 18th century tipped the balance of seaborne trade in favor of American merchants. The near monopoly practically guaranteed financial returns on shipping ventures. Ship owning, however, was a significant form of capital investment, requiring a risky outlay of money. Some merchants embarked upon seaborne ventures by themselves, others took shares with several others. Robert G. Albion categorizes vessel ownership into four principal types: The first was sole ownership. The second was ownership by a small group of two to four partners. The third category was ownership by a larger group, usually consisting five or more individuals. The final category was ownership by a corporation (Albion 1941: 2).

These four categories were not, however, the only business ventures in seaborne commerce. Merchants often used a portion of ships owned by their business to transport personal items, while others used their vessels as charter and common carriers, transporting passengers or cargo of other merchants. In other cases, managers or “husbands” of vessels held joint ownership. Masters and shipbuilders were also partial or sole owners of vessels.² Joint vessel ownership crossed states lines at times. This usually occurred when merchants from different districts formed partnerships. One such example

² These various typologies can be observed by reviewing the *Certificates of Registration and Enrollment Issued for Merchant Vessels*, Bureau of Marine Inspection and Navigation, Record Group 41. National Archives, Washington, DC.

is the 26 November 1845, Washington, NC enrollment of the schooner *Delaware*, listing a joint ownership of William Bond of Washington, NC, S.L. Collins of Darien, GA, and R.M. Serville of New York, NY (U.S. Bureau of Navigation 1996D: Enrollment 22).

In most cases, merchants owned stores where they sold imported merchandise. There were, however, several other types of merchants associated with the seaborne trades. Many acted as commission merchants, selling goods from producers or other traders, while others acted as brokers. The latter had no capital investment in the merchandise, and sold only goods belonging to other merchants (Taylor 1958: 11). Merchants, especially in the smaller coastal towns, were liaisons to the outside world. Local citizens depended on regular merchandise shipments arriving by sea. Newspapers ran daily reports of arriving or clearing vessels, which were often followed by adds describing recently arrived merchandise.

The coasting trade relied heavily on masters for both their sailing expertise and proficiency in procuring cargo. Profit was the bottom line. Swift shipment of sellable cargo was paramount. Because of these necessities, and the nature of sailing with a small handful of seaman in a capricious environment, 19th century coasting masters required a skill set that far exceeded that of the common person.

There is perhaps, no profession or trade known wherein so much and so many qualifications are required from one man, as from shipmaster. He is required to be well versed in navigation, in all its branches, from plain trigonometry to great circle sailing, and from finding the latitude by a meridian altitude, to the longitude by a lunar observation. He is also supposed to be thoroughly versed in seamanship; in fact, to be able to conduct his ship to all parts of the world, and to keep clear of lee shores, rocks, shoals, and sandbanks. All this is an absolute necessary requirement; but he is also required to be able (nearly) to build the ship he commands; he must know every part of her frame is put together, from the keelson upwards, and whenever a part of her becomes affected, he must know

how and where to apply the remedy. He must be also perfectly acquainted with various trades, such as sailmakers, carpenters, coopers, blacksmiths, and sometimes cooks....and the captain is supposed (while he is afloat at least) to be able to cure any disease that may happen to come within [his] limits....The shipmaster is also supposed to be thoroughly acquainted with the maritime law. Then he is supposed to be a merchant, and is frequently entrusted with the buying and selling of ships cargoes...Notwithstanding all this, the captain must make his passage, and transact his business, in all climates and in all weather, and, I am sorry to say, very little of the credit he deserves, falls to his share (Butts 1850: vi).

Early 19th century ship owners entrusted their masters in different ways. In some cases, the master acted only as the vessel captain, and brokers arranged shipments from distant ports. In other cases, masters were extensions of the merchants, and were relied on for decisions in procuring return cargo. The master was the most common joint owner of a vessel behind that of the husband or manager (Albion 1941: 7).

Obtaining return cargo was not always an easy task, but profitable long-term ventures entailed both incoming and outgoing goods. Return cargos of ballast were economically undesirable. To avoid this, masters often sailed from port to port searching for cargos, as days and weeks passed. William Augustus Parvin recalled one such example while on a voyage aboard the North Carolina schooner *Pacific* in January 1861. After unloading a cargo of bacon and black-eyed peas at Pointe-à-Pitre, Guadeloupe, and shingles and staves at Basseterre, St. Kitts, the *Pacific* sailed to two more islands before the master found a return cargo of salt at Saint-Martin (Parvin [1907]: 2).

A master's responsibility for the vessel often went beyond sailing from one port to another. Just after taking charge of the Washington, North Carolina, schooner *Independence*, Captain William Henry von Eberstein oversaw lengthening the vessel. "I

was at the ways every day until the job was completed. I had to examine every piece of timber to see that it was according to the contract, when she was lengthened – I painted her and put her masts in and rigged her” (von Eberstein [1887]: 110). William Henry von Eberstein was only master of the *Independence* for a short time. He fell ill in New York, and was unable to sail for a few weeks. In the interest of his employer, he contracted a mate from another North Carolina schooner to sail the *Independence* back to Washington. Shortly thereafter, he received a letter from his employer relieving him of his duties (von Eberstein [1887]: 114).

Several vessel types were used in the coasting trade between 1789 and 1860, but sloops and schooners were by far the most prevalent; the schooner eclipsing even the sloop. These vessels’ fore and aft rigs consisted of lateen sails suspended by gaffs, held below with or without booms. This rig was significantly less complicated than that of square riggers (MacGregor 1997: 9). Sails could be hoisted and set quickly and easily with fewer hands. Prevailing west-east winds along the Atlantic coast were better harnessed by fore and aft vessels that could sail close-hauled to the wind. Smaller crews decreased overhead, thus increasing profit.

Sloops and schooners were also smaller than square-riggers, and constituted a smaller capital outlay. Merchants often owned several schooners or sloops at one time, and simultaneously sailed them to different ports. Single-masted sloops were usually under 100 tons burthen, and predominantly used for trade with nearby ports, whereas

two-masted schooners ranged from approximately 60 to 180 tons. These vessels were generally single decked with square sterns and simple billet heads. John Willis Griffiths described the schooner in the following:

The famous Baltimore Clipper of which so many legends have been written, the canvas of which has whitened every sea, has no longer a charm among the owners of coasting vessels; the competition in the coasting trade renders a more profitable vessel desirable, in as much as they carry a proportionately small amount of cargo, and do not sail as much faster than other vessels as would make the defect...their great draught of water shuts them off from their own coasting trade vessels drawing less water, sailing equally as fast, and carrying from 30 to 50 per cent. more in proportion to their tonnage, are much better vessels for the coasting trade (Griffiths 1850: 351).

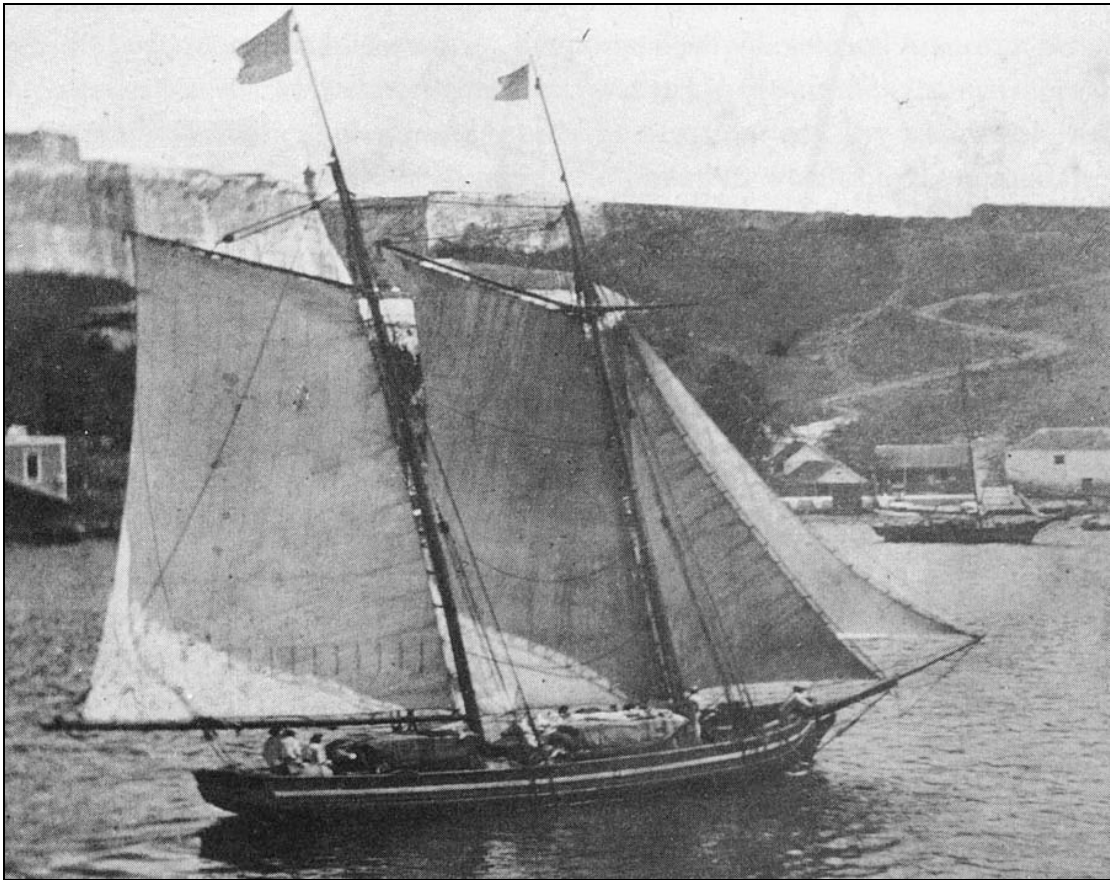


Figure I-4. Common Coasting Schooner at Havana circa 1850 (Courtesy of the National Maritime Museum, San Francisco, in MacGregor 1997: 27).

In *The History of American Sailing Ships*, Howard I. Chapelle examined factors affecting vessel typology importance. He considered the amount of cargo carried in one type compared to other vessel types, the economic importance of those cargos, and the vessel's efficiency in conducting trade. He also looked at the popularity of vessel types due to design, aesthetics, and “sentimental qualifications ” and concluded that:

The application of any of these methods of judgement to American Mercantile sailing craft causes no difficulty in arriving at a definite conclusion, however, for by any of these measuring-sticks the schooner must be accepted as the most important. Though square-riggers could usually carry more cargo than contemporary schooners, the ships have been far less numerous than the schooners from the time of the Revolution onwards (Chappelle 1935: 219).

It is not surprising that schooners were the most numerous 19th century American sailing vessels, constituting 49 percent of all vessels built in the United States between 1789 and 1860 (Figures I-5 and I-6).

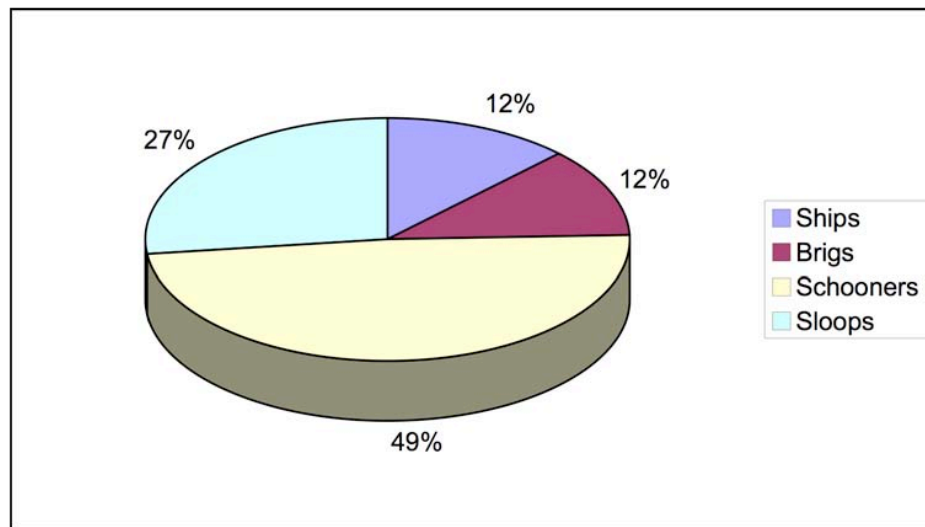


Figure I-5. Percentage of Vessel Types Built in the United States, 1789-1860. Compiled from the *Annual Report of the Commissioner of Navigation* (U.S. Bureau of Navigation 1908: 192-194).

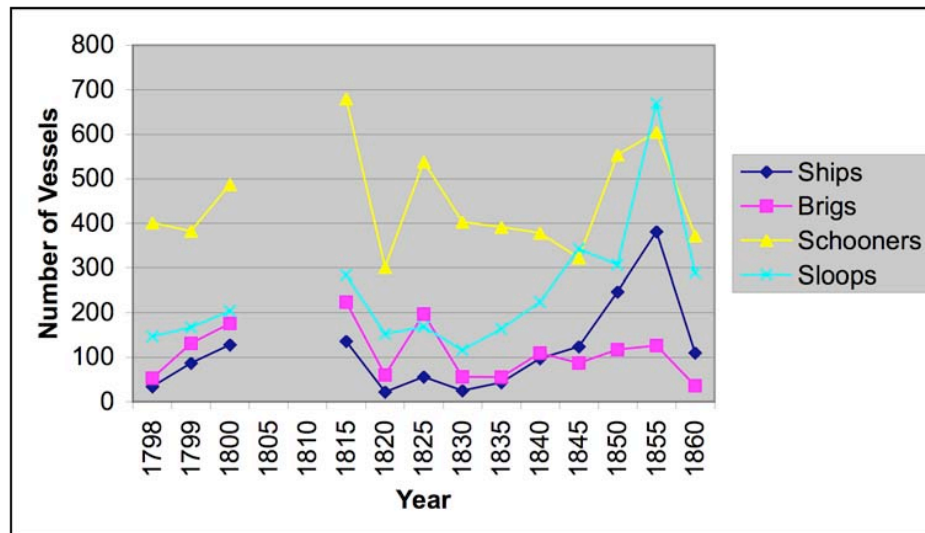


Figure I-6. Class and Number of Documented Vessels Built in the United States, 1789-1860. Compiled from the *Annual Report of the Commissioner of Navigation* (U.S. Bureau of Navigation 1908: 192-194). The blank area between 1801-1812 is due to missing data for these years.

Maritime commerce was the most important factor in the early 19th century economy. Following a phase of discontinuity and instability under the Articles of Confederation, maritime commerce flourished via congressional legislation empowered by the Constitution. Between 1789 and 1817, congress passed several acts that generated federal revenue and protected America's merchant marine markets. The coasting trade grew from this, and ultimately eclipsed the foreign trade in its level of economic importance.

The nation experienced tremendous growth between 1815 and 1860, and the coasting trade lay at the center. Although pedestrian, the coasting trade was the lifeblood of the American economy. It was the primary means of commerce and communication between the burgeoning port city populations. This trade depended on financial

speculation by merchants who provided the capital outlay for ships and cargo. These merchants depended on skilled masters to carry their investments from port to port. Some entrusted masters to procure profitable return cargo from distant ports. This whole industry depended on its shipping vessels. The schooner was the most common of all vessels in the coasting trade, followed by the sloop. These workaday vessels carried the 19th century economy in their holds.

II. Washington's 19th Century Maritime Trade and the Schooner *Star*

As seen in Chapter I, the flourishing 19th century coasting trade was reliant on merchant speculation, trustworthy masters, and swift vessels, especially the schooner. This trade instigated national economic growth as well as the growth of Atlantic coast cities and towns. The importance of the coasting trade is perhaps no better illuminated than by looking at the development of a small North Carolina port town. The emergence of Washington, North Carolina, as a viable port is a significant aspect of the state's history. Washington's development rested on the coasting trade, its merchants, and the vessels they used. The following pages chronicle Washington's 19th century development, and examine the continuity a single vessel created between several of the town's prominent merchants.

In 1771, James Bonner petitioned the North Carolina colonial government for permission to erect a town along the north bank of the Pamlico River (Saunders 1890: 152). Bonner had inherited the site known as Pea Town years earlier (Paschal 1976: 2). Bonner recognized the strategic importance of establishing a weigh point between the Pamlico's navigable waters and the sinuous, snag-filled Tar River. Bonner's petition was granted, and in 1776, Washington, North Carolina, was established at the head of the Pamlico River (Saunders 1890: 153; Paschal 1976: 2). The town was ideally located. Farmers from as far inland as Tarboro shipped their goods down the Tar to Washington, where they were loaded onto oceangoing vessels. By 1776, the town contained sixty lots, a common area, and a church site (Paschal 1976: 2); and by 1783, the Southern Post Road

connecting Edenton and New Bern was diverted from Bath to Washington (Shoepf 1911: 126; Paschal 1976: 2-3). That same year, traveler Johan David Schoepf wrote,

Washington on the Tar River, a new-settled little place of perhaps 30 houses....The trade of Washington is yet trifling; the chief occupation is the building of small ships and vessels....Here as well as in most of the small towns of North and South Carolina and Georgia, which are unable to carry on a large trade of their own, the greater part of their produce is taken out by the New Englanders who (like the Hollanders in Europe), have begun to be the middleman and freight-carriers of America (Schoepf 1911: 125).

Shoepf's description of Washington is probably accurate. He visited the town during the dead of winter, and missed the deluge of inland crops during the spring and summer months. He continued:

They [New Englanders]generally come to these southern parts in the autum, in small schooners and shalops, spend the winter either at one place or at several, bring with them cider, cheese, apples, gingerbread, rum, sugar, iron-ware, and trinkets which they exchange in small trade for pelts, pitch, tar, and the like, returning in the spring....their somewhat more vigorous traffick, as it appears, with the inhabitants of North Carolina, besides being due to the profits and advantages on both sides, may be explicable further because of very many New England emigrants having settled in North Carolina (Shoepf 1911: 125).

Shoepf's observation of the North Carolina-New England connection is interesting, as over the next 60 years, several prominent merchants would emigrate from northern cities.

Washington's waterborne commerce developed quickly during the 1780s and 1790s. Several warehouses and wharves were constructed, and local merchants began to sail their own vessels. "[L]arge flats and scows came from upstream on the Tar loaded with tobacco, tar, pitch, turpentine, corn and other commodities...[and] anchored in the stream were larger sailing vessels that brought in manufactured goods and that would carry out the locally produced goods" (Still 1981: 28 -29). Inhabitants in nearby New

Washington's waterborne commerce continued to blossom in the first half of the 19th century. The town's burgeoning population moved up the many small waterways, and settled large tracts of farmland. Washington merchants seized on raw materials arriving from points inland. Their speculation in the coasting trade boosted local commerce, and ignited the town's development. Lucy Wheelock Warren Myers reflects,

Some of my most vivid recollections have to do with the water traffic, both on the upper and lower rivers and at sea. In fact, in the early days, water communication was the principal way of keeping in touch with the outside world....great quantities of products from the rich counties of Pitt, Edgecombe and Nash were freighted down on flatboats consigned to middlemen here, called commission merchants, to be shipped away on seagoing vessels.....The flatboats brought a very important part of the trade to town. These boats were propelled by negroes who walked along a plank footway along the side of the boat...they chanted a most peculiar mournful song....[The] merchants found this business very lucrative, and were among the wealthiest and most prominent men of the town. Among them I recall Mr. B.F. Havens, Mr. W.A. Willard, Mr. S.R. Fowle, Mr. G.H. Brown, and Mr. John Myers....many of them, owned large seagoing sailing vessels- two and three vessels each which traded along the east coast northward to Baltimore, Philadelphia, New York and Boston, and southward to the West Indies (Myers [1937]: 34-35).

Congressman Lindsay Warren fondly recalled a lively waterfront town reliant on its seaborne economy and culturally and politically active:

For 40 years before the War between the States, Washington was a pleasure-loving but ambitious community. It was a port of no small repute.... Commerce teemed in the harbor and the docks were a busy scene. It was a day of large plantations, high living, fast horses, hard drinking, and political strife.... The social reputation of the community was widely known. The people were hospitable to their hurt, and entertained lavishly. The slaves did the work. But withal, there was a culture and refinement in the homes (Warren 1930: 3).

Congressman Warren and Mrs. Myers' sentiments were echoed by John Fowle's recounting of the anticipated arrivals of Washington's merchant schooner fleet.

When a ship would arrive in port it was a signal for most of the Town people to rush down to watch the unloading....Ships from the West Indies were loaded with

tropical fruits, molasses and sugar, usually a supply of sugar came for the children, and an occasional monkey or parrot for sale....Ships from the north usually [meant] a supply of new clothing and furniture. The ship capts. were really shopping agents for the town, as a great many house wives did, as my grandmother, giving the Capts. a long list of articles to purchase for them (Fowle [N.D.]:7)

These graphic recollections confirm that Washington's antebellum waterborne commerce was indeed the town's lifeblood.

Washington's most significant commercial growth occurred between 1840 and 1860. Even with an economic downturn following the Panic of 1857, annual vessel enrollments doubled from the previous two decades, averaging 28 annually between 1840 and 1860 (Figure II-2). The average enrollment tonnage grew to 1,963 tons annually (U.S. Bureau of Navigation 1996D). These numbers reflect only those vessels based in Washington. They do not account for vessels entering the port from other districts. The addition of the latter undoubtedly furthered the town's economic vitality.

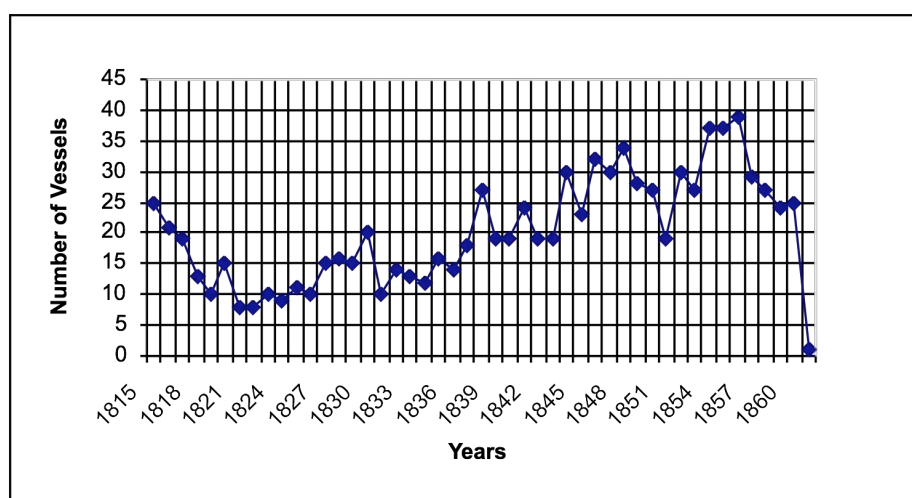


Figure II-2. Number of Vessels Enrolled in Washington, NC. 1815-1860. Compiled from the United States Bureau of Marine Inspection and Navigation, *Certificates of Enrollment issued at Washington, North Carolina*.

The substantial increase in vessel numbers required a competent shipbuilding industry. By the mid 19th century, shipbuilding and ship repairing facilities constituted a large portion of Washington's economic structure.¹ Between 1797 and 1839, 40 vessels were constructed in Beaufort County, and 66 in neighboring Hyde County. Between 1840 and 1860, 44 vessels were built in Beaufort County and 17 in Hyde County (Stephenson and Still 1993).² The 1840-1860 increase in Beaufort-built vessels and the concurrent decrease in Hyde-built vessels illuminate Washington's strengthening shipbuilding industry. It is not surprising that in 1850, the *Seventh United States Census* listed 24 ship carpenters, 2 block makers, 3 sail makers, and 2 caulkers (U.S. Census 1850, Beaufort County). Of the 61 vessels constructed in Beaufort and Hyde counties between 1840 and 1860, 55 were schooners. The average tonnage of these vessels was 70 tons burthen.

In 1842, one schooner departed Washington on its maiden voyage. No fanfare accompanied the occasion. Several years later, the local paper would praise the state of local vessel construction while denouncing the purchase of non-local built vessels (*North State Whig* XI (13), 9 February 1853). On this day, however, the only observation of the *Star's* departure was the following marine announcement dated 26 October: "Cleared 20 [October]. Schr. Star, Williams, New York, by Jno. Tyler" (*Washington Whig* VII (407)). Two weeks later, an equally laconic snippet announced its return: "Arrived 6

¹ To properly examine the extent of this industry, vessels built in Hyde County are considered along with the vessels built in Beaufort County (Washington). The reason for this inclusion is that many vessels built in Hyde County appear in the Washington Enrollments Records, as many Washington merchants purchased Hyde-built vessels.

² Vessel numbers are representative of those vessels larger than 20 tons burthen. Vessels falling below this size were often used locally, and rarely left the district. They were not required to enroll.

[November]. Schr. Star, Williams, New York, to Jno. Tyler” (*Washington Whig* VII (409)).³

The *Star*’s original enrollment certificate describes a one deck schooner with two masts, a square stern, and billet head. The vessel was built in Hyde County in 1842, and measured 63 ft 4 in (19.3 m) long, 20 ft 5in (6.2 m) in breadth, and had a 6 ft 6 in (2m) depth of hold. The vessel was 70 and 63/95 tons burthen (U.S. Bureau of Navigation 1996D: Enrollment 17, 17 October 1842).⁴ No builder was listed in the original enrollment. This missing information was common among local vessels from the same time period. No builder names are shown on Hyde County-built vessels between 1830 and 1860; instead, the enrollments stated the following: “Master Builder certificate on file in this office” (U.S. Bureau of Navigation 1996D). The Master Builder certificates have since been lost.

An attempt to identify the *Star*’s builder did not produce any definitive evidence, but several possibilities were discovered. Specific occupations are not listed in the 1840 Census; instead, they are broken into seven broad fields. Of these, two address maritime occupations: “Navigation of the Ocean” and “Navigation of Canals, Lakes, and Rivers” (U.S. Census 1840). The lack of specific occupational information limits the 1840 census’ usefulness for identifying Hyde County builders. The 1850 census lists specific occupations, but only one Hyde County ship builder is mentioned, 53 year old Richard Midyett of Chichomacomico Banks (U.S. Census 1850, Hyde County: 364). No other

³ See Appendix B for all extant *Star* marine announcements in the *Washington Whig* and *North State Whig*.

⁴ See Appendix A for complete list of the *Star*’s enrollment and registers.

reference to this builder has been found, and it is unknown how many or what type of vessels he constructed.

There are a few other possible builders. The *Hyde County Apprentice Papers 1771-1845*, list six orphan or minor children entering into “Shipwright” or “Ship Carpenter” apprenticeships between 1830 and 1853 (Leary 1991A and B XII (1 and 2); Leary 1992 XIII (1)). In February 1830, two minors were bound to ship carpenter Shadrack Ball (Leary 1991A XII (1): 15). Two years later, the boys’ father petitioned the court to rescind apprenticeships of both children “because from what he has seen and heard he believes his children are cruelly and inhumanly treated – that they are violently beaten and they are badly clothed and not kept at their trade of ship carpenter but engaged in other occupations” (Leary 1991A XII (1): 17). Shadrack Ball retorted that the boys “have never been beaten or ill treated and that he feeds and clothes the children and that they are not yet of sufficient age to put to hard labor in the ship yard to learn their trade” (Leary 1991A XII (1): 17). Shadrack Ball does not appear in any other Hyde or Beaufort county records. Whether he was still building vessels, or even in the area when the *Star* was constructed is unknown.

On 27 May 1840, Kennekeet Banks resident Christopher C. Flowers took Francis Fulcher into a ship carpenter apprenticeship (Leary 1991A XII (1): 21). The 1850 Census lists Christopher C. Flowers as a 46 year old mechanic, with seventeen year old Francis Fulcher living in his household (U.S. Census 1850, Hyde County: 388B). The designation “Mechanic” suggests that Flowers dabbled in trades other than ship building, but does not exclude the possibility that he was still building vessels in 1850.

ENROLLMENT.

PERMANENT.

thirty Enrollment, in conformity to an Act of the Congress of the United States of America, entitled "An Act for Enrolling and Licensing Ships or Vessels to be employed in the Coasting Trade and Fisheries, and for regulating the same." *David Carter* of the town of *Washington*, County of *Wassaw*

State of North Carolina, having taken or subscribed the oath required by the said Act, and having sworn that:

He is a

Ally COLLECTOR citizen of the United States, and sole owner, of the Ship or Vessel called the *Star* of *Washington N.C.* whereof *James Farrow* is at present Master, and, as he hath sworn, is a citizen of the United States, and that the said Ship or Vessel was built at *Hyam County* State of *North Carolina* in the year one thousand eight hundred and *forty two* as per

as appears by his Enrollment No. 7
given on the 15th April 1844

And this Enrollment

having certified

that the said Ship or Vessel has *one* deck and *two* masts, and that her length is *thirty three feet* inches her breadth *twenty feet* inches her depth *four feet* inches and that she measures *seventy* tons,

that she is a square-sterned *Schooner* has no galleries and *a* *killer* head

And that the said *David Carter* having agreed to the description and admeasurement above specified, and sufficient security having been given according to the said Act, the said *Schooner* has been duly enrolled at the Port of Washington

GIVEN under my Hand and Seal, at the Port of Washington, N. C.,
this *eight* day of *December* in the
year one thousand eight hundred and *sixty eight*

Figure II-3. Typical *Star* Enrollment (U.S. Bureau of Navigation 1996D: Enrollment 30, 8 December 1848).

Two names that appear several times in the *Apprentice Papers* are Abraham Farrow and Tilman Farrow. In 1837, Abraham Farrow took Hathaway Bradley as an apprentice (Leary 1991A XII (1): 19). He also took on Tilman Williams in 1852 (Leary 1991B XII (2): 41). Tilman Farrow started six year old Joseph Neal as an apprentice in 1831 (Leary 1991A XII (1): 16), and assumed supervision of Abraham's apprentice, Tilman Williams in 1853 (Leary 1992 XII (3): 39). The reason for William's transfer to Tilman Farrow is unclear. In fact, the connection between Abraham and Tilman is unclear. No documents regarding Abraham have been found. The two might have been brothers or father and son. The 1840 Hyde County Census lists a male between the ages of 15 and 20 residing in Tilman Farrow's household (U.S Census 1840, Hyde County: 90). The 1850 Census lists Tilman Farrow as a 51 year old seaman in Hyde County's Ocracoke District, but lists no other males over age 16 (U.S. Census 1850, Hyde County: 403A). Whoever the young male listed in 1840 was, he was no longer present in 1850. This young man might have been Abraham Farrow. In 1837, Abraham's apprentice Joseph Neal was 22 years old and probably near the end of his apprenticeship. If Abraham was Tilman's son or brother, and the two operated a joint business, then Hathaway's apprenticeship would have started just after Joseph Neal's ended.

In 1839, Tilman Farrow and James Farrow enrolled the newly constructed schooner *Emeline* (U.S. Bureau of Navigation 1996D: Enrollment 17, 28 October 1839). James was listed as the vessel's master. The vessel was undoubtedly built by Tilman, as it bore the name of his eldest daughter (U.S. Census 1850, Hyde County: 403A). The vessel was sold three months later (U.S. Bureau of Navigation 1996D: Enrollment 1,

January 9, 1840). A noteworthy point to consider is the name James Farrow. James was listed as a partial owner, as well as the master. James might have been Tilman's son, the unnamed young male in the 1840 census. Although the Farrow connections are muddled, it is clear is that Tilman Farrow was building vessels in Hyde County between 1831 and 1853, and could have built the *Star*.

Another builder possibility is Oliver O'Neal. The 1850 census lists O'Neal as a 47 year old seaman residing in the Mattamuskeet district (U.S. Census 1850, Hyde County: 364). The reason for his inclusion as a possible builder is that O'Neal enrolled four new vessels between 1830 and 1840 (U.S. Bureau of Navigation 1996A). The fact that these vessels were all new suggests that O'Neal might have built them for his own use.

Whoever built the *Star*, he built a vessel that doubled the shipping capacity of its original owners, John and James H. Tyler. The 1840 Beaufort county census lists neither John nor James H. Tyler (U.S. Census 1840, Beaufort County). The 1850 census, however, lists John Tyler as a 60 year old Washington merchant from Virginia, and James H. Tyler as a 29 year old merchant (U.S. Census 1850, Beaufort County: 336). James H. Tyler would have been 21 when the *Star* was purchased, and it is reasonable to assume that the vessel's addition coincided with James H. Tyler's inclusion into the shipping firm. On 25 May 1842, James H. Tyler shipped aboard the schooner *Anaconda* bound for New York, and arrived back in Washington two weeks later (*Washington Whig* VII (388 and 390)). The trip was most likely an introductory affair between James H. and the merchants John Tyler regularly conducted business with. Prior to 1842, John

Tyler ran only one vessel, the *Anaconda*, and James H. was not listed on any enrollments (U.S. Bureau of Navigation 1996D). After 1842, the two were jointly listed on several vessels.

The *Anaconda* was built in 1839 by Washington's Paul Cornell. The vessel measured 61 ft 10 in (18.8 m) long, 18 ft 5 in (5.5 m) in breadth, and had a 6 ft 5 in (1.9 m) depth of hold. The *Anaconda* was rated at 63 and 33/95 tons (U.S. Bureau of Navigation 1996D: Enrollment 1, 10 January 1839). The *Anaconda's* dimensions are close to the *Star's*. This dimensional similarity is interesting. In 1842, John Tyler could have purchased a vessel of almost any size, but settled on one almost identical to the vessel he already owned. It is possible that the builder used the *Anaconda's* dimensions as a reference.

Little is known about John and James H. Tyler beyond what is listed in the Washington newspapers or vessel enrollment records. Neither appear in the Port of Washington Marine Announcements prior to 1839. Prior to 1842, John Tyler used the *Anaconda* to ship naval stores to New York, and bring back merchandise and ballast (*Washington Whig* VI-VII, 1840-1842). This New York trade continued after the *Star's* addition.

Between 1842 and 1848, the *Anaconda* and the *Star* regularly departed with naval stores and returned with either merchandise or were in ballast (*Washington Whig* VI-VII and *North State Whig* I-V). Jacob G. Williams was the only master listed on the *Star's* enrolments from 1842-1844; between 1845 and 1848, the *North State Whig* listed three additional masters: Robbins, Gautier, and Rogers (*North State Whig* II (48), III (21), IV

(46), V (31 and 41)). The Tylers regularly employed two of the three over the next several years. James S. Robbins mastered the schooners *Deborah*, *Frances*, *Pathfinder*, and *Secretary Marcy*; Benjamin Gautier mastered the *Secretary Marcy* (U.S. Bureau of Navigation 1996D). The third, Rogers, is a mystery. Jacob G. Williams' appointment as the *Star's* first master is an interesting observation about the Tylers' employees. Williams had been master of the *Anaconda* preceding the *Star's* arrival. Instead of placing a new master on their new vessel, they decided to use one who had proven his abilities and worth.

The Tylers registered the *Star* on two occasions, 31 January 1843 and 27 January 1844 (U.S. Bureau of Navigation 1996E: Registers 3 and 4 of the respective years). These months are missing from the Washington papers, leaving the *Star's* trade destinations indeterminable. The most likely destination was the West Indies, as Washington merchants often sailed vessels to the West Indies during the winter months.⁵

The Tylers sold the *Star* to David Carter in 1848 (U.S. Bureau of Navigation 1996D: Enrollment 30, 8 December 1848). The reason for the sale is unknown, but a likely explanation is that the firm's addition of the 113 ton schooner *Deborah* in 1846 made the *Star* redundant (U.S. Bureau of Navigation 1996D: Enrollment 12, 19 May 1846). The *Deborah's* size enabled the firm to ship larger quantities in fewer trips. John Tyler also enrolled the 68 ton *Frances* in 1847 (U.S. Bureau of Navigation 1996D:

⁵ Extant Washington papers for the December, January, and February months cite several vessels clearing and arriving from the West Indies. William Augustus Parvin describes one such January journey to the West Indies aboard the Washington schooner *Pacific* in 1861 (Parvin [1907]: 1-3).

Enrollment 1, 2 January 1847). It is possible that adding the *Deborah* and *Frances* in such a short time created financial strain, and the *Star* was subsequently liquidated.

No new vessel enrollments for the *Anaconda* appear after 1847, but *North State Whig* marine entries announced the vessel's arrival and departures until 1849, when the "Anaconda...ran back after getting as far on her passage North as the Capes of Virginia, in running back was run into and damaged considerably" (*North State Whig* VII (32), 21 March 1849). This is the last reference to the *Anaconda*.

In January 1849, John and James H. Tyler maintained three vessels with a combined capacity of 245 tons. This number decreased, of course, after the loss of the *Anaconda*, but even excluding the *Anaconda*'s capacity, the firm maintained three times the shipping tonnage they had prior to purchasing the *Star*. Over the next eight years, John and James H. Tyler co-owned four additional vessels, two of which were the three-masted 154 ton *Secretary Marcy* and 328 ton *Pathfinder* (U.S. Bureau of Navigation 1996D).⁶ John Tyler also owned the schooners *Edward J. Rudderow* and *Sarah*.

1848-1850

David Carter was the *Star*'s sole owner for only four months. The vessel was jointly enrolled in April 1849 by David Carter and Sylvester Brown (U.S. Bureau of Navigation 1996D: Enrollment 9, 4 April 1849). David Carter is an enigma. He was listed as a Washington resident in the 1848 enrollment, but does not appear in Beaufort County census records. There are two possible identities. One is 50 year old Hyde

⁶ See Appendix C for a list of all the vessels owned by the *Star*'s owners.

County farmer, David Carter (U.S. Census 1850, Hyde County: 4). The other is a young Washington attorney David M. Carter, one of the seven members of the politically active Washington Bar which “for 125 years...has been without a superior” (Warren 1930: 4). Ownership in coasting vessels was probably a lucrative investment for financially able persons, and not beyond a prominent attorney’s means. On the other hand, David Carter of Hyde County was also of substantial means, claiming \$30,000 in real estate value, 32 slaves, and a substantial portion of land in the Mattamuskeet District (U.S. Census 1850, Hyde County).

The *Star*’s owner was most likely the elder Carter. A 19th century farmer needed to maintain vessels for transporting his crops to market. David Carter owned seven vessels between 1845 and 1857, three of which were dimensioned for trade through the Dismal Swamp Canal. Canal vessels were less than 17.5 ft (5.3 m) wide, and had drafts of less than 5 ft (1.5 m) (Turner 1999: 32). This suggests that he maintained trade relations with Norfolk merchants as well as Washington merchants. Carter’s canal vessels were obviously purpose built as they were constructed at either end of the canal: two in Norfolk and one in Camden County (Appendix C).

Although David Carter only owned the *Star* for a short period of time, several connections between him and local merchants are evident. For instance, the joint ownership between David Carter and Sylvester Brown is not the only connection Carter has to the Brown family. In 1850, ownership of the schooner *Frances Anne* changed hands from David Carter to George H. and Parson W. Brown, Sylvester Brown’s sons (U.S. Bureau of Navigation 1996D: Enrollment 23, 4 September 1850; Mayo 1903: 50).

In 1857, Carter changed the schooner *Orapeake's* enrollment paper to include Tilman Farrow as half owner (U.S. Bureau of Navigation 1996D: Enrollment 27, 19 December 1857).

David Carter also had financial ties with Washington steam miller Benjamin F. Hanks. In 1852, Carter purchased the schooner *Dolphin* from Hanks (U.S. Bureau of Navigation 1996D: Enrollment 6, 3 August 1852), and sold Hanks the schooner *Nags Head* (U.S. Bureau of Navigation 1996D: Enrollment 17, 9 August 1852). Carter also sold the schooner *L.G. Dobbin* to Hanks in 1854 (U.S. Bureau of Navigation 1996D: Enrollment 19, 24 June 1854). In 1851, Benjamin F. Hanks enrolled the schooner *David Carter* (U.S. Bureau of Navigation 1996D: Enrollment 17, 6 September 1851). David Carter sold the *Star* in July 1850.

1850-1853

Over the next several years, the *Star* was owned in one form or another by the Brown family. Sylvester Brown, and his sons George H. and Parson W., arrived in Washington from Connecticut sometime in the early 1840s. None of their names appear in the 1840 census, but all appear in the 1850 census (U.S. Census 1850, Beaufort County: 338). George H. Brown began shipping ventures with Charles E. Jarvis, as the firm Jarvis & Brown, some time prior to May 1844. The two were jointly listed on a 30 May 1844 outgoing shipment of lumber and corn to Boston aboard the schooner *Topic* (*North State Whig* II (6)). In 1844, Jarvis & Brown, along with William H. Howard, purchased the schooner *Saunders* (U.S. Bureau of Navigation 1996E: Registration 9, 24

September 1844). William H. Howard's role in the firm is unknown. It is possible that he bought shares in the *Saunders* as an investment. Extant Washington papers are limited between 1844 and 1847, subsequently only two other marine announcements relating to Jarvis & Brown were found. A salt shipment from Wilmington arrived on 18 May 1846 aboard the schooner *Pactolus* (*North State Whig* III (36)), and a shipment of merchandise arrived from Baltimore on 9 December 1846 aboard the schooner *Joseph Ann* (*North State Whig* IV (26)). The firm of Jarvis & Brown was short lived. On 13 April 1847, the firm was dissolved "by mutual consent, and by its own limitations" (*North State Whig* IV (46)).

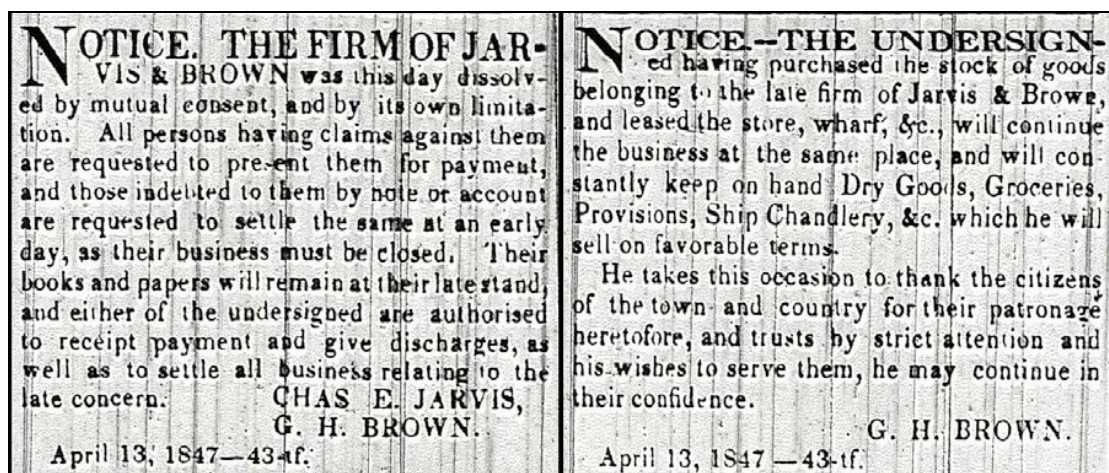


Figure II-4. Dissolution notice of Jarvis & Brown, 13 April 1847 (*North State Whig* IV (46), 5 May 1847).

Between 1845 and 1847, Sylvester Brown and Isaiah Respass jointly owned two vessels, the sloop *Dolphin* (U.S. Bureau of Navigation 1996D: Enrollment 23, 18 December 1845), and the 51 ton schooner *Pactolus* (U.S. Bureau of Navigation 1996D: Enrollment 19, 6 July 1846). Nothing else is known of this connection the two owners do not appear in Washington's marine announcements during this period. The connection

between Sylvester and Isaiah dissolved the same year that George H. Brown and Charles E. Jarvis ended their partnership. George H. Brown replaced Isaiah Respass as joint owner of the *Dolphin* on 12 November 1847 (U.S. Bureau of Navigation 1996D: Enrollment 24), and again on the *Pactolus* 8 May 1848 (U.S. Bureau of Navigation 1996D: Enrollment 9). On 5 July 1849 George H. Brown and Parson W. Brown replaced David Carter as the *Star's* joint owners (U.S. Bureau of Navigation 1996D: Enrollment 19).

The Browns' were prolific in their trade endeavors. Analysis of *Star* listings in the *North State Whig* marine entries between 1850 and 1853 reveals that the vessel completed several trips to Atlantic coast ports and the West Indies. Documentation during these years is aided by an almost complete set of newspapers for 1850, 1851, and 1853. In 1850, the *Star* completed two round trips to New York, followed by a rather long trip to Charleston. On 17 April, the *Star* left for Charleston with a load of grain from J. Myers & Sons but did not return until 5 June, when it arrived at Washington loaded with ballast (*North State Whig* VIII (34 and 41)). This two-month trip to Charleston could not have been a profitable venture for the Browns, especially considering that the vessel left carrying another merchant's cargo and returned in ballast. The *Star* was the only Washington vessel to depart for Charleston in 1850 (*North State Whig* VIII –IX), suggesting that trade with Charleston was not as profitable as trade to northern ports and the West Indies. This makes sense because Charleston exported the same raw materials as North Carolina. Current Roanoke River research suggests that the Albemarle and its tributaries are more closely related to the Chesapeake region than

points south like South Carolina and Georgia (Price 2006). Washington's lack of trade to other southern states fits this pattern.

There is a possibility that the master was delayed searching for a return cargo, but a more likely explanation for the lengthy trip is that the *Star* was stuck in Charleston by a series of severe storms that wracked the West Indies and Atlantic coast in April and May of 1850: "We are informed by sea-captains in that service, that they have rarely experienced such a succession of severe gales as have recently been encountered" (*North State Whig* VIII (36)).

After returning from Charleston, the *Star* was loaded, and cleared for New York. The vessel's trading status changed during this trip. On 20 August 1850, the *Star*'s enrollment was surrendered in Plymouth, Massachusetts, and the vessel was registered for foreign trade in nearby Scituate (U.S. Bureau of Navigation 1996A: Scituate Registration 4, 20 August 1850). The *Star* did not reappear in Washington Marine announcements until 18 December 1850, when it arrived with a load of "merchandise" from Boston and a new master, Perry Parker (*North State Whig* IX (16)).⁷ Parker likely sailed the *Star* to the West Indies, where he loaded the vessel with a return shipment to Boston. After unloading the West Indies shipment, Parker likely loaded the vessel and headed back to Washington.

William Henry von Eberstein recorded one such triangular trade trip in 1848, when Washington schooners *North Carolina* and *Edward Tillet* left New York bound for

⁷ Prior to Parker, *North State Whig* marine announcements recorded Stewart as the vessel's master. The author has been unable to locate Stewart's first name. A possibility is Josephus Stuart, listed as master of the Carteret-built schooner *Raleigh* from 1842-1844 (U.S. Bureau of Navigation 1996D). William Allen was the listed master when the Browns jointly enrolled the vessel in July 1849 (U.S. Bureau of Navigation 1996D: Enrollment 19), but his name never appeared in the marine announcements.

the Caribbean “both after a load of salt to take back to New York the reason of it freights being due in Washington” (von Eberstein [1887]: 96). The vessels sailed headlong into a hurricane, where the *Edward Tillet*, along with its crew and Captain John Gaskill, were lost. The *North Carolina* managed to complete the journey back to New York laden with salt, and then returned to Washington in ballast (von Eberstein [1887]: 98-99).

In January 1851, Captain Parker happened across the wreckage of the steamer *America* while returning from New York. The 520 ton *America* wrecked on Hatteras Shoals, Wednesday morning 26 January. The steamer’s master, Captain Broadwell retells the vessel’s fateful journey and subsequent crew rescue:

[L]eft Philadelphia January 14th, at 1 o’clock p.m. Anchored at Breakwater at 10 p.m. wind blowing strong from S.S.W.

Friday, 17th, left Breakwater at 1 p.m. wind N. West, weather clear; at 8 p.m. wind changed to N.E. blowing hard and snowing, with a heavy sea; at 10 p.m. made Cape Henry light, and went in for harbour to Norfolk; remained there 10 days – during the time made several attempts to go to sea, but returned on account of the threatening appearance of the weather. On Wednesday, the 26th, at 5 a.m. wind changed to N.W., blowing strong, but moderated at 11 a.m.; raised steam and left Norfolk; passed Cape Henry light at 1 p.m. steering course along land, passed New Inlet light 7 p.m. and were abreast of Cape Hatteras light at 10 1-2 p.m., wind W.N.W. to N.N.W., meeting a heavy cross sea, causing the boat to labour very hard, and the sea striking her under the guards lifted the deck frame from the hull – the sea making a clear breach into the hull of the boat. The wind still increasing, and the sea running very high, and the boat labouring hard, caused the steam pipe to part in three places, thus rendering the machinery entirely useless. We then made sail to keep the boat steady – and finding that of no avail, we cast anchor in eight fathoms water, to keep from blowing farther from shore. We then commenced throwing overboard the coal we had in sacks upon deck, and emptying the boiler to lighten her; by this time say 11 to 11 1-2 o’clock the boat was half filled with water, and by 12 1-2 to 1, she was a complete wreck, and sunk down to the guards. We then launched our boats and divided the crew (22 in number) viz: - Six in each of the two small boats, and ten (including myself) in the life-boat, and in less than 10 minutes after leaving the wreck, she sunk entirely out of sight, taking all our baggage, provisions, &c.

We drifted in our boat until 11 o’clock, a.m. the next day, with an increasing wind, from land, when we were picked up about 20 miles from shore

by the Schr. *Star* of Washington, N.C. Capt. Perry L. Parker, who with his officers rendered us all the aid that could be desired. Capt. Parker placed us in his cabin and provided us with dry, warm clothing and excellent food, and did all that could be done by a noble and generous man. We landed at Washington, N.C., about 1 o'clock on Saturday, Feb'y 1st, and were received by Mr. Houston, Mr. Myers and other citizens of the place, who in the kindest and most feeling maner provided our men with clothing, and every thing to make as comfortable, and means for all who were destitute, to get home (*North State Whig* IX (22), 5 February 1851).

Captain Perry picked up only those in the large life boat, "of the other 12 no tidings have been received" (*North State Whig* IX (22), 5 February 1851). The arrival of the survivors must have caused excitement among Washington residents, and undoubtedly brought attention to G.H. Brown & Brother, as the firm was then called. The *Star's* enrollment was soon surrendered, and registered solely in George H. Brown's name on 7 February 1851 (U.S. Bureau of Navigation 1996E: Registration 2). The next day, Captain Parker cleared Washington bound for the West Indies with a load of lumber (*North State Whig* IX (23)).

The *Star's* return from the West Indies was not announced, but on 6 May 1851, its registration was surrendered in lieu of an enrollment. The new enrollment listed a new master, Benjamin Bond (U.S. Bureau of Navigation 1996D: Enrollment 8). From May to November 1851, Benjamin Bond sailed the *Star* to Providence, Rhode Island, twice, carrying shingles both times. He also sailed to New York on two occasions, once clearing with naval stores by S.R. Fowle and Son and returning by way Boston in ballast. In late August 1851, Bond cleared for Baltimore carrying lumber for S.R. Fowle, and returned with merchandise for G.H. Brown & Brother (*North State Whig* IX (34, 38, 39, 49, and 50); X (3, 9, and 10)). Bond sailed to the West Indies once in 1851, clearing

Washington on 12 November 1851, but his return date is unknown (*North State Whig* X (10)). He would have likely arrived in Washington sometime in January or February, but only one edition of the 1852 *North State Whig* exists for these months, and the *Star* is not mentioned.

The *Star* received a new registration on 1 June 1852. The new registration listed a third owner, William Bond, Benjamin Bond's father, and described an enlarged *Star*. The vessel was 10 ft (3 m) longer, 5 in (12.7 cm) wider, and rated at 85 39/95 tons (U.S. Bureau of Navigation 1996E: Registration 6). No other details of the *Star*'s lengthening exist. However, the schooner *Independence*, a vessel used by G.H. Brown and Brother,⁸ was lengthened in 1854, and its master William Henry von Eberstein recorded the process:

I took her to the ways of Capt. Wm. Farrow and after unrigging her and taking the masts out we hauled [the vessel] up on his ways. She was then cut in two and a piece 18 feet long put in the center of her. I was at the ways every day until the job was completed. I had to examine every piece of timber to see that it was according to the contract (von Eberstein [1887]: 110).

Von Eberstein did not tell how long the lengthening took. Once the *Independence* cleared Ocracoke Bar on its first voyage after rebuilding, von Eberstein noticed "that her sailing quality had been increased but her strength had not, she being too shallow for her length" (von Eberstein [1887]: 111).

⁸ The *Independence* conducted two trips in 1851 for G.H. Brown and Brother, once in April, and once in May (*North State Whig* IX (31, 33, and 34)). They are not owners. George H. Brown does enroll the vessel in 1852, but states that he is not the owner (U.S. Bureau of Navigation 1996D: Enrollment 4, 16 February 1852).

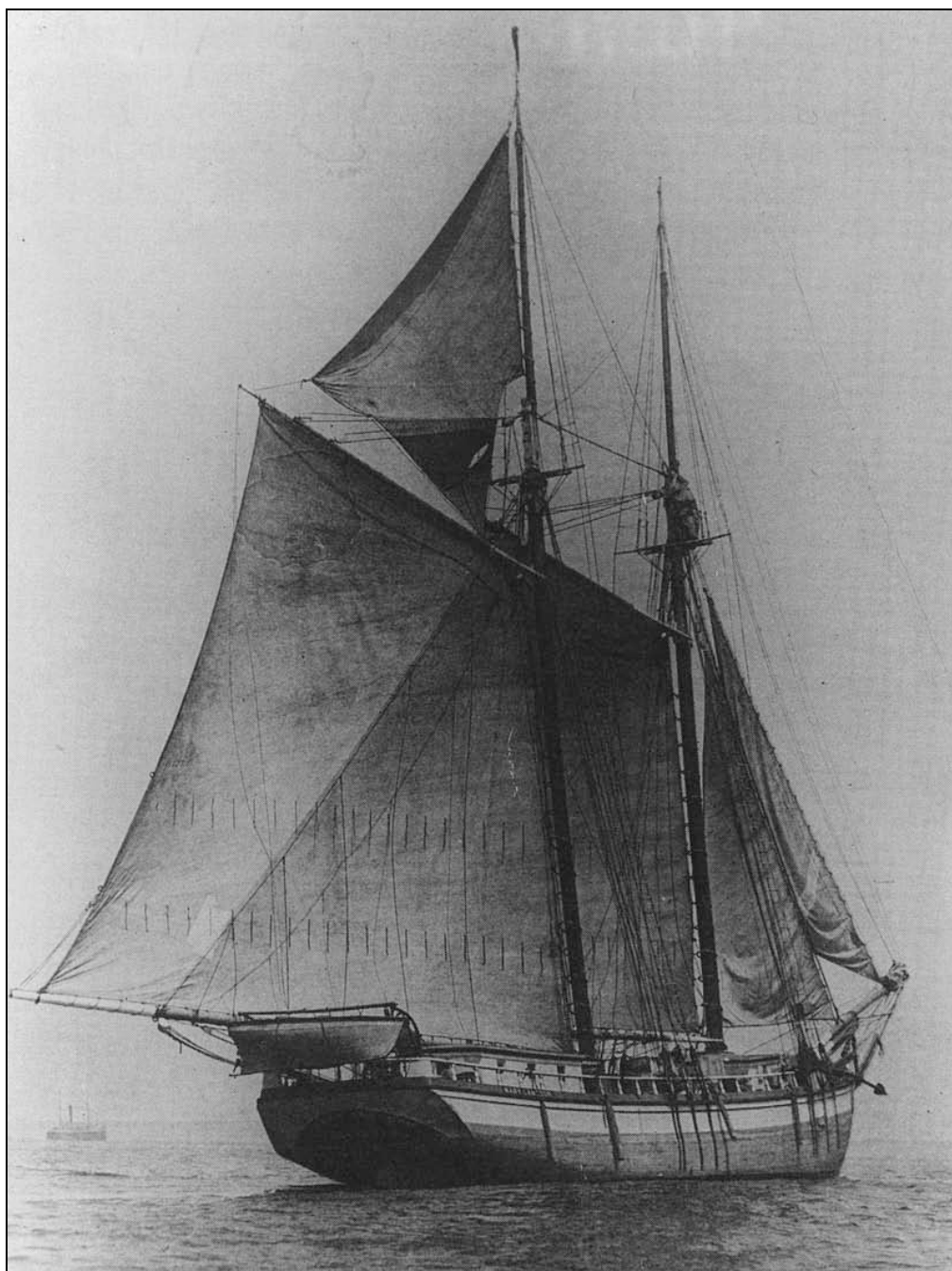


Figure II-5. Rockland, Maine square-stern schooner *Mary Langdon* circa 1860. This vessel was built in 1845 and rebuilt in 1860. The rebuilt dimensions, 73 ft (22.3 m) by 20 ft 10 in (6.4 m), are almost identical to those of the rebuilt *Star* (Courtesy of Peabody Museum of Salem, in MacGregor 1997:70).

Vessel lengthening was a quicker and lower cost alternative to purchasing another vessel. Adding an extension amidships could significantly increase a vessel's tonnage. In the *Independence's* case the 18 ft (5.5 m) long section increased its tonnage from 84 to 102 tons (U.S. Bureau of Navigation 1996D: Enrollment 23, 8 August 1854). Captain von Eberstein's observation of the *Independence's* sailing qualities after lengthening suggests that the process was not necessarily the safest approach to increasing a firm's shipping tonnage.

The newly lengthened *Star* must have sailed immediately after the registration was issued, as the vessel arrived from the West Indies on 21 July 1852 (*North State Whig* X (42)). The dearth of 1852 Washington newspapers leaves a four-month gap in the *Star's* timeline. Bond arrived from New York on 18 November 1852 and was replaced by John Spencer (*North State Whig* XI (5)). An ailing Bond was the likely reason for the change. He passed away three months later: "Died in this town, at five o'clock, p.m. on the 6th inst., Capt. Benjamin Bond, son of Mr. William Bond, aged 22 years, 6 months and 19 days" (*North State Whig* XI (13), 9 February 1853). The *Star* made two voyages to New York under the command of John Spencer before being sold to steam miller Benjamin F. Hanks on 19 February 1853 (U.S. Bureau of Navigation 1996D: Enrollment 6).

The *Star* completed at least 16 voyages while owned by the Brown family. Of these 16 voyages, nine were to New York, with two returning by way of Boston; one was to Charleston; two were to Providence, Rhode Island; one was to Baltimore; and three were to the West Indies, with a possible fourth occurring after the Scituate registration

(Appendix B). G.H. Brown & Brother operated nine vessels between 1839 and 1853 (Appendix C), and on at least one occasion, lengthened a vessel to increase shipping capabilities.

Although George H. and Parson W. Brown were listed as owners of the *Star* until its sale to Benjamin F. Hanks, the G.H. Brown & Brother partnership had been dissolved since August 1852 (*North State Whig* XI (10), 19 January 1853). Parson W. Brown formed a partnership with David P. Moules sometime after 1853, but that partnership dissolved on 5 September 1855 (*North Carolina Times* II (38)). Little is known about Parson Brown after 1856. Sylvester Brown operated his own vessels up until 1860 (*North Carolina Times*, 25 January 1860), and also held an appointment as one of two Customs House collection officials (Mayo 1903: 50). When the 1860 census was conducted, George H. was the only family member still listed (U.S. Census 1860, Beaufort County: 187). Nothing is known about George H. Brown's doings during the war; however, following the war, George H. Brown was agent for the Clyde Steamship Company (Litchfield 1976: 233).

The Brown family wasted no time embarking on shipping ventures after arriving in Washington. They regularly shipped goods along the east coast and south to the West Indies. Unlike the Tylers, the Browns shipped just about anything that could be sent by sea. Items shipped included grain, corn, lumber, shingles, naval stores, and on most return voyages, merchandise. The Browns not only used their own vessels for this trade, on several occasions they shipped items aboard other merchants' vessels. They also chartered their vessels to other Washington merchants.

1853-1856

Lumbering was a large portion of Washington's mid 19th century economy. Depleting northeastern forests sparked a boom in southern lumber production, as northeastern lumberman migrated south setting up mills in the densely wooded Carolinas. "These lumberman found Beaufort County, North Carolina, with its hundreds of square miles of virgin timberlands and its vast waterways, a sleeping giant waiting only for the sawmill whistles to awaken it" (May 1976: 329). Benjamin F. Hanks was one such lumberman, arriving from Massachusetts sometime in the 1840s (U.S. Census 1850, Beaufort County: 349). Hanks built a lumber-milling enterprise throughout the late 1840s and early 1850s. The following *North State Whig* entry describes Hanks' operations as of 6 July 1853:

Mr. Hanks has just put in operation another new saw mill. It works with circular saws only, and cuts logs into plank with a rapidity and precision we have never seen equaled. This makes four mills owned and worked by Mr. Hanks. One of them is a planing mill. Some idea of Mr. Hanks' operations may be formed from the fact that it requires ten millions feet of timber annually, to keep his mills at work (*North State Whig* XI (33)).

The 1850 Beaufort County Product of Industry Report lists five million feet of lumber valued at \$70,000 produced by Hanks' mills (U.S. Census 1850, Beaufort County: 269). Milling was not Hanks' only enterprise. That same year he listed \$21, 000 in turpentine production (U.S. Census 1850, Manufacturing Industries, Beaufort County: 269).

Between 1850 and 1853, Hanks conducted an extensive lumber shipping enterprise to northern ports. The majority of his dealings were with Baltimore (Figure II-6). Alexandria and Philadelphia were distant seconds. Hanks shipped to New York and the West Indies on a few occasions, and twice to Norfolk during these years. The low

number of Norfolk shipments is curious, as local Washington historical accounts suggest that Hanks maintained an extensive trade with that port (Worthy 1976: 11). Some evidence suggests that the latter was indeed the case. Of the 15 vessels owned by Hanks between 1844 and 1856, eight were dimensioned for trade through the Dismal Swamp Canal, and four of the eight were built in Norfolk (Appendix C). This makes sense, as the canal was a straight path to the Chesapeake Bay, and the cities of Alexandria, Baltimore, and Philadelphia. Hanks' masters possibly landed shipments in Norfolk on their way northward.

	1850	1851	1853	Totals
Alexandria	3	3	11	17
Baltimore	24	28	15	68
New York	1		2	3
Norfolk			2	2
Philadelphia	6	3	7	16
West Indies		2		2
Other	1			1
Total Shipments	35	36	41	114

Figure II-6. Benjamin F. Hanks' shipment totals for the years 1850, 1851, and 1853. Compiled from extant *North State Whig* issues. The year 1852 was left out of the chart because only three 1852 *North State Whig* issues exist, and the data are thus incomplete. The "Total Shipments" for 1853 is larger than the combined port totals for that year because shipment origins/destinations were not listed in a few 1853 *North State Whig* marine announcements.

In 1853, Hanks added three vessels to his fleet of nine: the steamer *Post Boy* (U.S. Bureau of Navigation 1996D: Enrollment 2, 1 July 1853), the steamer *Astoria* (*North State Whig* XI (33)), and the *Star* (see Appendix C). The first *Star* announcement following Hanks' purchase was its arrival from New York with merchandise on 10 March 1853 (*North State Whig* XI (18)). The *Star* made seven more trips in 1853. Six were to Philadelphia, returning once by way of Baltimore. The seventh trip destination

was not listed but the vessel returned by way of New York (*North State Whig* XI (42), 14 September 1853). The *Star* carried lumber on every 1853 outbound voyages. Return cargos were merchandise, coal, or ballast (Appendix B). Hanks shipped a total of 103 loads of lumber to Middle Atlantic ports in 1850, 1851, and 1853. These are the only known *Star* sailings while owned by Hanks, as only one *North State Whig* issue exists beyond 1853, and the *Star* is not mentioned.

Hanks' ownership of the *Star* ended in 1856. On 17 September 1856, Hanks turned over three land holdings, five sawmills, his stock in the Bank of Washington, his stock in the Greenville-Raleigh Plank Road, and nine vessels: the steamer *Post Boy*, and the schooners *Star*, *L.G. Dobbin*, *Cora*, *C.W. Skinner*, *David Carter*, *Osceola*, *Nags Head*, and *Actor*. The *Star*, *David Carter*, and *L.G. Dobbin* were loaded with lumber when the conveyance was signed (Beaufort County Real Estate Conveyances 29: 335-336). The reason for Hanks' sudden financial downturn is unknown, but the growing recession preceding the panic of 1857, and Hanks' speculation in eastern North Carolina plank roads were likely contributors.

George R. Taylor cites 1844 as the beginning of America's plank road boom, a "mania that spread rapidly to every part of the country... strongest in the Middle Atlantic and North Central states... but the movement was short-lived; only a few companies struggled on after the panic of 1857" (Taylor 1951: 30-31). North Carolina's affinity for plank roads started in the late 1840s, but the results were unimpressive. Eighty-four North Carolina plank road companies were chartered between 1849 and 1861. Eighty of those charters occurred between 1850 and 1855. Only 11 plank road companies actually

built roads, totaling a mere 500 miles by 1861 (North Carolina Business History 2006). Hanks was a plank road proponent. He was a board director of the Greenville and Raleigh Plank Road Company and the Washington and Tarboro Plank Road Company (*North State Whig* XI (16), 2 March 1853). It is possible that Hanks' 1853 steam mill and vessel additions were speculations based on plank road expansion. Unfortunately, the Washington and Tarboro Plank Road Company collapsed after surveyors decided that the road should instead connect Tarboro and Enfield (*North State Whig* XI (21), 6 April 1853). A new company was created for the Tarboro-Enfield route, but never commenced construction (North Carolina Business History 2006).

Unlike other Washington merchants, Hanks was a one-man firm. He had no one to share his financial losses. Of the 15 vessels owned by Hanks between 1844 and 1856, all were solely owned except three (Appendix C). Hanks did not diversify much beyond lumbering and turpentine distilling. While most Washington merchants were able to shift market targets with demand fluctuations, Hanks had to stay the course. If Hanks extended his enterprise on speculation, then the loss of the prospective plank road would have been a financial blow. Coupled with the growing recession in 1856, the components of financial disaster are evident.

1856-1857

When Benjamin F. Hanks' real estate was divided amongst his creditors, the schooners *Actor*, *C.W. Skinner*, *Cora*, *David Carter*, *L.G. Dobbin*, and the *Star* were

allotted to Joseph Potts, Reading L. Myers, and R.S. Donnell. These three owners were some of Washington's wealthiest and prominent men.

Joseph Potts' Washington based shipping ventures began in 1836 with the enrollment of the schooner *Franklin* (U.S. Bureau of Navigation 1996D: Enrollment 10, 14 July 1836).

Mr. Joseph Potts was one of the venerable founders of the town and is identified with its material advancement as much or more than any other man in its history. He was of Scotch descent and came here when quite a lad. Was engaged in merchandising and was for many years eminently successful. He was a man of large public spirit, kind, benevolent, and hospitable, a devout church manHe and Mr. Samuel R. Fowle were spoken of generally together (*Washington Gazette*, December 1889).

Potts maintained a steady merchant enterprise throughout the 1840s and 1850s, owning 13 vessels between 1836 and 1860 (Appendix C). He was a member of several local boards, including those of the Greenville and Raleigh Plank Road and Washington and Tarboro Plank Road (*North State Whig* XI (16), 2 March 1853). Potts was also instrumental in Washington's education system. He was a trustee of the Washington Academy (Kornegay 1976: 251), and chaired the Beaufort County Teacher Examination Committee (*North State Whig* XI (17), 9 March 1853).

Reading Louis Myers, like Potts, was a prominent Washington merchant. Between 1856 and 1860, he owned 11 vessels (Appendix C). All were co-owned with his father John Myers, except the six acquired from Benjamin F. Hanks. Reading L. Myers was also President of the short-lived Washington and Tarboro Plank Road Company (*North State Whig* XI (16), 2 March 1853).



Figure II-7. Myers Family photograph circa 1848. Top Row from left to right: Thomas Harvey Blount Myers, Reading Louis Myers, Maria Louisa Blount Myers, William Blount Myers, Jane Maria Myers. Front Row: Susan Grimes (Mrs. John Gray Blount Myers), John Gray Blount Myers, Jr., John Gray Blount Myers, Joseph Dolby Myers, Lucy Harvey Myers, Mary Harvey Blount Myers, John Myers (Myers Family Papers, Courtesy of East Carolina University's Manuscript Collection, Joyner Library, Greenville, NC.).

Reading's father, John Myers, had been a prominent member of Washington's merchant community as well as a member of the Academy's board of trustees (Kornegay 1976: 251; *North State Whig* VII (372), 19 January 1842). John incorporated Reading into the family business by commissioning the John Myers & Son firm on 1 January 1842 (*North State Whig* VII (372), 19 January 1842). The firm was later changed to John Myers & Sons, by including Reading's brothers. The Myers also built and repaired vessels under the name Pamlico Railway Company (Still 1981: 36). The firm specialized in steamboat construction and, following the war, acted as an agent for the Old Dominion Steam Ship Company (*Washington Gazette*, November 1889). "[F]or half a century...no

firm in the town has done more than this one as it has been the centre of the steamboat interest for many years” (*Washington Gazette*, December 1889).

Richard S. Donnell, like David M. Carter, was a member of the elite mid 19th century Washington legal fraternity. Donnell was born in New Bern, and attended the University of North Carolina and Yale. “He was a man of commanding appearance, quick and decisive in his actions.... a clear thinker” (Warren 1930: 5).

[T]ruly a “king among men,” possessed of ample means, inherited from wealthy parents, he was not in any way dependent upon his profession for a living. Social, genial, generous to a fault, he spent his large fortune as much or more for the benefit of his friends than himself....He was a fine lawyer and distinguished states man, having several times represented his county in the legislature and the district once in the United States Congress. (*Washington Gazette*, December 1889).

Donnell’s participation in Hank’s buyout was probably not in the interest of furthering any personal mercantile enterprise. The six schooners obtained from Hanks were the only vessels Donnell owned, and they were only owned for a short time. It stands to reason that Donnell’s participation was likely due to his “ample means” and generosity.

It is unfortunate that information regarding the *Star* is limited while owned by these three community pillars. As stated earlier, only one *North State Whig* issue exists beyond 1853; in fact, only five Washington newspaper issues survive between 1854 and 1860. The *Star* is not mentioned in any. This lack of information makes it impossible to track the *Star* beyond its enrollment and registration records. Potts, Myers, and Donnell sold the vessel eight months later to Edward Waters (U.S. Bureau of Navigation 1996D: Enrollment 13, 5 June 1857).

1857-1859

Edward Waters enrolled the *Star* on 5 June 1857 (U.S. Bureau of Navigation 1996D: Enrollment 6). Little is known of Waters. He does not appear in census records between 1840 and 1860. However, he and E.H. Putnam are listed as owners of the schooner *Solomon Andrews* in 1855 (U.S. Bureau of Navigation 1996D: Enrollment 18, 6 June 1855). The enrollment states that the vessel's former paper was in Perth Amboy, New Jersey, 1854, where it was constructed. The enrollment does not cite a property change as reason for its enrollment. Waters and Putnam possibly sailed the vessel from New Jersey to set up a merchant business in Washington.

The only extant newspaper references to Waters occur in 1856 and 1857. The 8 October 1856 *North Carolina Times* marine announcements list the *Solomon Andrews*' arrival from New York with merchandise (*North Carolina Times* II (38)), and the 23 December 1857 *Washington Dispatch* marine announcements lists the arrivals of the *Solomon Andrews* with merchandise from New York, and the *Pocomoke* in ballast from the West Indies, both to "E. Waters" (*Washington Dispatch* I (27)).

The *Star* was registered once on 9 Nov 1857 (U.S. Bureau of Navigation 1996E: Registration 12), and re-enrolled on 21 January 1859 (U.S. Bureau of Navigation 1996D: Enrollment 1). Waters turned ownership of the *Solomon Andrews* over to E.H. Putnam in 1858 (U.S. Bureau of Navigation 1996D: Enrollment 18, 5 August 1858). He sold the *Star* to Joseph Robinson and David H. Dill a year later, and then disappeared.

1859-1860

Joseph Robinson mastered and owned several vessels prior to purchasing the *Star*. He shared ownership of the schooner *Thomas Wynns* with Henry Lavender in 1835 (U.S. Bureau of Navigation 1996D: Enrollment 2, 2 February 1835), the schooner *Transport* with Thomas Robinson of Carteret County in 1839 (U.S. Bureau of Navigation 1996D: Enrollment 2, 11 January 1839), and was listed as owner on the schooner *John Myers* in 1838 (U.S. Bureau of Navigation 1996D: Enrollment 7, 18 April 1838). Robinson also shared ownership of the schooner *Sarah* with John and Reading L. Myers between May and October 1846 (U.S. Bureau of Navigation 1996D: Enrollment 11, 11 May 1846), and assumed sole ownership of the vessel on 3 October 1846 (U.S. Bureau of Navigation 1996D: Enrollment 26). Between 1847 and 1852, Robinson shared ownership of the schooner *Actor* with John Myers (U.S. Bureau of Navigation 1996D: Enrollment 17, 29 June 1847). He also shared ownership of the same vessel with Thomas J. Gaskill between 1852 and 1853 (U.S. Bureau of Navigation 1996D: Enrollment 21, 14 October 1852), and Joseph Potts and Thomas J. Gaskill between 1853 and 1855 (U.S. Bureau of Navigation 1996D: Enrollment 7, 16 March 1853). In 1854, Robinson co-owned the Baltimore-built schooner *Ospray* with the Corner family of Baltimore (U.S. Bureau of Navigation 1996E: Registration 1, 2 January 1854). Benjamin F. Hanks used the *Ospray* extensively during 1850, 1851, and 1853 (*North State Whig* VII-XI).

David H. Dill was Washington's principal blacksmith (Mayo 1903: 52). He only owned one other vessel between 1840 and 1860, the schooner *Independence*, discussed earlier (U.S. Bureau of Navigation 1996D: Enrollment 37, 29 November 1855). Little

else is known about Dill other than he was 44 years old in 1860 (U.S. Census 1860, Beaufort County: 186).

Joseph Robinson and David H. Dill first enrolled the *Star* on 10 December 1859 (U.S. Bureau of Navigation 1996D: Enrollment 23). During their seven months of recorded ownership, Robinson and Dill changed the enrollment status five times. Interestingly, the *Star's* shortest documented ownership period contained the most numerous changes in the vessel's trading status. On 5 January 1860, the *Star* was registered in Plymouth (U.S. Bureau of Navigation 1996C: Registration 2), and two months later it was registered in Washington (U.S. Bureau of Navigation 1996E: Registration 7, 13 March 1860). It is not clear why the owners changed its port of registration for only two months, especially considering the ports' proximity.

Another puzzling change occurred six days later when the *Star's* Washington registration was surrendered for a new registration in Philadelphia (U.S. Bureau of Navigation 1996A: Washington Enrollment 7, 13 March 1860). What happened in Philadelphia following the registration surrender is a mystery. The *Abstracts of Enrollments and Registers issued at North Carolina Ports* lists an enrollment or registration occurring in Philadelphia on 7 April 1860. No distinction is made regarding whether it was enrolled or registered. The reason for the three-week gap between registration surrender and new registration acquisition is uncertain. It is possible that the vessel was registered twice during the gap, perhaps due to an ownership change. Robinson and Dill might have added an additional partner for an anticipated shipment, but the arrangement fell through. This would explain two registrations in the short time

period. What is certain is that the vessel could not have made a round trip to the West Indies in such short amount of time. The vessel likely sat in Philadelphia for those three weeks. The *Star* reappeared in Washington three months later and was enrolled for the final time (U.S. Bureau of Navigation 1996D: Enrollment 15, 19 July 1860). The *Star* was not mentioned again until the Civil War had commenced.

There is perhaps no better illustration of the coasting trade's affect on the nation's economic vitality than the small port town of Washington, North Carolina. Washington grew quickly during the early 19th century. Its congressional appointment as one of only three ports of entry was a boon for the developing town, but the town's vitality relied heavily on merchants engaged in coastal trading enterprises.

General summations about Washington's economic rise can and have been made. However, individual investigation of merchant enterprises is limited to only one or two written works. By narrowing historical investigation and examining the life of only one Washington merchant vessel, the *Star*, interconnectedness among the town's merchants can be drawn. This chapter is not a complete representation of these individual merchants. Instead, it focuses on snapshots of their enterprises while they owned the *Star*. This being said, however, observations can be made about these merchants' 19th century endeavors, both economic and social.

First, most of the *Star*'s owners increased their enterprises between 1840 and 1860. This growth was not without risk as evidenced by Benjamin F. Hanks' 1856 business collapse. Second, several of the *Star*'s owners emigrated from northern towns. Examples include Benjamin F. Hanks, the Brown family, and Edward Waters. Third,

these merchants worked together to further the town's economic vitality as evidenced by the Hanks, Potts, and Myers interest in building a plank road from Tarboro to Washington. They also worked to increase the town's social development. An example of this is Joseph Potts' work with the Washington Academy and teacher certification standards. Another observation can be made about how these owners increased their shipping capabilities. This was done three different ways: 1) new vessel procurement, 2) chartering of other merchant's vessels, 3) vessel lengthening. The author found four examples of the latter: the *Globe*, lengthened in 1848; the *Cora*, lengthened between 1850 and 1852; the *Star*, 1852; and the *Independence*, lengthened in 1854 (Appendix C).

Between 1842 and 1860, the schooner *Star* played a role during Washington's most economically prosperous time. Carrying cargos ranging from merchandise and grain to lumber and naval stores, the *Star* plied the waters of the Atlantic coast and West Indies. The vessel even participated in a rescue at sea. The *Star* is a dynamic example of the common 19th century coasting schooner.

III. The Civil War and the Disappearance of the *Star*

Washington's waterborne commerce screeched to a halt when the Civil War spread to North Carolina's rivers and sounds. "In 1861 the war cloud began to hover over our horizon and suddenly burst by the firing of the first gun at Fort Sumter" (Mayo 1903: 61). The decision to secede troubled Washington's residents. While large slaveholding plantations pressed the state government to pull away, a significant portion of coastal residents, mostly small farmers, fisherman, and merchants who did not identify with the slave economy sought to retain the status quo (Carbone 2001: 1-4). Most of Washington's legal community including R.S. Donnell were strong union supporters, vehemently denouncing secession (Warren 1930: 7). Things changed, however, when Lincoln called for North Carolinians to take up arms against its neighbors to quell the rebellion. North Carolina seceded shortly thereafter, with a now supportive Beaufort County behind the decision (Warren 1930: 8). Mariners and merchants were especially concerned about the prospects of war. After arriving from a West Indies trip in March 1861, Captain William Farrow and the crew of the schooner *Pacific* stepped off the vessel into a world of trepidation. "There was so much talk about war and business so unsettled that captain Farrow laid his vessel up and discharged all hands" (Parvin [1907]: 3).

Knowing that secession was near, local attorney Thomas Sparrow mustered a group of young men into the Washington Grays. On 16 May 1861, the state finally seceded, and four days later the Grays set sail to Portsmouth Island:

When the day came for the soldiers to leave, what heartaches, what tears and misgivings. With proud hearts our boys marched to the boat that was to take them to Portsmouth...commanding the inlet called Ocracoke. A beautiful flag had just been presented by our loyal women given with smiles, tears and loving hearts (Sparrow [1900]: 53).

The Washington Grays and other local regiments shipped to Portsmouth, Ocracoke, and Hatteras Islands.

U.S. Navy authorities viewed North Carolina's Outer Banks as a "watery bastion with sounds and moats" (Trotter 1989: 21). The islands were the first line of defense for port towns like Washington, as the rivers and sounds were only accessible through a few inlets, that could be easily guarded by forts. Privateering became a healthy Union antagonist as captains could steam in and out of Hatteras and Ocracoke inlets at will, assaulting northern vessels plying close to shore. "The Confederacy had a real opportunity to use its coastal waters as a base for a determined campaign of *guerre de course*" (Trotter 1989: 21). The Washington Grays witnessed several privateering forays, including one conducted while family members visited. "What a happy visit my sisters and I had to our dear father [Thomas Sparrow] at a time. A vessel laden with fruit bound for New York from the West Indies was captured just then and we had a whole bunch of bananas sent to us by the men" (Sparrow [1900]: 53). The load of bananas was brought in by the privateer *Gordon* (Parvin [1907]: 10).

Unfortunately, privateering depredations brought the Outer Banks to the forefront of the Union's naval strategists' minds.

It seems that the coast of Carolina is infested with a nest of privateers that have thus far escaped capture....Hatteras Inlet, a little south of Cape Hatteras Light, seems their principle rendezvous. Here they have a fortification that protects them from assault. A look-out in the lighthouse proclaims the coast clear, and a

merchantmen in sight; they dash out and are back again in a day with their prize (Rush 1914, Series I, VI: 72)

On 26 August, Commodore Silas Stringham arrived and anchored his fleet of ten Union warships off Hatteras. Captain Thomas Sparrow received a dispatch on the morning of 28 August ordering the Washington Grays to Hatteras. He mustered his men and boarded the schooner *Pantheon* (Sparrow [1872]). On the morning of 29 August, the Union fleet moved close to shore and bombarded Hatteras fortifications. The Confederates returned fire, but their 32-pounders were ineffective against the Union vessels. Stringham's fleet moved offshore and

opened fire on us with their 100 pound Rifled Parrot guns and in 3 hours they dismounted or disabled every canon we had in the fort. The ships lay off there with nothing to bother them and they got the range so good that they got nearly every shell in the fort they shot the flag down twice...we had nothing to do but to take care of our selfs and a sand battery is a good place as there is no splinters or rock or cement to be knocked to pieces by shells (Parvin [1907]: 15).

Most of the fort's powder was wet, their shells were either damaged or ineffective, and at some point a Union round penetrated the Confederate magazine and started a fire (Carbone 2001: 12-13). The incessant shelling and the Confederates' inability to return fire led Commodore Samuel Barron, the commanding officer, to raise a white flag as Hatteras capitulated. The men were taken prisoner and shipped north to Boston's Fort Warren (*Washington Dispatch* V (23), 3 October 1861). Washington's men had been at Hatteras less than a day. Fort Clark fell just after Hatteras, and Ocracoke and Oregon inlets were abandoned shortly thereafter (Trotter 1989: 40). The capture of Hatteras was the first Union naval victory of the Civil War, and opened North Carolina's sounds and rivers to a Union advance.

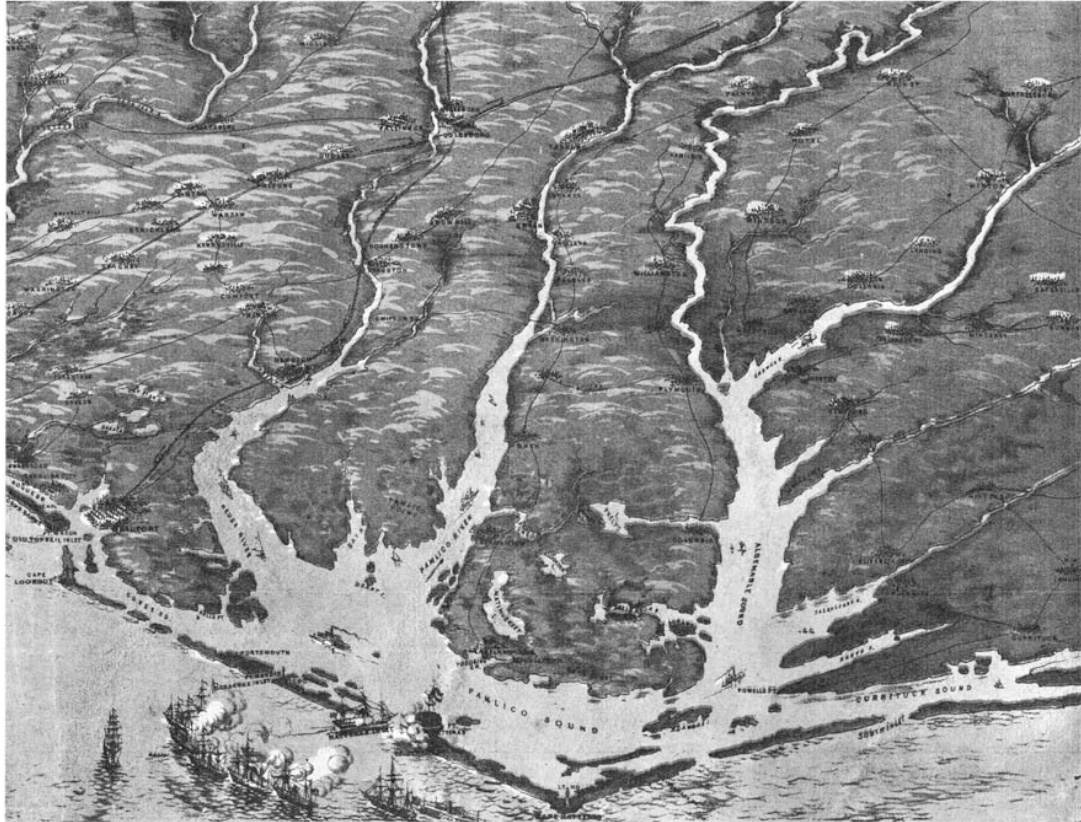


Figure III-1. *Panorama of the Seat of War: Birds Eye View of North and South Carolina and Part of Georgia* (after Bachman 1861). View of Butler's attack at Hatteras.

Washington merchant Samuel R. Fowle was perhaps the first to feel the sting of the Union occupation of Hatteras. Union forces captured his schooner *Ocean Wave* in early September 1861:

The schooner *Ocean Wave*, belonging to S.R. Fowle & Son, of this place, Capt. Warner, on her return from the West Indies, loaded with coffee and salt, was taken by Lincoln's forces at Hatteras last week. Not having heard of the change of things here, Capt. Warren came in thinking all was right and was grabbed. Three other vessels, we learn, have also been grabbed (*Washington Dispatch*, 17 September 1861).

Union Commander Rowan sent all the captured vessels to Philadelphia except the *Ocean Wave* on account of it being “too leaky to trust at sea at this season of the year” (Rush 1914, Series I, VI: 199). Some merchants sought to protect their investments by extreme measures. One time *Star* owner Joseph Potts sank his schooner *Maria Louisa* up the Tar River, to avoid having it fall into Union hands (Mayo 1903: 63). This was not the only case of a purposeful sinking. After slipping out of Charleston during the battle at Fort Sumter, Ocracoke native Horatio Williams sailed the schooner *Paragon* into the Albemarle Sound and up the Roanoke, where he and his two crewmen sank the vessel “until only the tops of her masts were above water” (Parris 1949). Horatio and his crew buried the sails nearby, and sailed to Williamston where they headed overland to Washington for passage back to Ocracoke.

Even with the Union cloud hanging so close, many Washington residents continued business as usual through 1861, and mariners continued to slip across Ocracoke bar en route to the West Indies. Some residents, however, like William Blount Rodman knew that the enemy would soon come, and were agitated by Washington’s seeming indifference:

Things are quiet here still– too quiet by far for our safety and honor. I am trying...to get up a company – but there is still a great deal of secret optimism and more real indifference. I think I will succeed in the course of a month – but before that the Yankees will probably be here...Notwithstanding the enemy here now held our territory for 3 weeks not a company has been raised to meet him – Great blame is freely given to our State Government for indifference and incompetency (Rodman 1783-1976: 18 Sep 1861 Letter to W.A. Blount).

William Blount Rodman’s prophecy was soon realized. Continued privateering depredations on northern merchant vessels and raids on the Hatteras occupation forces

brought the Pamlico and Albemarle sounds to the forefront of U.S. Navy concerns. Flag officer Goldsborough voiced concern to Secretary of the Navy, Gideon Wells in November 1861:

SIR: It strikes me that we should command the waters of Pamlico Sound, and this may, I think, be easily accomplished if I can be given a few suitable vessels in addition to those already at Hatteras Inlet. The enemy now have seven or eight small but well-armed steamers on those waters, and these I propose to attack and subdue, or at any rate to drive into such a position that they can no longer threaten or annoy us at Hatteras Inlet (Rush 1914, Series I, VI: 420-422).

The Union response was already underway. Regiments were assembling in Annapolis by 21 October 1861. General Burnside and Rear Admiral Goldsborough were outfitting vessels for a massive assault (Trotter 1989:68-69). The *New Bern Weekly Progress* followed the expedition with alarm:

The following refers to the expedition fitting out at Annapolis and Old Point which many believe is to come to North Carolina...Being forewarned let us be forearmed, and let every man now determine to defend his house with such arms as he can command in case of an attack (IV (9), 7 January 1862).

The trepidation continued when Burnside arrived at Hatteras. "After several days of painful suspense, [we] learned...that 42 gun-boats and 2 sailing vessels were in the harbor at Hatteras" (*New Bern Weekly Progress* IV (21), 18 January 1862).

The Union invasion fleet crossed the Hatteras bar by 4 February 1862. With swift movements, the Burnside Expedition attacked forts and strongholds throughout Albemarle and Pamlico sounds. Roanoke Island fell on 8 February, followed by Elizabeth City on 10 February. On 14 March 1862, Union troops captured New Bern.

Shortly after Newbern was secured, Lieutenant A. Murray led a naval column consisting of the U.S.S. *Louisiana*, U.S.S. *Delaware*, U.S.S. *Commodore Perry*, and

steamer *Admiral* to Washington. The expedition met no resistance on their approach other than a triple row of submerged pilings driven into the river bottom and cut off three feet below the water. Confederate troops abandoned the batteries and earthworks prior to Murray's arrival (Figure III-2).

The authorities, with many of the citizens, met us on the wharf...we proceeded to the court-house, where, with all the ceremonies, we hoisted the flag of the Union... The woods and swamp in this and Hyde County are represented as being alive with refugees from the draft. Many of them encouraged by our presence came in; they are deep and bitter in their denunciations of the secession heresy, and promised a regiment, if called upon, to aid in the restoration of the flag (Rush 1914, Series I, VII: 151).

Commander S.C. Rowan relayed Murray's progress to Admiral Goldsborough, but was cautious about Murray's Washington reception:

The Political sentiments of the inhabitants of Washington are divided, but the reception given our people is more hopeful than any we have yet witnessed in these waters. The rabid secessionists proclaimed that we intended to burn the town, and this fear alone may induce many to seem what they are not...if I find that they are not in reality what they seem (good Union men at heart), I shall treat them with less consideration. For the present I shall keep a strict blockade of the river and town and shape my course as circumstances may seem best for the interest of my Government (Rush 1914, Series I, VII: 151).

On 29 March, Commander Rowan sent Lieutenant Quakenbush and the *Delaware* back to Washington,

for the purpose of intercepting all communication between Washington, [N. C.], and the sound. It is reported that a vessel is expected hourly in the Pamlico or Pungo from the West Indies through Ocracoke. You will also ascend the Pamlico and show your vessel off Washington, and be very careful that no attempts are made to remount the guns. Remain in the river until further orders (Rush 1914, Series I, VII: 176).

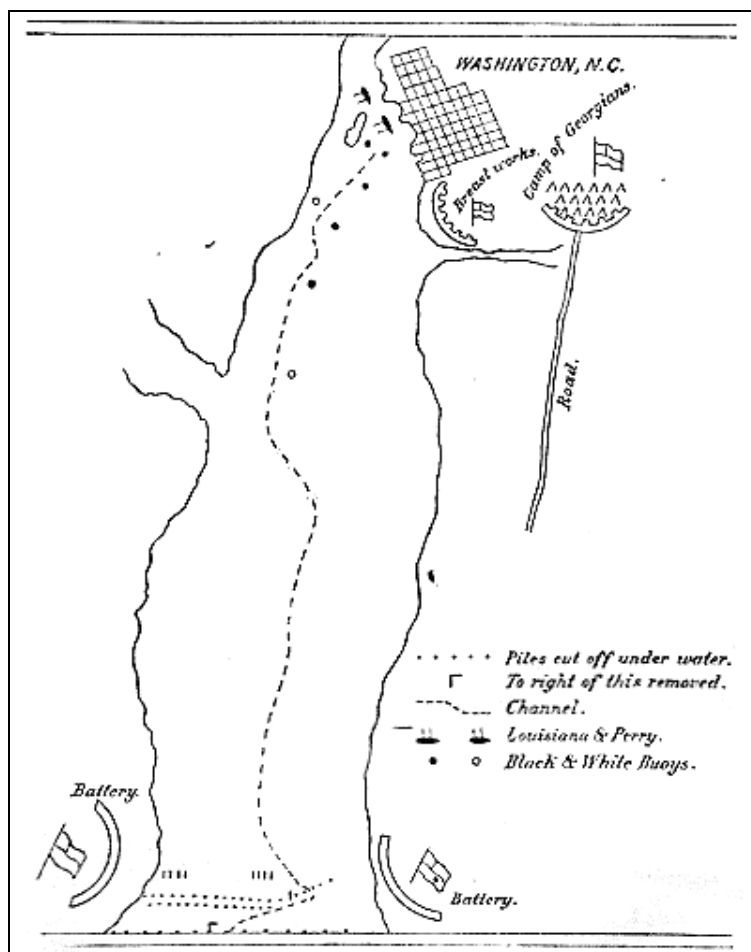


Figure III-2. Lieutenant A. Murray's map of Washington and its defenses (Rush 1914, Series I, VII: 153).

At the time of Rowan's order to Quackenbush, one such vessel was on its way back from the West Indies. On 12 March 1862, H. Thionville, the United States Vice Consulate at Pointe à Pitre, Guadeloupe, sent the following message to the Secretary of State:

SIR: The Southern schooner *Star*, of 85 38/95 tons, six men, David Gaskell, master, arrived in this port on the evening of the 2d instant from Washington, N. C., with a cargo of 60,000 shingles, 16,800 staves, 8 barrels tar, and 6 barrels spirits of turpentine, sold at the following rates; Shingles, \$9.14; staves, \$50.58 per thousand; tar, \$5 per barrel; turpentine, 88 cents per gallon.

The schooner will in a few days effect her return to Washington, laden with sugar, molasses, coffee, and apothecary ingredients. According to a conversation held by Captain Gaskell, the wants of Washington are great and things of immediate necessity are held at enormous prices. I resort to the British steam packet as the surest and most expeditious mode to convey these facts to your knowledge, thinking that this will reach you at a due and propitious moment (Rush 1914, Series I, VII: 216).

David Gaskell is undoubtedly David Gaskill of Washington. Originally an Ocracoke pilot, David began sailing Washington vessels sometime in the 1850s, mastering the schooner *Champion* from 1856 to 1858 (U.S. Bureau of Navigation 1996D: Enrollment 4, 21 January 1856; Enrollment 17, 19 August 1857), and the schooner *Mary E. Parmerle* from 1858 to 1860 (U.S. Bureau of Navigation 1996D: Enrollment 5, 23 February 1858; Enrollment 23, 26 November 1860).

At the time, a West Indies voyage averaged six to twelve weeks (Mayo 1903: 54, 63). Gaskill's outbound voyage would have taken three to six weeks, placing his Washington departure sometime in January. David Gaskill likely cleared for the West Indies just prior to Burnside's arrival at Hatteras. He might not have known of the coming invasion, or did know and was trying to bring in one last shipment before the invasion's arrival. What is clear, is that by leaving Pointe à Pitre around 12 March, as the Vice Consulate's message suggest, he would have returned to North Carolina sometime in April, and the Pamlico would have been a gauntlet compared to the flimsy blockade he slipped past on his outbound voyage.

The Guadeloupe Vice Consulate's message is the last official record of the schooner *Star*. The vessel obviously returned to North Carolina, as David Gaskill continued to master vessels after the war, including the S.R. Fowle schooners *Carolina*

and *Cora*, the latter of which he sailed for most of its working life (Merriman 1996: 176). David Gaskill was also listed as master of the schooner *Paragon*, the same schooner sunk by Horatio Williams at the start of the war (U.S. Bureau of Navigation 1996D: Enrollment [6], 10 January 1866).

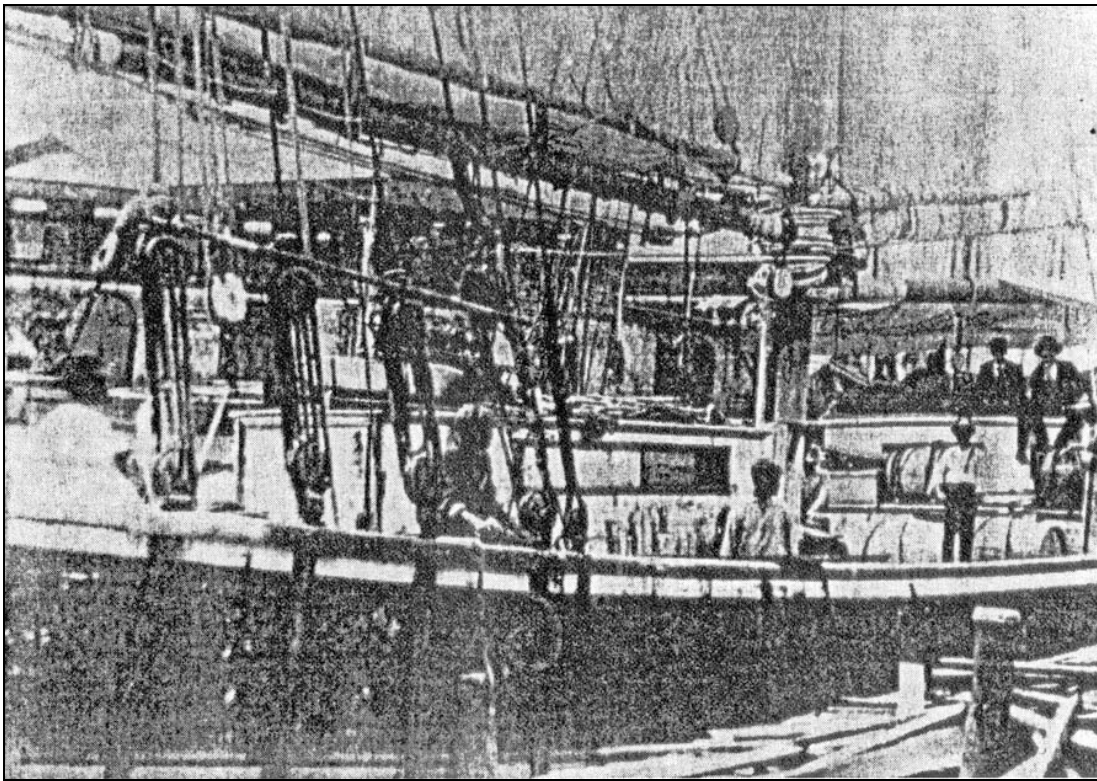


Figure III-3. The schooner *Cora* in Barbados circa 1895. David Gaskill mastered this vessel until 1893 (Fowle Collection, Courtesy of East Carolina University's Manuscript Collection, Joyner Library, Greenville, NC.).

The Town of Washington remained occupied throughout most of the war. For the first four months, no vessels cleared Washington for provisions. In the beginning of July, however, Captain James Farrow was allowed to sail the *Pacific* to the West Indies with a

load of shingles. It was “the first sailing merchant vessel sailed out of this port since the blockade was established” (*The New Era* I (6), 3 July 1862).

Confederate forces tested Union resolve to hold Washington with attacks in September 1862 and March 1863, but were repelled both times (Warren 1898: 38-43). Union troops abandoned Washington in 1864 after Confederate forces captured Plymouth. The retreat destroyed the town.

For the three preceding days the town was given up to sack and pillage. The plundering was...general and indiscriminate...The owners and occupants were insulted and defied in their feeble endeavors to protect their property...The fire broke out at 10 o'clock in the morning of April 30th, as the last Federal troops were embarking. It burned from the river through to the northern limits of the town, extending from Van Norden nearly to Repess streets, and spreading both to the east and west...the bridge was fired and destroyed...Quite one third of the town was consumed...After this baptism of fire the town was desolate and ruined. There were scarcely five hundred inhabitants remaining of what had been an enterprising and prosperous of thirty-five hundred three years before (Warren 1898: 43-45).

Thus ended the Union occupation, and what had been an extensive and profitable town.

Commerce once again sprouted after the war, but on a much smaller scale than in the pre-war years. Mellie Gaskill Mayo provides a poignant epitaph:

After four long years of bloody strife, the fragments of humanity that were left came back to view the ruin of their once beautiful town, a greater portion of which had been laid in ashes. At this time the people were much reduced in circumstances. Their vessels had been taken by the enemy or destroyed in other ways, they were compelled to discontinue their West India trade and rely mostly upon the coastwise, and before prosperity again smiled upon them, larger ports and more money had taken this trade which now, except and occasional trip, is entirely extinct (Mayo 1903: 62).

The schooner *Star* disappeared from official records after it left Guadalupe in 1862. But that was not the end of the vessel's legacy. The presence of a shipwreck called the *Star* has long been known in Hyde County's local oral history. Several differing accounts record the final days of a vessel sunk in the Pungo River, north of Ponzer, North Carolina. In 2002, Hyde County resident Bill Smithwick relayed a story told to him by the late Robert Lowe, a local waterman and boat builder. According to Mr. Lowe, the schooner *Star* had taken on a load of naval stores at nearby Pine Grove Landing, and while waiting to sail down river, the crew heard rumors of approaching Union vessels, so they removed the cargo and scuttled the vessel. Lowe also stated that a portion of the vessel was above water for years, and that he had salvaged timber for use as boat building material (Lawrence 2002B: 2). In 2002 and 2003, Hyde County brothers Dewey and Leslie Clayton, both over 90 years old, shared stories of the sunken blockade-runner. According to Dewey, after the Confederates abandoned the vessel, Union forces came upon it and set it afire (Lawrence 2002B: 2). He remembered seeing the vessel above water "sometime in the 1920s" (Babits 2003: 18 June). Dewey related that Robert Lowe and his brothers lived in the nearby marsh area and removed wood from the *Star* to use as barn building material (Babits 2003: 18 June). Leslie agreed with his brother's accounts and added that the *Star* burned mostly along the portside, about 20 ft aft the bow (Babits 2003: 17 June). Another local account cited the *Star* as a Confederate gunboat (Harris 1995: 136).

When David Gaskill entered the Pamlico Sound, he probably quickly learned that he needed to find place to hide. The Pungo River would have been the closest option.

Sailing the vessel far up the river would have given him a good hiding place as well as a decent place to offload his cargo for overland shipment to Washington. What remains indeterminable, however, is whether or not Gaskill once again sailed the *Star* to the West Indies. The vessel ran the blockade once, but did it happen again?

According to Union dispatches during the sound occupation years, the Pungo was patrolled because it was known for contraband vessel traffic. On 5 March 1863, the U.S.S. *Lockwood* returned to New Bern following a foray up the Pungo where “[s]he destroyed a bridge which the enemy had built to facilitate the removal of the products from that section into the interior...and brought in ...a small schooner and a few arms” (Rush 1914, Series I, VIII: 587). In June 1864, the U.S.S. *Lockwood* and U.S.S. *Valley City* steamed to Mount Pleasant (Wysocking Bay), Hyde County, captured three schooners and burned two more. Lieutenant G.W. Graves then headed up the Pungo to Saterwaite’s Point where he embarked with men to Leechville to capture Confederate guerillas. “I find that they keep a regular system of lookouts on all prominent points, making it almost impossible to surprise them” (Rush 1914, Series I, X: 154). Graves confiscated a large shipment of shingles awaiting shipment. The shingles suggest that vessels were still loading for shipments south. Graves does not name the schooners burned or give a precise location. Chances are they were burned at Mount Pleasant and not farther up the Pungo where the Leechville raid occurred. *Valley City* crewman John M. Bolten kept a journal between the lines of a dictionary and described the same foray, but did not mention capturing or burning vessels (Bolten 1864). Did the *Star* fall prey to one such search and destroy mission?

IV. Surveying Site 0014PUR

Project Overview

In June 2003, faculty and students from East Carolina University's Maritime Studies Program investigated a submerged wooden vessel in the Pungo River, approximately 2.5 miles (4.0 km) upriver from Ponzer, North Carolina (Figure IV-1). The vessel lay in 2 to 15 ft (.6 to 4.6 m) of water and was covered by 6 to 7 ft (1.8 to 2.1 m) of silt. The investigation was the culmination of a three year project started by Dr. Lewis Forrest of the Mattamuskeet Foundation.

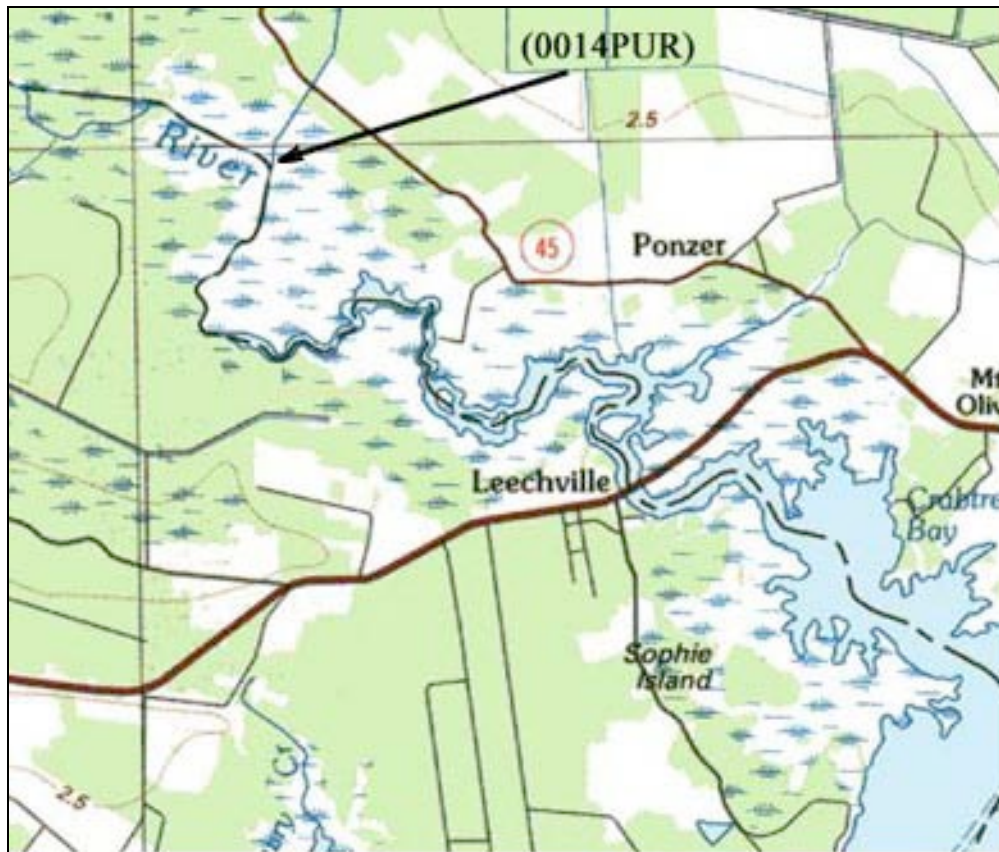


Figure IV-1. Pungo River and Site Location Map (after Maptech 2005).

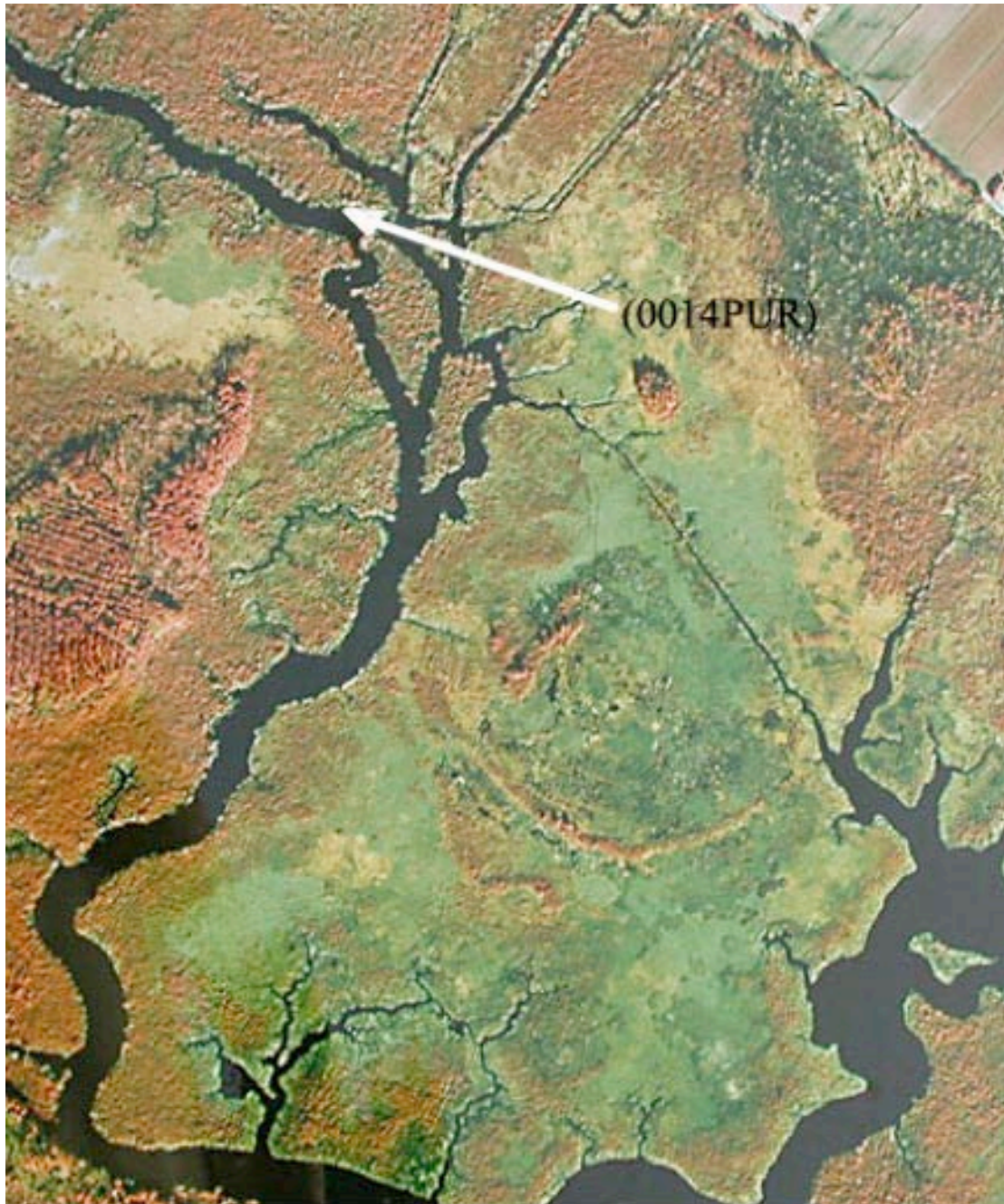


Figure IV-2. Upper Pungo River Satellite Image Map (after Forrest 2003).

In November 2001, Dr. Forrest organized an exploratory dive where local inhabitants believed the schooner *Star*, a Confederate blockade-runner, was burned to avoid capture. The site lay adjacent to a 350-acre tract donated to the Mattamuskeet Foundation by Ponzer resident Bill Smithwick. The Foundation plans to develop the parcel into a heritage tourism park and mark the wreck site as part of a canoe trail. Dr. Forrest enlisted the help of Tony Weston, owner of Dallas Weston Dive Shop in Virginia Beach, Virginia, and his associate, Jeff Bradbury, to dive on the site. The two divers discovered frames protruding from the muddy river bottom, suggesting a wooden vessel was buried in the sediment. Dr. Forrest then contacted Richard Lawrence of the Underwater Archaeology Branch (UAB), and a joint UAB/ Mattamuskeet Foundation project was scheduled for summer 2002.

From 17 to 18 June 2002, the UAB, along with Mattamuskeet Foundation members, and Dr. Lawrence Babits, Maritime Studies Program at East Carolina University, conducted a site investigation. The investigation began with a magnetometer survey. Several passes were made over the site, but it generated less than 20 gammas magnetic disturbance. Following the magnetometer survey, UAB divers conducted exploratory dives. The divers discovered frame ends and a large timber protruding from the bottom. It was determined that the latter was probably one end of the vessel.

A 74 ft (22.6 m) baseline was attached to the large timber and extended upstream. Historical investigation by Richard Lawrence revealed that the *Star*, a schooner 63 ft 4 in (19.3 m) in length, 20 ft 5 in (6.2 m) in breadth, was built in Hyde County, North Carolina, in 1842. In 1852, the vessel was lengthened to 74 ft (22.6 m) and widened to

20 ft 10 in (6.34 m). The goal was to use the *Star*'s known measurements to locate the other end.

The baseline was secured at the upstream end by a metal stake. An excavation unit was dredged at 57 ft (17.4 m) on the baseline where exposed frame ends were found. The excavation unit contained both frame ends and hull planking with evidence of charring. The frame end orientation suggested that the upstream end of the vessel was closer to shore than assumed.

Another large timber was found upstream, protruding from mud in approximately 2 ft (.6 m) of water. The baseline was extended and attached to this new timber (see Figure IV-3 for vessel orientation). The baseline move changed the length to 75 ft 6 in (23 m), approximating that of the *Star*. A second excavation unit was dredged at the upstream end to determine whether or not gudgeon straps were present because local oral histories claimed the vessel's stern lay upstream against the river bank (Lawrence 2002: 2). No straps were found, but a horizontal athwartships hole was discovered along with several longitudinal drift pins and planks measuring approximately 2 in by 8 in (5 cm by 20 cm).

Divers probed along the vessel's centerline between 20 and 40 ft (6.1 and 12.2 m) along the baseline to determine whether or not the vessel was equipped with a centerboard. None was found, in part because more than 6 ft (1.8 m) of silt overlay the site. Following the search for a centerboard, divers took measurements from the baseline to the frame ends along the vessel's channel-side. The half beam measurement was determined to be 10 ft 3 in (3.1 m). Doubled, this measurement is 20 ft 6 in (6.25 m),

approximating the *Star's* 20 ft 10 in (6.34 m). Richard Lawrence concluded that if the vessel located adjacent to the Mattamuskeet Property were the *Star*, it represented the oldest known North Carolina-built schooner located in state waters. The site was designated (0014PUR), and a more thorough investigation was recommended (Lawrence 2002B: 10-12).

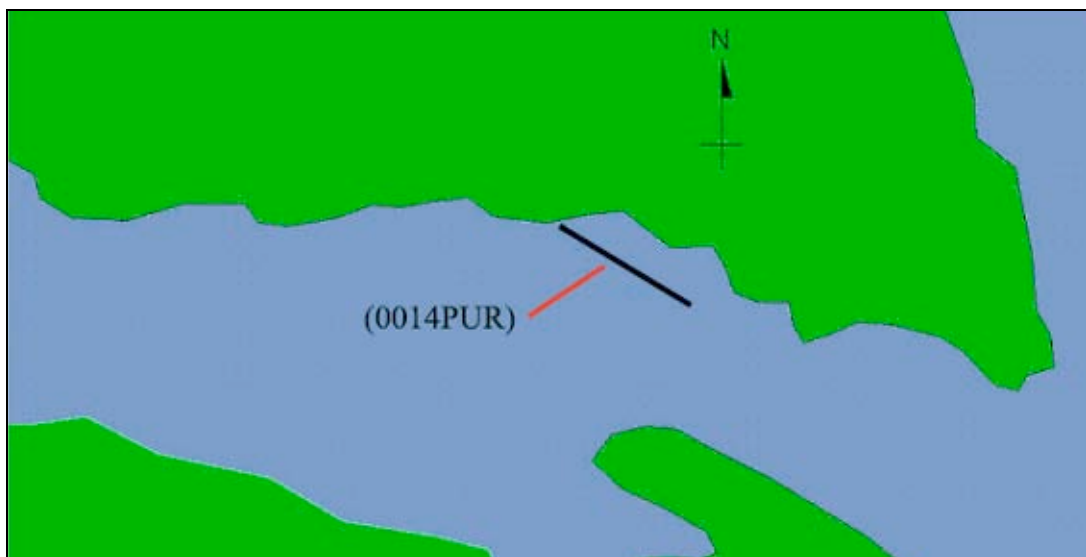


Figure IV-3. Vessel Orientation (after Lawrence 2002B:5).

From 4 to 20 June 2003, the Maritime Studies Program at East Carolina University, along with Dr. Forrest and the UAB, conducted a Phase II investigation of the site (0014PUR). Three excavation units were dredged along the channel-side of the vessel, one at either end and one amidships. A trench was later dredged along the keelson, connecting the three excavation units. Eighty artifacts were recovered, documented, and all but seven returned to the site. The remaining seven artifacts were taken to the UAB for conservation. The vessel was determined to be 74 ft 6 in (22.5 m)

long by 20 ft 8 in (6.3m) in beam. It was burned throughout most of the area surveyed.

Two mast steps were found.

Research Design

Preliminary historical research did not reveal any written first-hand accounts regarding the vessel's final disposition. The combination of the 2002 UAB findings and local oral history provided a foundation on which to create a research design; however, a problem lay in how to approach the site without bias. The goal was not to prove that the submerged vessel was the *Star*, rather, it was to document the vessel while taking into account details provided by local oral histories. Several research hypotheses were formulated with the intention of disproving as many as possible. Any that remained following the field investigation would suggest a best-fit scenario on which explanation of the site would be contingent (Chamberlain 1965; Platt 1964). Site investigation methodology was designed to provide optimal data recovery to address research hypotheses. Limiting site disturbance while maximizing data recovery was paramount in the research design. The research hypotheses tested in 2003 follow.

Hypothesis 0. The Null Hypothesis (Platt 1964) was unnecessary: the existence of a submerged vessel was determined by both the 2001 exploratory dive and the 2002 UAB investigation.

Hypothesis 1. The vessel is a wooden vessel. Previous investigations did reveal wood remnants, but their small scale was not sufficient to rule out composite construction. Evidence of an iron, steel, or fiberglass hull will disprove this hypothesis.

Hypothesis 2. The vessel is a sailing vessel. Sail, steam, and other fuel-powered vessels have plied and continue to ply, the rivers and sounds of North Carolina. Existence of engine remnants will partially preclude this hypothesis. It remains true, however, that 19th century steam vessels often relied on sail technology as well as steam for propulsion. Signs of both might be present. Evidence of engine remnants without evidence of sail technology will disprove this hypothesis, whereas evidence of mast steps and rigging remnants devoid of other propulsion evidence will suggest that the vessel is a sailing vessel.

Hypothesis 3. The vessel is a two-masted schooner. Contingent on *Hypothesis 2*, if the vessel is a two-masted schooner, at least two mast steps should be present. If the vessel lacks steps, or the vessel contains only one step, this hypothesis can be disproved. Additionally, evidence of two steps will not prove that the vessel is a two-masted schooner. Several other rig patterns used two masts.

If the vessel is a two-masted schooner, mast step locations should fall within a range found on similar sized schooners. Using key dimensions of North Carolina-built schooners (Appendix H) as a guideline for mast step location on vessels 58 to 76 ft (17.7 to 23.2 m) in length, the forward step of a two-masted schooner will probably occur between 7 and 15 ft (2.1 and 4.6 m) from the bow. The aft step will probably occur between 30 and 43 ft (9.1 and 13.1 m) from the bow (Lawrence 2002B: 15). If the vessel is indeed 75 ft 6 in (23 m) in length, as previous investigations concluded, mast steps will likely occur between 11 to 13 ft (3.4 to 3.9 m) and 40 to 43 ft (12.2 to 13.1 m) from the bow.

Hypothesis 4. The vessel contains a centerboard. Centerboards became increasingly common in coastal North Carolina during the second half of the 19th century, where shoals and bars were navigational obstacles for deep keel vessels. The absence of a centerboard or remnants thereof will disprove this hypothesis.

A centerboard might help indicate vessel age. The earliest known North Carolina centerboard reference is in a letter from Elijah Cornell of Martin County, to his brother on 13 March 1817:

I finished the vessel that I was at to good satisfaction the oner sold her. I am building another for the same man...she is to be a vessel with a Leabourd in the Middle which people here are not acquainted with but I think it will introduce the fashion here which will be a grate advantage to this Country the navigation be shole (Merriman 1997: 9).

Although the centerboard was introduced in the early 19th century, the probability of centerboard use on North Carolina vessels prior to 1830-1835 is low, “but the 1840s would be getting well into its common usage...” (Mike Alford cited in Lawrence 2002B: 10). As a caveat, however, vessels constructed after 1840 did not necessarily have centerboards; the centerboard did not instantly eclipse the deep keel. “By the 1860s there were two basic hull shapes for local schooners...used in the coasting trade. The keel type which could be shoal or deep, and the centerboard” (Fleetwood 1995: 132). John Willis Griffiths adds that “some [coasting vessels] are built with a centre-board, or moveable keel, to increase the lateral resistance when the water is of sufficient depth to admit of its being lowered, while others have a deep keel; and again on the other hand, some have no-centre-board and a very small keel” (Griffiths 1850: 347). Three different ship building contracts undertaken by New Bern, North Carolina, shipbuilder Joseph J. Roberson

between 1832 and 1844, detail the construction materials and fittings to be used, down to the windlass's iron attachment bolts. Centerboards are not mentioned (Roberson 1830-1844).

Hypothesis 5. The vessel was lengthened. Enrollment records reveal that the *Star* was lengthened in 1852. According to Alford, "A vessel can be lengthened a couple of ways, but this vessel was certainly cut through the middle and a new section built in. I base that on the substantial increase in tonnage after rebuild and also an increase in the beam dimension" (Cited in Lawrence 2002B: 10). If the vessel were lengthened in this manner, indications should be present. For example, lengthening the vessel might have moved existing mast placement and necessitated construction of new steps. Changing step locations, however, might not have affected the sailing performance enough to necessitate new steps. If new steps were created, extraneous steps might be present.

Disproving this hypothesis will entail finding no evidence of lengthening. This might prove difficult because vessels could have been lengthened in several ways and evidence might not be readily identifiable. During the lengthening process, new sections of keel and keelson would have scarphs at their beginning and terminating points. The existence of scarphs along the keelson amidships might indicate lengthening, but would not be conclusive. The keelson might contain several sections. Conversely, the lack of scarphs along the keelson does not disprove vessel lengthening: the entire keelson might have been replaced. Similar changes in ceiling plank patterns will also suggest lengthening.

Hypothesis 6. The vessel dates to the 19th century. Sailing vessels plied North Carolina waters since the 16th century. The vessel examined might date to a time frame other than 1862. Identification of particular construction traits will narrow the field.

Hypothesis 7. The vessel is North Carolina-built. This is undoubtedly the most difficult of all hypotheses to disprove. The database for North Carolina-built vessels is very small, and historical documentation of North Carolina ship construction techniques is almost nonexistent.

After the Revolutionary War, vessel construction followed growing local traditions. Smaller and less organized southern yards produced less uniform vessels than those of their northern counterparts. Mike Alford (2003, pers. comm.) describes this as “intuitive building”. That is, local builders built by “rack of eye” rather than using extensive mathematics, models, or lofting rooms. Available timbers were made to fit.

John Willis Griffiths adds the following:

The coasting vessels of the United States combine the greatest variety of shape and principal dimensions; and we would doubtless be quite safe in our conclusion were we to add, to a much greater extent than in any other part of the world, which we think the difference in draught of water will fully prove... It must be quite apparent that no definite instructions can be given for the construction of coasting vessels that will apply-universally to all (Griffiths 1850: 347).

Some regional building characteristics might be evident, but pinning them down to strict local building techniques will be difficult. Harry Peccorelli identified a break from traditional 18th century European ship construction techniques by defining “plantation” or “lowcountry” building techniques: “While these carpenters were skilled in working local species of lumber, and even possibly employed for some time in a shipyard, they were usually not apprenticed in the European tradition” (Pecorelli 2003:

73). Pecorelli cites variations in construction techniques by examining several 18th century vessels located in North Carolina, South Carolina, and Georgia, while comparing his findings to known European-built vessels from the same time period. Indicators of plantation construction include:

- 1- Variations in keel construction: Keels that widen amidships and taper at their ends, and keels that are rounded on top versus the traditional rectangular profile of European construction.
- 2- Variations in keelson construction: Some are notched to straddle floors while others are not. The European vessels examined were all notched to fit over the floors.
- 3- Variations in floor construction: Specifically, floors in plantation-built vessels are laid atop the keel without being notched. This places the garboard strake attachment point at the top edge of the keel. In European built vessels, the floors are notched to straddle the keel (Pecorelli 2003: 66-88).

Although these indicators create a starting point for distinguishing vernacular construction from that of traditional European techniques, they might be limited in a broader diagnostic sense. The vessels used for this comparison originated in the 18th century. If vessel (0014PUR) was constructed later, it might not resemble the plantation-built characteristics identified by Pecorelli.

Wood samples might help identify local origin. Live oak (*Quercus virginian*), white oak (*Quercus alba*), red cedar (*Juniperus virginiana*), and southern yellow pine, loblolly (*Pinus taeda*) and longleaf (*Pinus palustris*) specifically, were commonly used shipbuilding species indigenous to eastern North Carolina. The three Roberson

indentures mentioned in *Hypothesis 4* cite all of the above listed species as construction components (Roberson 1830-1844). Additionally, southern yellow pine was identified as the primary building material in a 19th century sailing flat investigated in Chocowinity Bay, 1997 (Merriman 1997: 76).

The Elizabeth City, North Carolina-built schooner *Scuppernong*, built in 1853, was constructed of several of the above listed species, but also contained a sweet gum (*Liquidambar styraciflua*) keel and keelson (Turner 1999: 71-92). Documented use of sweet gum in ship construction is rare. John Willis Griffiths, in his *Treatise on Marine and Naval Architecture*, offers that “the timber composing the keel is usually of white oak; sometimes, however, a kind of timber called sweet gum is used for small vessels that are to be iron-fastened on account of the salutary influence it exerts on iron...[however] it is too soft and flexible for the keel of ships (Griffiths 1854: 289-290). Griffiths does not describe his distinction between small vessels and ships. In the *American-Built Clipper Ship*, William L. Crothers adds, “[I]n strength and elasticity it [sweet gum] can not compete with such woods as ash, maple, or oak; however, it is stable and easy to work with tools...Sweetgum was not looked upon favorably in shipbuilding” (Crothers 2000: 26). Crothers references only one vessel, *Santa Claus*, in which a sweet gum keel was used. In this instance, the sweet gum was laminated to rock maple to increase the keel’s rigidity (Crothers 2000: 26). An additional quality of sweet gum is its moderate resistant to rot (U.S. Bureau of Ships 1945: 10).

The *Scuppernong* is not the only documented instance of sweet gum use in eastern North Carolina ship construction. In May 1849, New Bern, North Carolina,

resident E.R. Willis placed the following newspaper advertisement in Washington, North Carolina's, *North State Whig*. "The subscriber has on hand a quantity of white oak and post oak ship timber, of large size and the best quality, that has been docked three years; also a gum keel 75 feet long. And he will contract to build, or will sell the timber at a fair price" (*North State Whig* VI (46), 27 June 1849).

Sweet gum trees average 4 ft (1.3 m) in diameter and 120 ft (36.6 m) tall (Crothers 2000: 26). The tree was thus a possible option when long, straight, strong timber was needed. Although less favored than white oak, sweet gum might have been the only viable substitute available to the southeastern shipbuilder as local white oak supplies dwindled.

Hypothesis 8. The vessel was abandoned. Disproving this hypothesis would entail finding signs of wrecking processes. One useful distinguishing factor would be finding a cargo. If a cargo were still on board, it could be assumed that the vessel wrecked before the cargo could be offloaded, thus disproving the abandonment hypothesis. Conversely, signs of scuttling, such as holes drilled beneath the water line would point to abandonment.

Hypothesis 9. The vessel was burned. We know from the earlier archaeological investigation that charring was present on frames. Did this charring continue into the rest of the vessel? Several local accounts indicate that the vessel was burned. They differ, however, in how and by whom it was burned.

Hypothesis 10. The vessel lay stern upstream. If the stern lay closest to shore with the bow facing downstream, it might indicate that the vessel was adrift and

grounded, with the bow swinging downstream with the current. If the bow lay closest to shore, it might suggest that the vessel was driven ashore in that location, perhaps to offload cargo. Local history claims that the vessel is oriented with bow upstream.

In order to address the hypotheses, as well as minimize site disturbance, the investigation commenced with the following specific goals for data collection:

- 1- Document overall dimensions.
- 2- Identify and document centerboard if present.
- 3- Document construction techniques: frame spacing, fastener types and patterns, stem and stern construction, keel, keelson, and location of mast steps.
- 4- Identify extent of charring.
- 5- Obtain measured plan and profile views.
- 6- Identify and document related artifacts.
- 7- Acquire sonar data of the site.

Methodology

A baseline was stretched the length of the vessel and attached to a protruding timber at either end. A 100 ft (30.5 m) tape measure was then attached to the baseline. It was later found that the baseline actually stretched between the stern post and the shore-side knighthead, skewing it from the vessel's centerline. This did not create a problem as measuring methods were not reliant on the vessel's centerline.

It was assumed that the slope of the river bottom caused the vessel to list toward the channel. It was therefore decided that the channel-side of the vessel would be investigated, as it held the greatest possibility for documenting artifactual and structural remains. Exposing portions of only one side would limit overall site degradation. Accordingly, inverted "U" shaped PVC dredge guides were placed perpendicular to the

baseline, 10 ft (3.1 m) in from either end. The structures began at the baseline and extended toward the channel. Two additional PVC frames were placed 10 ft (3 m) apart in the midship section, equidistant from either end of the vessel.

Three excavation units were dredged down to the vessel's ceiling using water induction dredges. The upstream excavation unit began just forward of the stem, and ran 11 ft (3.4 m) aft. The midship unit exposed a 10.5 ft (3.2 m) long section from 24.5 ft (7.5 m) to 35 ft (10.7 m) on the keelson baseline. An 11.5 ft (5 m) wide unit was excavated in the stern (downstream end), exposing the inner port side. Both end units were eventually extended longitudinally to expose the outer hull, stem, stern post and rudder assemblage. A 2 ft (.6 m) wide trench was dredged along the vessel's keelson, to connect the three excavation units. Finally, a portion of the upper hull that lay beyond the vessel's channel side was uncovered. Test units were cleared with a dredge each morning to remove sediment accumulated over the previous night.

The thick overburden contained several tree remnants necessitating the use of saws in some areas. As dredging neared the vessel's ceiling, catch bags were attached to the dredge outflow heads. The bags were periodically emptied and searched for artifactual or structural remnants. As the ceiling was uncovered, frame spaces were dredged one at a time to preserve any artifact contextual relationships. Catch bags were examined and recorded when filled.

The vessel was mapped using triangulation and offsets. Plumb bobs were used where possible, but plumb floats proved more useful in the black-water environment. Floats were created by tying line to large symmetrical conical bottles. The floats were

then pulled downward by one diver while the other diver took intersecting measurements from two points on the baseline. Offsets were used at the stem and stern post to determine the slope of each. Keelson features, planking, and fastener locations were documented using running measurements.

Artifacts were brought to the research boats, measured, photographed, and drawn to scale. Eighty artifacts were documented. Seventy-three were re-deposited on site and seven were taken to the UAB laboratory for conservation. The baseline was removed on the final day, and 2003-dated pennies were placed in the mast steps. One student placed a 2000-dated, 1-Euro coin in the stern excavation area at the frame four/keelson juncture. At the conclusion of the project, the shore-side mud bank was caved in to cover exposed sections. The vessel lies in the slope of the riverbank where sediment is re-deposited quickly. The investigation required frequent re-dredging. Because of this heavy sedimentation rate, the vessel will likely be re-covered in short time.

In addition to excavation and mapping, a side-scan sonar survey was conducted. The three test excavation units and centerline trench are visible, but the image is otherwise diagnostically limited. Shadows of the stern and rudder are somewhat visible, but no other structural details are present. The upward slope of the riverbank along the vessel's starboard side, coupled with the port-side list, precludes any other distinct shadows (Figure IV-4).

A shoreline survey was attempted, but aborted due to a malfunctioning Electronic Distance Measure. The unit was not repairable during the project. Several GPS points

were recorded, but the error range of these points was too great to create a shoreline sketch (see Figure IV-3 for vessel's orientation to the shoreline).

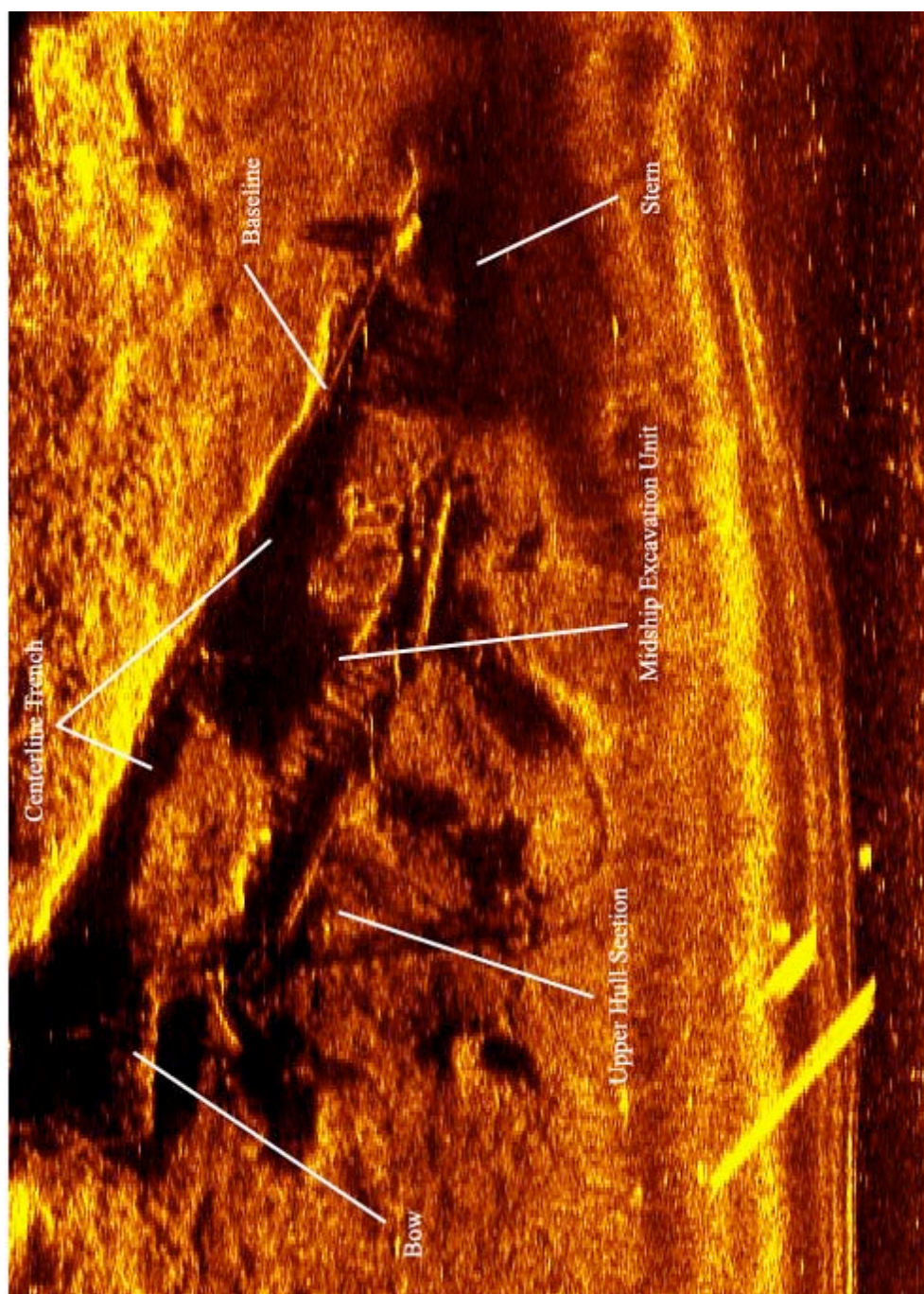


Figure IV-4. Side-scan sonar image (0014PUR).

V. Structural Findings

Bow Excavation Unit

The stem assemblage consists of two discernable timbers: the stem and the apron (Figure V-1). The stem is sided 9.6 in (24.3 cm). From the hull planking to the outer stem edge, the stem's molded dimension increases from 1.4 ft (.42 m) near the top, just below the bobstay juncture, to 1.8 ft (.55 m) near its juncture with the keel. A vertical crack is present along the stem, midway between the hull planking and the outer stem edge. This crack might be a lamination line but it is not traceable throughout the stem's entire length. The stem rises 9 ft (2.7 m) from the bottom of the keel to the top, and is raked 60 degrees. A 1.8 in (4.6 cm) wide scarph is present on the outer edge of the stem, 2.3 ft (.7 m) above the keel bottom. Cracks running vertically from each edge are not traceable for more than a few inches. This scarph appears to be the beginning of the gripe-stem joint. The gripe-keel joint, however, is not discernable, although there is a distinct transition from the keel's squared bottom to the stem's rounded leading edge. A cluster of six yellow metal (probably copper) tacks is nailed into the side of the stem 6.2 ft (1.9 m) up from the keel, and a large iron staple is present at the top of the stem. The hull planks are let into a 2.4 in (6.1 cm) wide beveled rabbet.

The stem is broken 5.8ft (1.8 m) above the keel, and three iron drift pins protrude horizontally from the broken edge. This is undoubtedly the bobstay attachment point. Bobstay assemblage remnants, consisting of two timbers connected by three iron drift pins, were found just forward of the stem (Figures V-2 and 3). The larger bobstay timber is 47 in (119.4 cm) long and narrows from 9 in (22.8 cm) to 4 in (10.0 cm) wide along its

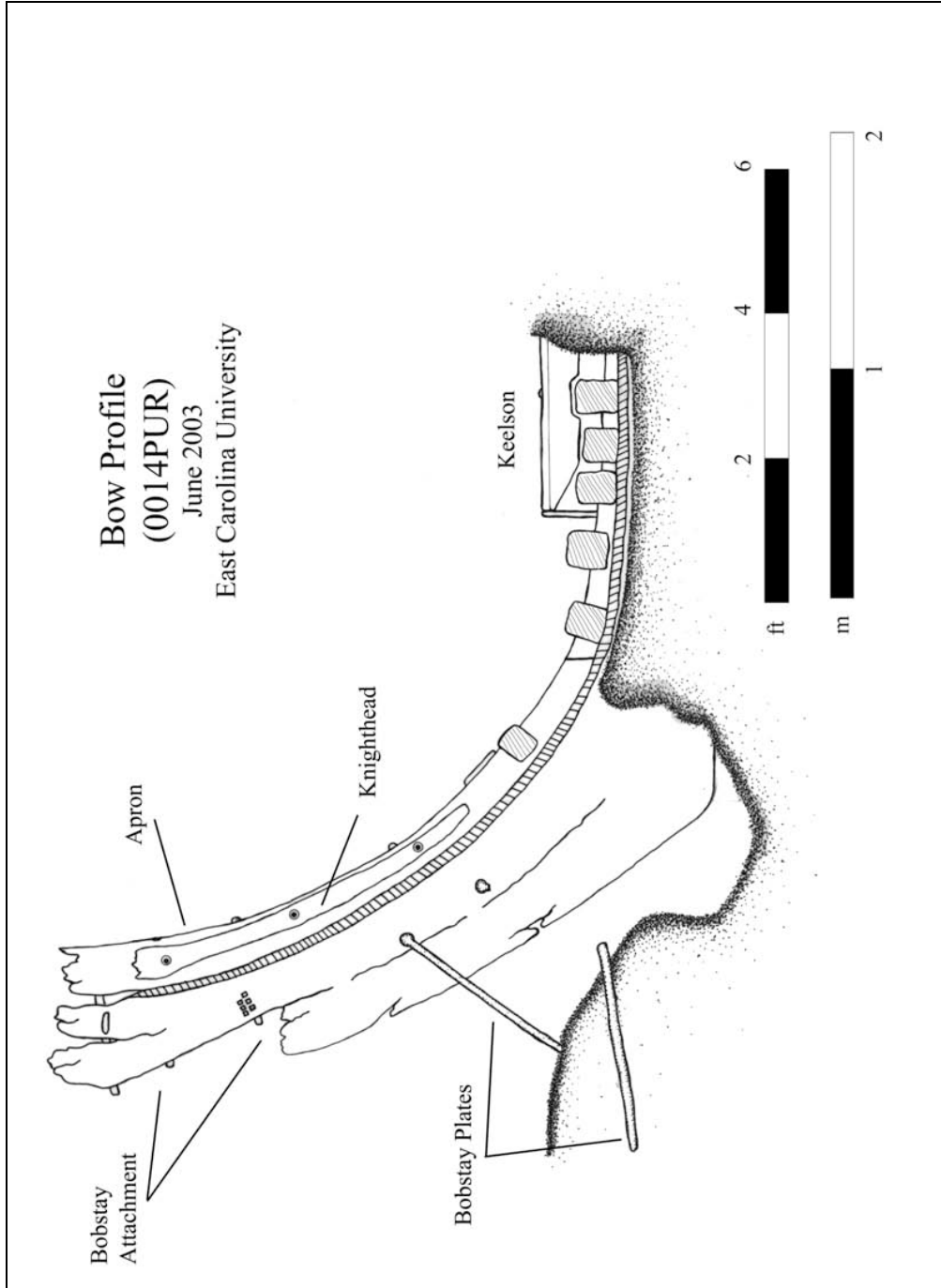


Figure V-1. Bow Profile.

length. The smaller timber is 32.5 in (82.6 cm) long and narrows from 6 in (15.2 cm) to .5 in (1.3 cm). Both timbers are 3 in (7.6 cm) thick.

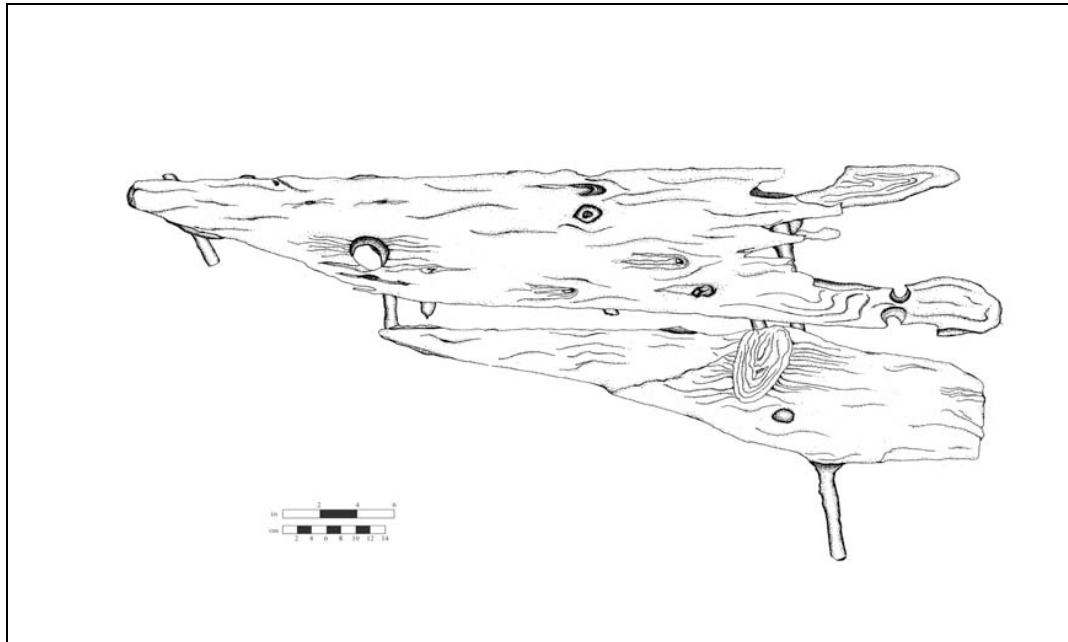


Figure V-2. Bobstay Assemblage. Artifact 0014PUR009.



Figure V-3. Bobstay Assemblage photograph (0014PUR009).

Two bobstay plates are present. The upper attaches to the stem 4.1 ft (1.3 m) above the keel bottom, the lower 3.1 ft (.95 m) above the keel. Both are 6 in (15.2 cm) forward of the hull planking. The plates are actually 1.2 in (3.1 cm) diameter iron rods. The upper plate leaves either side of the stem heading forward, and is bent into a wishbone shape. It appears to be one piece. The lower plate has broken off. A portion of the bobstay chain is also present.

The apron is smooth with no sign of charring (Figure V-1). Three iron drifts and one drift hole are extant along its inner face. The drifts are through-pinned into the stem. The drift hole and first drift pin line up with two drifts on the outer edge of the stem. The third drift is clenched over. The apron gently curves downward into a scarf with the keel, 4 ft (1.2 m) aft of top of the apron. Scarf typology was not determined as the joint continues vertically through the rabbet line, below the hull planking. No breast hooks or breast hook attachment points are present. The smooth, un-charred apron face suggests that a stemson or stem knee was once present and joined to the keelson's leading edge.

Six cant frames and the port knighthead are present (Figure V-1). A 6 in (15.2 cm) square rail stanchion is also present above the turn of the bilge between frames three and four. All are badly burned. The knighthead is molded 3.6 in (9.2 cm) and narrows from 8.4 in (21.3 cm) sided at the top, to 2.4 in (6.1 cm) sided at the bottom. It is fastened to the apron with three iron drifts through-pinned athwart ship. There are two 2.4 in (6.1 cm) diameter holes, one above the other, in the knighthead's top face. The first five frames aft the knighthead are cant frames; the sixth is the first full frame. Frame one butts directly to the apron, while frames two and three are notched to partially ride

atop the keel. Frames four and five continue beneath the keelson, where they butt with the starboard side frames. Frame six is not accessible beneath the keelson. A futtock-like timber can be seen in the plan view just aft of frame six, but it does not continue under the keelson. Speciation of frame five indicates live oak (*Quercus virginiana*) (Newsom 2003, pers. comm.) (see Appendix I for complete wood sample list). Frames in this section vary from 4.8 in (12.1 cm) to 6 in (15.2 cm) sided, and 5.4 in (13.7 cm) to 7.2 in (18.2 cm) molded (see Appendix J for individual frame dimensions and spacing).

Four ceiling planks and eleven hull planks are present in the bow excavation unit. The ceiling planks vary between 7.2 in (18.2 cm) and 8.4 in (21.3 cm) wide, and are 1.8 in (4.6 cm) thick. The hull planks vary between 6 in (15.2 cm) and 7.2 in (18.2 cm) wide, and are 2.1 in (5.5 cm) thick. There is no extant limber board in the bow excavation area, but the first ceiling plank starts 6.6 in (16.7 cm) outboard from the keelson, suggesting that a limber board was once present. The ceiling planks are intermittently charred, making conclusive fastener pattern determinations impossible. A 10 in (25.4 cm) long hawse pipe sits vertically at the forward edge of the ceiling planks. The pipe is 5 in (12.7 cm) in diameter along its length, with a 7 in (17.7 cm) diameter rim. A 1.2 in (3.4 cm) gap runs from top to bottom, the function of which is unknown.

Keelson

The keelson is 57.7 ft (17.6 m) long and broken into two major sections. The first section runs 20.9 ft (6.4 m) aft from the bow. The aft section is 36.8 ft (11.2 m) in length. The two are joined with a nib scarph (Crothers 2000: 78-79). The forward section runs up and aft, while the rear section runs down and forward. The scarph is approximately 4 ft

(1.2 m) long. The forward keelson terminus is ruptured upward. Wood speciation indicates southern long leaf pine (*Pinus* sp., *taeda*) for both forward and aft sections (Newsom 2003, pers. comm.).

The forward keelson section begins in the bow just forward of frame four. It is sided 10.2 in (25.9 cm) and molded 6.6 in (16.7 cm), and a 1.2 in by 1.2 in (3.1 cm) bevel is located along both of its top edges. The leading edge is one half of a nib scarph. A vertical iron drift touches but does not penetrate the leading edge. This suggest that a stemson or stem knee was once attached at this point, connecting the keelson to the apron. A 1.8 in (4.6 cm) deep mortise is present above bow frame six, “letting-in” the frame. The keelson widens to 10.8 in (27.4 cm) amidships, but then narrows to 9.6 in (24.3 cm) at the stern. It also decreases in molded dimension to 4.8 in (12.2 cm) amidships. This dimensional decrease explains why the frames in this section are not “let-in” to the keelson (see *Midship Excavation Unit*), instead the keelson rides atop the frames. The change in width as well as change in molded dimension aft the scarph suggests that the keelson aft the scarph was replaced at some time, perhaps during a vessel lengthening.

The following features occur along the keelson (Figure V-7). A stanchion mortise is centered along the midline, 4.3 ft (1.3 m) aft of the leading edge. The forward mast step begins at 5.9 ft (1.8 m). This equates to 11.8 ft (3.6 m) aft of the inner apron face. A port side mast support runs from 3.8 ft (1.2 m) to 7.3 ft (2.2 m). The keelson scarph connecting the fore and aft keelson sections begins at 16.9 ft (5.2 m) and ends at 20.9 ft (6.4 m). The aft mast step starts at 34.6 ft (10.5 m) on the keelson baseline, 40.6 ft (12.4

aft of the apron. The aft step is accompanied by port and starboard mast supports that run from 31.9 ft (9.7 m) to 38.2 ft (11.6 m). Port and starboard bilge pumps are present at 46.2 ft (14.1 m), 52.2 ft (15.9 m) aft the apron. The pumps are followed by two deck stanchion mortises at 48.9 ft (14.9 m) and 50.3 ft (15.3 m). The keelson terminates 64.7 ft (19.7 m) aft the apron. It is intermittently charred along its full length. No centerboard trunk is present.

The forward-most deck stanchion is 1.8 in (4.6 cm) by 3 in (7.6 m). The aft stanchion mortises measure 2.4 in (6.1 cm) by 4.8 in (12.2 cm), and 2.4 in (6.1 cm) by 9.6 in (24.3 cm). The forward mast step is 5 in (12.7 cm) wide and 11 in (27.9 cm) long. A southern long leaf pine (*Pinus* sp., *taeda*) (Newsom 2003, pers.comm.) rectangular plug is present in the forward step. The aft step is 6 in (15.2 cm) wide and 1.25 ft (.38 m) long. A treenail is present mid-step. Both steps are 3 in (7.62 cm) deep. The forward port mast support is 6 in (15.2 cm) square. A starboard support is presumed to be under the starboard side mud-bank. Both aft mast supports measure 7.2 in (18.2 cm) square. The port support worked loose and floated during the investigation and was documented as artifact (0014PUR004).

Both bilge pump boxes are intact and measure 7.2 in (18.2 cm) square (Figures V-4 and 5). The pumps are heavily charred above the boxes. The extant port pump is 26.5 in (67.3 cm) long and measures 5.75 in (14.6 cm) by 6.5 in (16.5 cm) at the base (Figure V-6, plate 3). The base is beveled 14 degrees. The top 19 in (48.2 cm) is heavily charred; the bottom 7 in (17.7 cm) is not. Each of the base's corners is beveled. The 2.75 in (6.9 cm) diameter pump shaft was created by boring out the tree's heart, and is

consequently not centered. Several metal pump components lay next to the port pump, and are described in Chapter VI. The port pump resembles a common or “suction” pump as described by Thomas J. Oertling (Oertling 1996: 22-55).

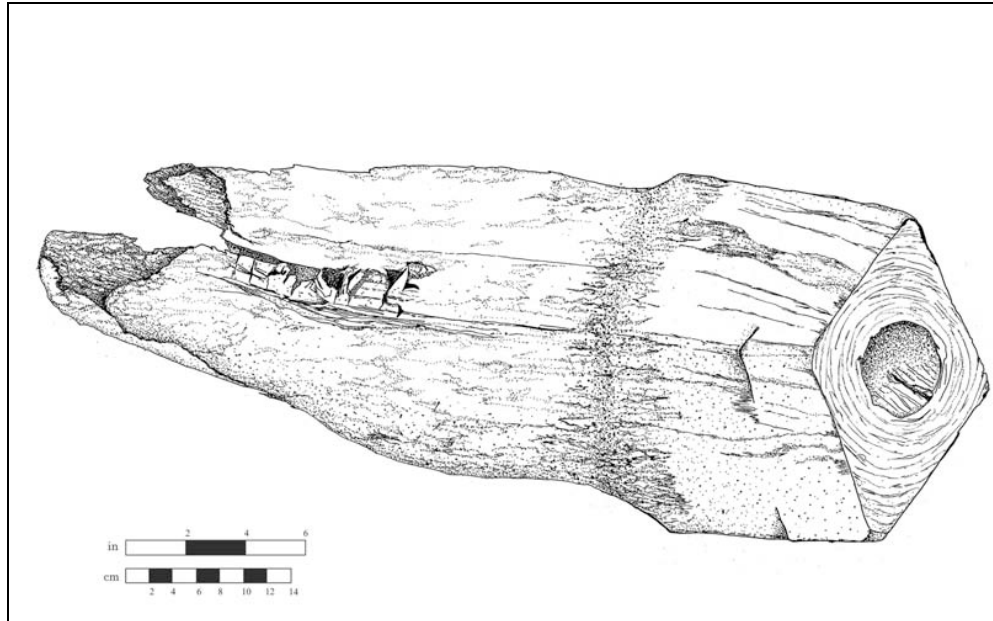


Figure V-4. Port Bilge Pump. Artifact 0014PUR046.



Figure V-5. Port Bilge Pump photograph (0014PUR046). Yellow notebook is 7 in (17.7 cm) long.

Midship Excavation Unit

There are eleven frames in the midship excavation unit, varying from 6 in (15.2 cm) to 7.8 in (19.8 cm) sided (Figure V-6). All are molded 7.2 in (18.2 cm), and none are let in to the keelson. Each frame has a 2.5 in (6.4 cm) wide by .75 in (1.9 cm) limber hole notched into its bottom edge.

Frames are butt-joined with no elaborate scarphing. Most frames have sizeable gaps between their joined edges. There are two distinct frame types. Frame type I starts with a first futtock that butt joins its starboard counterpart beneath the keelson. The first futtock continues outboard past the turn of the bilge, where it meets a second futtock. Type I frames have no floors. Type II frames have floors and begin at indeterminable points on the starboard side, pass under the keelson, and continue to the turn of the bilge where they join the second futtock. Framing in the midship section suggests an alternating sequence of frame types I and II. The butt joints between floors and futtocks are staggered. No frames in this section consist of more than two futtocks. Frame speciation indicates live oak (*Quercus virginiana*) (Newsom 2003, pers.comm.). One random treenail removed from the midship section was longleaf pine (*Pinus taeda*) (Newsom 2003, pers. comm).

Hull planking is present throughout the midship section, but no decking, deck beams, or knees are present. Three heavily charred ceiling planks extend into the midship excavation unit from the forward mud wall. From the keelson, they measure 7.2 in (18.2 cm), 10.8 in (27.4 cm), and 10.8 in (27.4 cm) wide respectively. All are 1.8 in (4.6 cm) thick. No bilge keelsons or clamps are present.

Midship/Keelson Profile
(0014PUR)
June 2003
East Carolina University

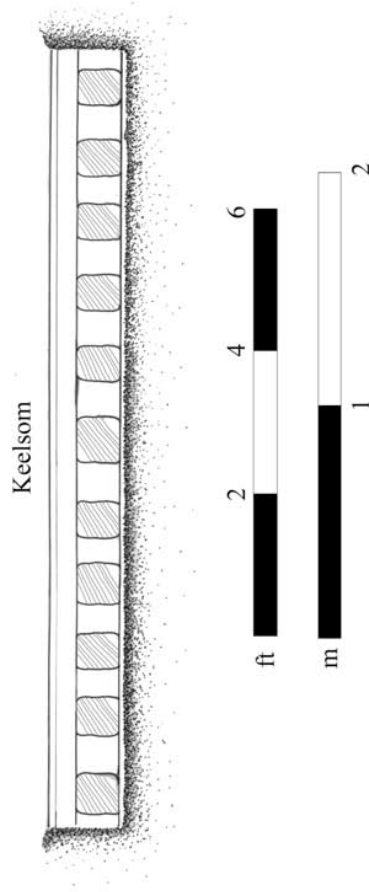


Figure V-6. Midship Profile

Plan View
Pungo River Shipwreck
(0014PUR)
June 2003
East Carolina University

- Iron Nail
- Drift Bolt
- Treenail
- Treenail Hole

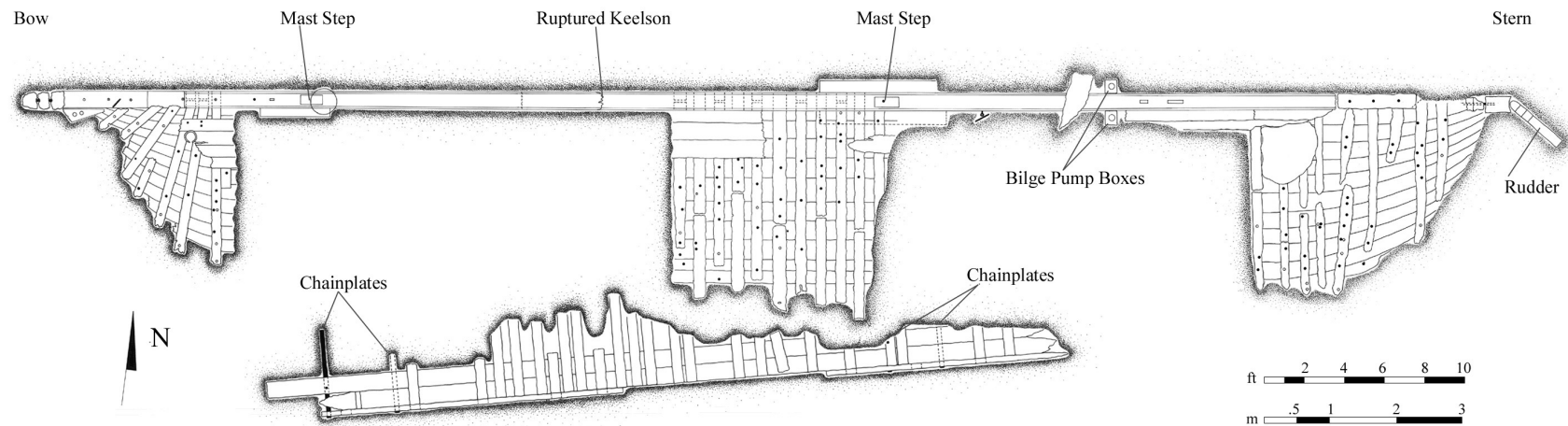


Figure V-7. Plan View.

Stern Excavation Unit

The stern excavation unit is almost devoid of ceiling planking, and is heavily charred (Figure V-8). The keelson terminates 4.5ft (1.4 m) into the unit and is followed by a 3.9ft (1.2 m) long section of deadwood sided 9in (22.8 cm) and molded 8.4in (21.3 cm). This deadwood timber is mortised 1.8in (4.6 cm) deep in two places to accept two stern frames.

Nine frames are present, ranging in size from 5.4 in (13.7 cm) to 7.2in (18.2 cm) sided by 4.8in (12.1 cm) to 7.2in (18.2 cm) molded. Remnants of ceiling planking are present for the first three to four feet aft of the excavation edge. A large amorphous iron object approximately 3.5ft (1.1 m) in circumference lay atop the planking. The planks and iron blocked access to frames beneath the keelson. From the forward mud line moving aft, frame one follows the midship pattern and presumably continues under the keelson to the starboard side. Frame two presumably butts to its starboard counterpart below the keelson. Frames three and four follow the alternating midship pattern. Frames five, six, seven, eight, and nine are half frames rising with the deadwood. Frames six and seven are mortised into the deadwood timber discussed earlier. Frame eight is live oak (*Quercus virginiana*) (Newsom 2003, pers.comm.). Once again, charring precludes accurate fastener documentation; those that were documented follow no recognizable pattern.

The sternpost assemblage is composed of inner and outer posts. Both timbers are sided 7.2 in (18.2 cm). The inner post varies between 6 in (15.2 cm) and 7.2 in (18.2 cm)

molded. The inner post's top is flat. This is most likely a transom timber attachment point.

The outer post is live oak (*Quercus virginiana*) (Newsom 2003, pers.comm.), and stands 8.7 ft (2.7 m). It tapers from 1.4 ft (.42 m) molded at the top to 2 ft (.61 m) molded at its juncture with the keel, and is sided 9.6 in (24.3 cm). The aft edge is concave to allow rudder movement. The outer post is notched to fit over the end of the keel, and is made fast to the keel by a 3.6 in (9.1 cm) by 1ft (.30 m) fish plate.

The rudder is white oak (*Quercus alba*) (Newsom 2003, pers.comm.), and consists of two laminated timbers, edge-joined and through-pinned by three iron drifts. The assemblage tapers from 1.5 ft (.46 m) molded at the top to 2.95 ft (.90 m) molded at the bottom. It is 4.8 in (12.1 cm) sided, and 8.4 ft (2.6 m) tall. The leading edge is convex. Two iron gudgeon straps connect the rudder to the stern post. The lower gudgeon brace is 3.6 in (9.1 cm) by 1.3 ft (.39 m) long, and the upper brace is 3.6 in (9.1cm) by 1 ft (.30 m). The pintles are 2.4 in (6.1 cm) tall by 1.5 ft (.50 m) long. A partial tenon, most likely a tiller mortise connection, is present at the top of the rudder stock. The rudder angles 37 degrees to port.

Keel

The keel-gripe joint is not discernable. Therefore, the only dependable keel measurement comes from the keel-sternpost juncture. At this point, the keel is 1 ft (.30 m) molded and 9.6 in (.24 m) sided. The keel is sweet gum (*Liquidambar styraciflua*) (Newsom 2003, pers.comm.). The keel is inaccessible along its entire length, and it could not be determined if the timber is one piece.

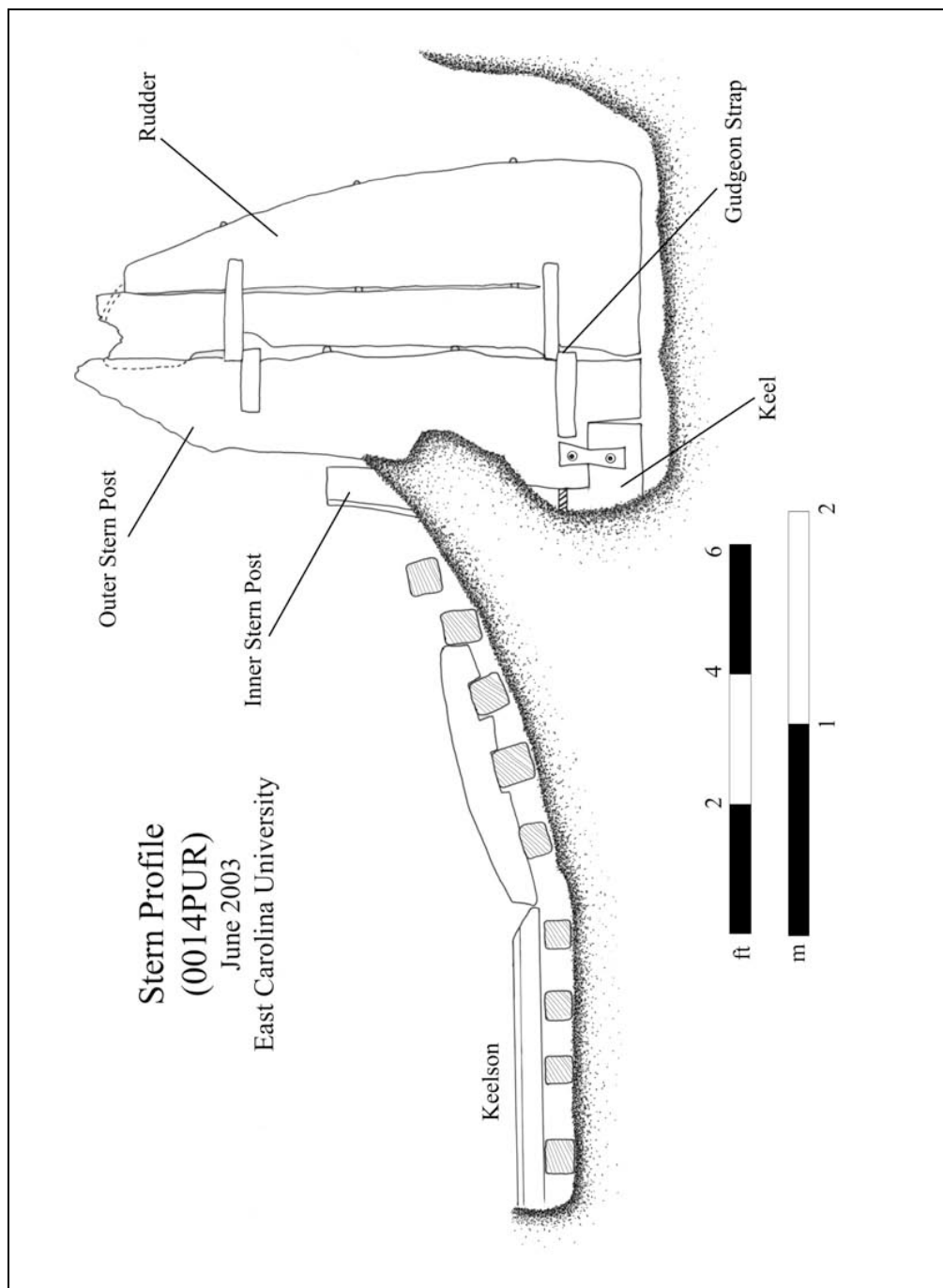


Figure V-8. Stern Profile.

Upper Hull and Covering Board

The upper port side hull is fractured and lay outboard. The exposed section is 40.2 ft (12.3 m) long by 4.9 ft (1.5 m) wide (Figure V-9). The sheer strake and one hull plank are present and run the entire length of the excavation. Both planks are 9.6 in (24.3 cm) wide by 1.8 in (4.6 cm) thick. Fifteen frames and eight rail stanchions are present. The rail stanchions are all 6 in (15.2 cm) sided by 5 in (12.7 cm) molded, and 2.3 ft (.7 m) long. All are mortised through the covering board, but do not extend above it. Frames are spread out along the full length of this section, and measure 6 in (15.2 cm) sided by 5.4 in (12.7 cm) molded. Ten frames are concentrated in an 11 ft (3.4 m) long section. Their spacing differs from spacing in the midship excavation unit (see Figure V-9). Six of the ten frames are grouped into three tightly spaced frame pairs, 2.4 in (6.1 cm) apart. Two additional frames are paired and spaced 4 in (10.1 cm) apart. Two non-paired frames and three rail stanchions complete this section. Framing along the rest of the upper-hull is sparse.

The covering board is 1 ft (.3 m) wide, and tapers in thickness from 3.6 in (9.1 cm) on its outboard edge to 1.8 in (4.6 cm) on its inboard edge. It is split into two sections. The 15.1 ft (4.6 m) forward section begins and terminates cleanly. The aft is 12.1 ft (3.7 m) long and starts cleanly but is splintered along its aft edge. A 10.2 ft (3.1 m) section is missing in between. The forward covering board has five through mortises, the aft has three. Forward and aft chain plates are present. The forward chain plates measure 2.4 in (6.1 cm) wide by 1.2 in (3 cm) thick and 4.5 ft (1.4 m) long. They were

spaced 3.4 ft (1 m) apart. The aft plates are dimensioned the same as the forward plates, but are spaced 2.6 ft (.79 m) apart.

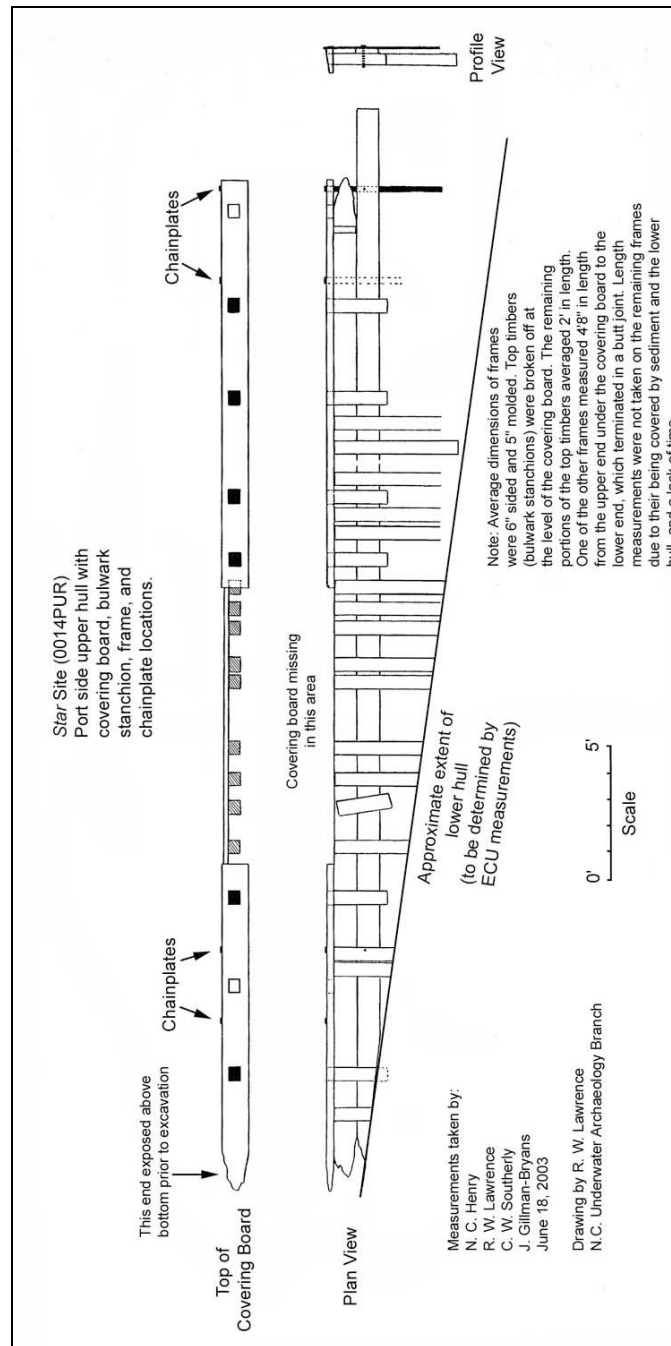


Figure V-9. Upper Hull. Documented by the Underwater Archaeology Branch (Lawrence 2003).

VI. Artifact Analysis

Eighty artifacts were recovered and documented. Seven are currently being conserved at the UAB (Appendix L). The remaining artifacts were returned to the site. Artifacts range from rigging components to structural ship timbers. Although covering a broad temporal range, the artifacts are consistent with a mid 19th century sailing vessel. Artifacts are organized into four categories: *Rigging Elements*, *Bilge Pump Components*, *Fasteners*, and *Additional Artifacts*. These sections contain descriptions and illustrations of the most significant diagnostic artifacts. Appendix K contains a complete artifact list.

Rigging Elements

Iron Eye Bolts. Three iron ring and bolt assemblages were recovered from the bow. The first, a large eyebolt with partial deadeye (0014PUR071), was found in front of the stem near the bobstay location (Figures VI-1, 2, and 3). This artifact is composed of a keyhole shaped iron hoop 9.5 in (24 cm) long by 6 in (15.2 cm) wide, and an 8 in (20.3 cm) long iron eye bolt. The end of the bolt is peened over, leaving approximately 5.5 in (13.9 cm) of bolt length between the eye and peened end to penetrate through a timber. When removed, the assemblage contained a remnant portion of the wooden deadeye, and concretion had formed across the narrow end of the iron hoop (Figure VI-1 depicts the artifact at time of collection, whereas Figures VI-2 and VI-3 were taken after conservation began). Artifact 0014PUR071 is most likely part of the bowsprit rigging, the bolt having been affixed to the stem or bobstay.

The second iron eye and bolt assemblage (0014PUR049) was collected from the bow excavation unit between bow frames 5 and 6 (Figure VI-4). The ring is approximately 3.5 in (8.9 cm) in diameter, and the iron bolt is approximately 3.5 in (8.9cm) long. The assemblage was heavily concreted at the time of drawing, and it is unclear whether the bolt loops around the ring or is just concreted to the ring. Artifact 0014PUR065, the third iron eye and bolt assemblage resembles 0014PUR049, but is too heavily concreted to distinguish.

Bobstay Chain. Approximately 18 in (45.7 cm) of the bobstay chain (0014PUR074) was found near the bobstay plates (Figures VI-5, 6). One end of the chain is heavily concreted, and the other terminates with a broken link. The links are approximately 3 in (7.6 cm) long by 2 in (5.1 cm) wide. Seven links are discernable below the concretion. One additional link was collected as artifact 0014PUR024.

Iron Hooks. Three iron hooks were found. Artifact 0014PUR023 was collected from stern space 3 (Figure VI-7). This hook is 4 in (10.1 cm) long by 2.5 in (6.4 cm) at its widest point. The base is the remnant of a swivel, consisting of a 1.75 in (4.5 cm) wide flange, with a .75 in (1.9 cm) hole drilled in its center.

Artifact 0014PUR035 was located outside the sternpost while dredging down to the keel (Figure VI-8). This is the largest of the three hooks, measuring approximately 11 in (27.9 cm) tall by 7.5 in (19 cm) across. An eye is formed at the top, perpendicular to the hook. The hook's eye contains thimble, grooved to accept a line. Artifact 0014PUR064 is similar in shape to 0014PUR035, but is much smaller (Figure VI-9). This hook was also found at the stern, but was inside the excavation unit atop the keelson.

Overall dimensions are approximately 5 in (12.7 cm) by 2.5 in (6.4 cm). All three hooks were most likely used for loading and offloading cargo. The close proximity of the three suggests that a boatswain or rigging locker was located in the vessel's stern.

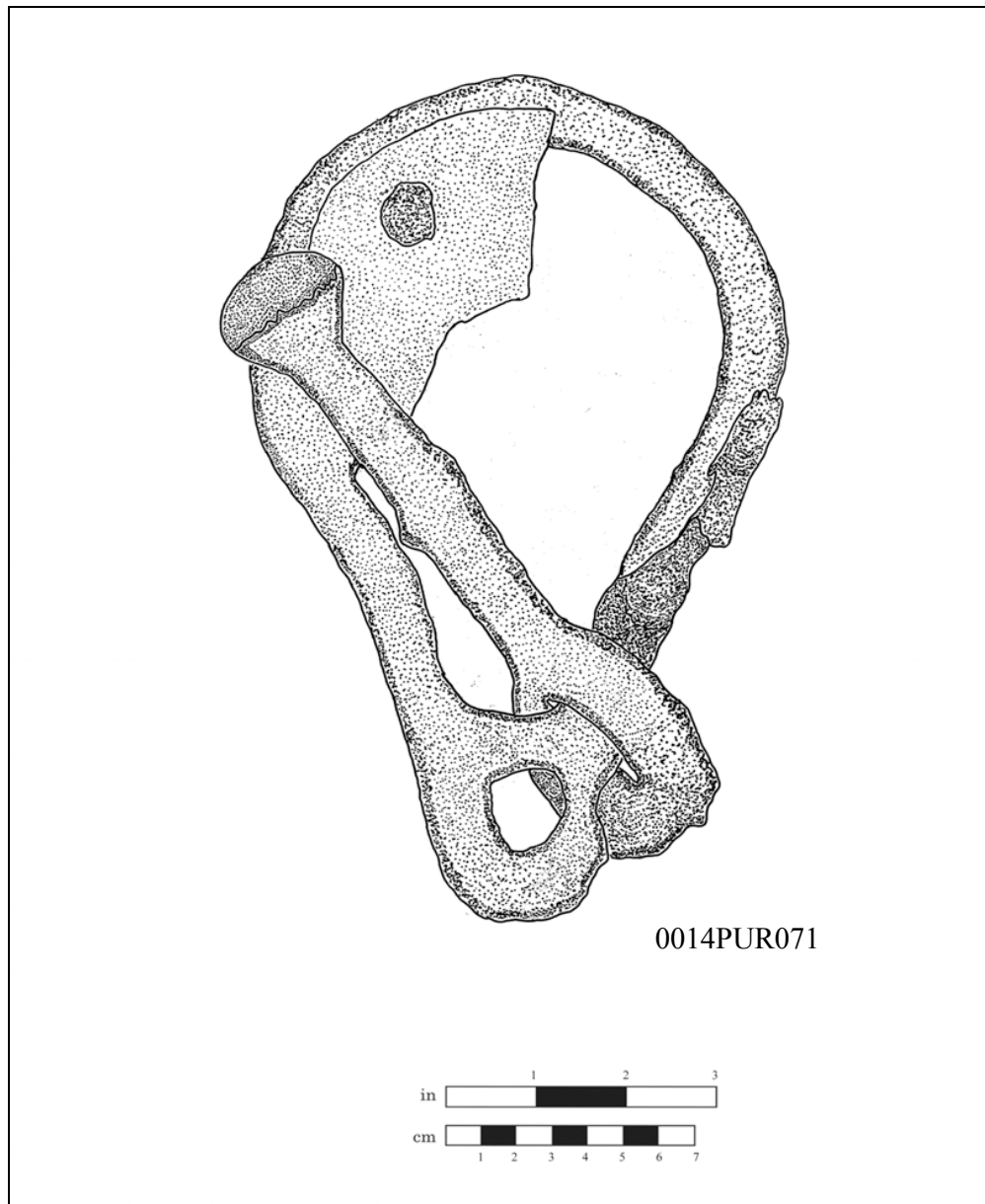


Figure VI-1. Iron deadeye and eyebolt assembly (0014PUR071).



Figure VI-2. Iron deadeye and eyebolt assembly photograph 1 (0014PUR071).



Figure VI-3. Iron deadeye and eyebolt assembly photograph 2 (0014PUR071).

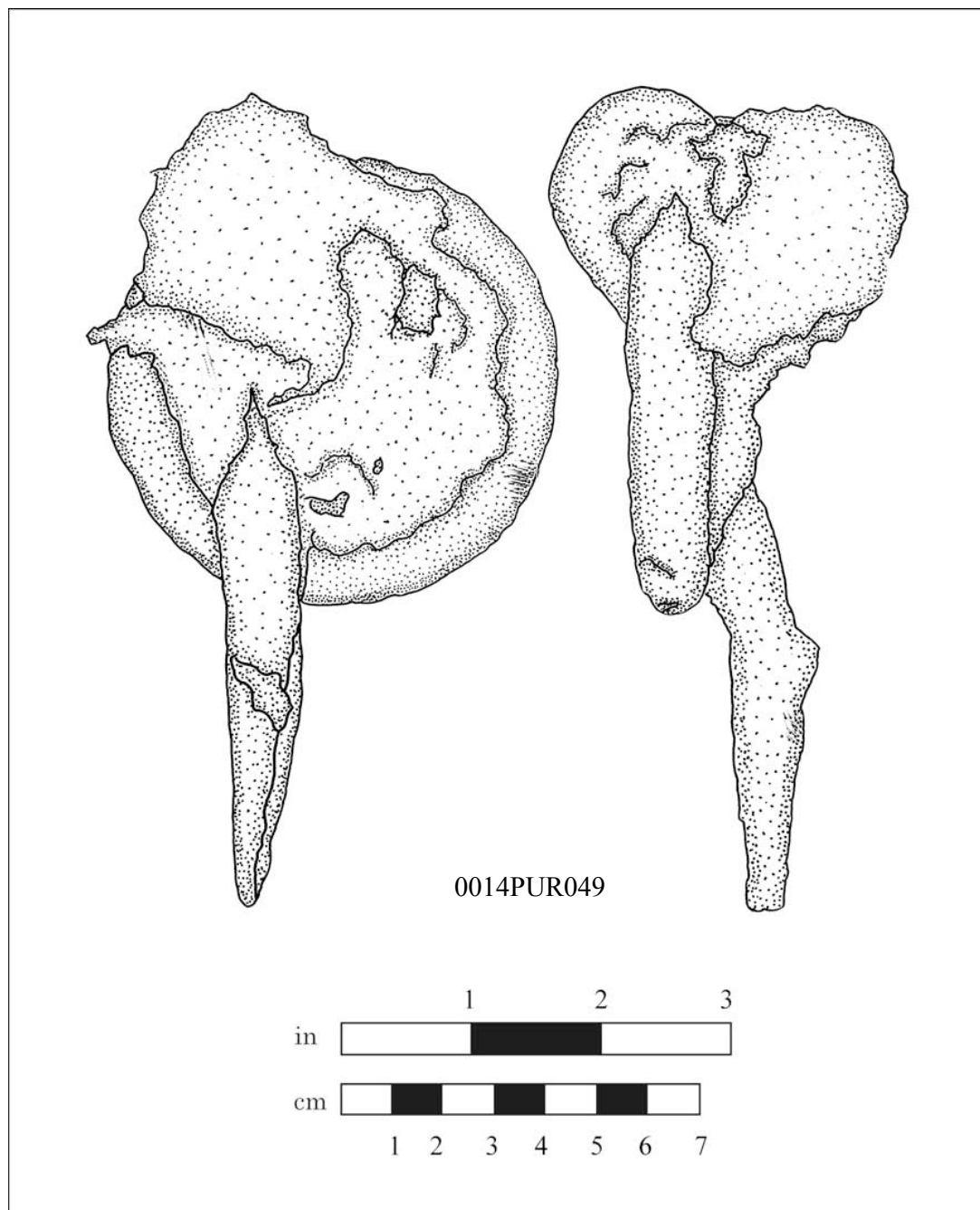


Figure VI-4. Iron ring and eyebolt (0014PUR049).

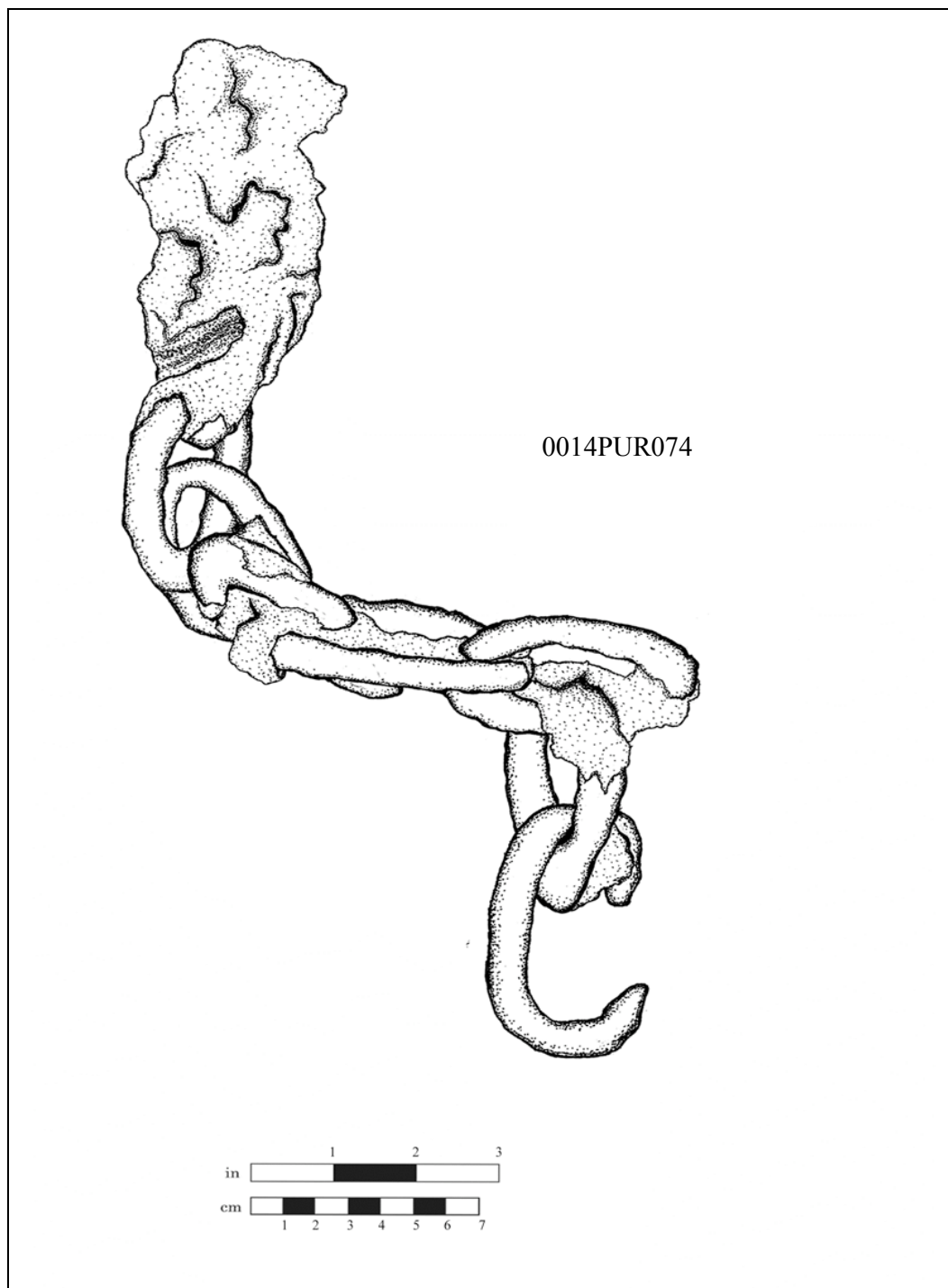


Figure VI-5. Iron bobstay chain (0014PUR074).



Figure VI-6. Iron bobstay chain photograph (0014PUR074).

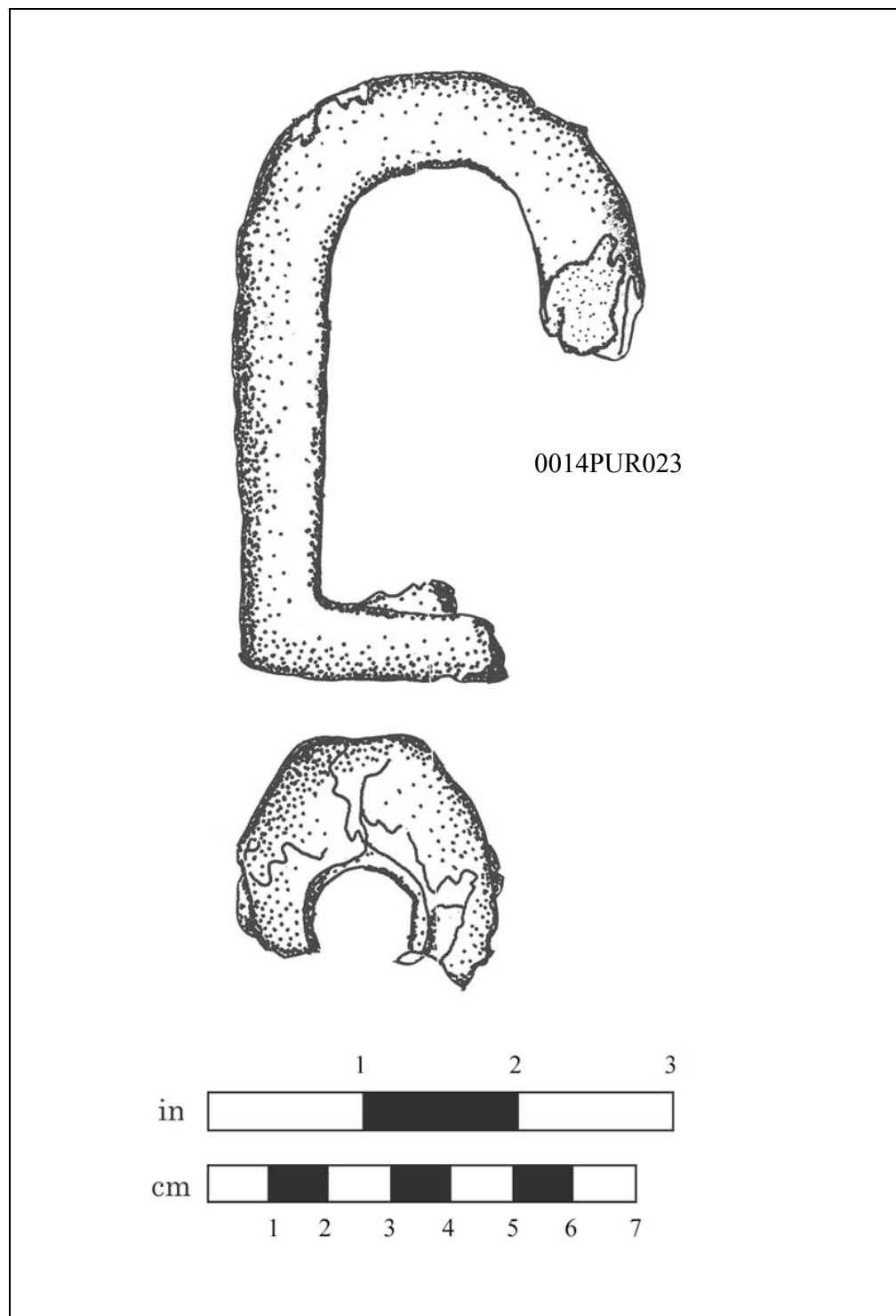


Figure VI-7. Iron swivel hook (0014PUR023).

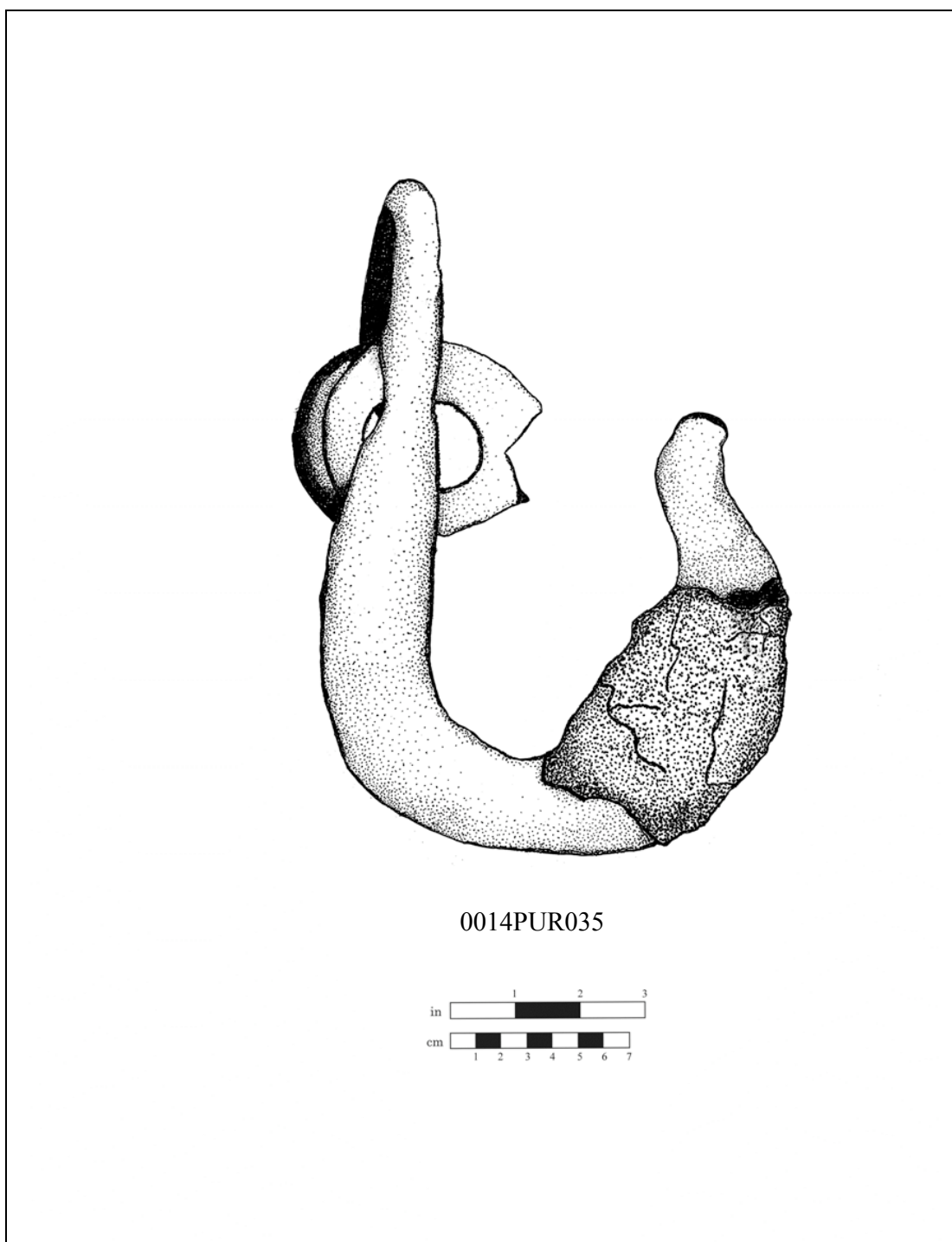


Figure VI-8. Iron cargo hook (0014PUR035).

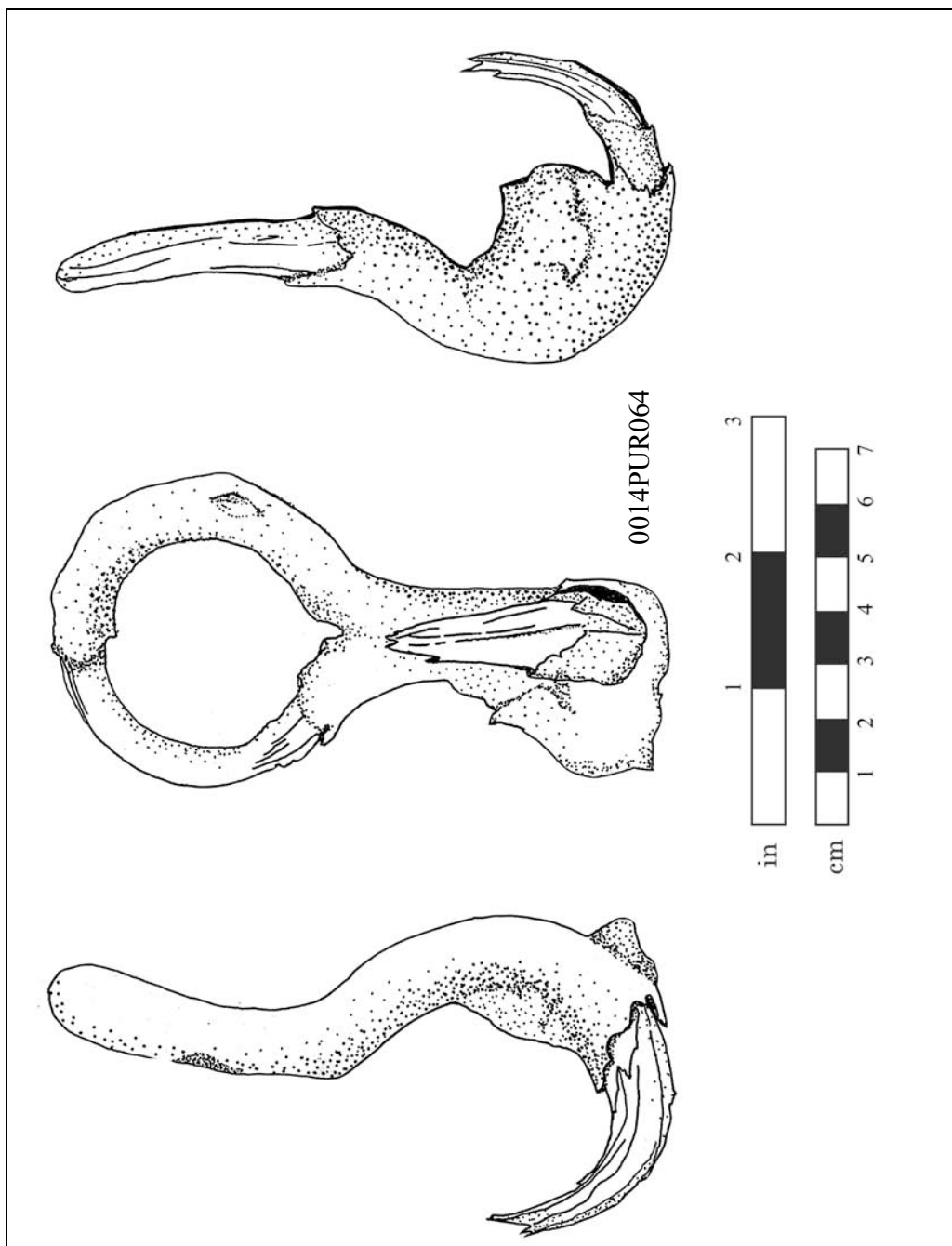


Figure VI-9. Iron hook (0014PUR064).

Iron and Composite Block Remnants. Three iron block remnants were recovered from the stern excavation unit. Artifact 0014PUR025 is a small iron block fragment 5 in (12.7 cm) by 4 in (10.1 cm) with a 2 in (5.1 cm) diameter eye (Figure VI-10). The inner eye diameter is approximately 1.25 in (3.2 cm). Artifact 0014PUR001 appears to be an intact version of 0014PUR025 (Figure VI-11). The artifact is a 10 in (25.4 cm) by 5 in (12.7 cm) flat rectangular iron bar. A bolt divides the rectangle into two sections. This bolt most likely acted as a sheave axle. A thick concretion is present at one end, and is probably the remnants of an eye, similar to artifact 0014PUR025.

The third block remnant (0014PUR061) is a heavily concreted iron-wood composite 8 in (20.3 cm) diameter circle (Figure VI-12). A 3 in (7.62 cm) by 6 in (15.2 cm) rectangular hole is present in its center, and a small axle remnant protrudes from one side of the rectangle. A sheave was probably attached at this point.

Iron Sheave. One iron sheave (0014PUR072) was found in midship space 9 (Figure VI-13). The sheave is 3.5 in (8.9 cm) in diameter by approximately .75 in (1.9 cm) wide. The outer edge of the wheel is grooved to accept a line. One side of the sheave is concreted, but two distinct spokes are present, producing three “holes”. Three more depressions are present in the concretion, spaced similar to the existing “holes.” A 3 in (7.62 cm) axle runs through the sheave’s hub.

Woven Line. A 23 in (58.4 cm) long line (0014PUPR021) was collected near stern frame 8 (Figures VI-14 and 15). The line is 2.25 in (5.7 cm) wide at the center and tapers to approximately .75 in (1.9 cm) at its ends. One end terminates with a 3.5 in (8.9 cm) long iron ferrule. The line is composed of several wrapped woven layers.

Considering its proximity to the other rigging elements collected in the stern, this artifact is most likely the tail of a tail block as illustrated in Figure VI-16.

Patent Roller Bearings. The investigation uncovered four brass or patent roller bearing assemblies: three in the stern, and one in the bow excavation units. Artifact 0014PUR016 was found in stern space 5 (Figure VI-17). The remnant bearing assembly is severely melted. It measures 1.75 in (4.5 cm) in diameter, and contains a 5.5 in (13.9 cm) long iron axle. Bearing assembly 0014PUR026, found atop the keelson 5 ft (1.5 m) in front of the sternpost, contains an iron pin, as well as an intact flange and bearing roller cage (Figure VI-18). The iron pin is also 5.5 in (13.9 cm) in length, and the extant flange is 4.5 in (11.4 cm) in diameter. Six needle bearings are still present in the roller cage. Bearing assembly 0014PUR034 was collected in a catch bag (Figure VI-19). Its six needle bearing roller cage is still intact, but only half of the outer flange is present. The roller cage is fused 90 degrees to the outer flange. These three bearing assemblies would have been inserted into wooden sheaves and fastened via the flanges (Figures VI-20 and 21). The wood attached to artifacts 0014PUR016, 0014PUR026, and 0014PUR034 obviously disappeared during the fire.

The fourth bearing assembly (0014PUR033), located in bow space 2, differs from the previous three in that the outer “cups” or “races” are flangeless (Figures VI-22 and 23). This assembly consists of the inner roller cage with six needle bearings, and two outer races. An iron pulley sheave was also found around the bearing assembly. The sheave might have been connected to the bearing with lead, although no definitive evidence of this is present. This assembly is the most intact of the four, but is still

somewhat deformed from the fire that melted the others. This artifact is being conserved at the UAB.

The presence of patent bearings is consistent with mid to late 19th century ship rigging components. Washington pump and block maker William Z. Morton ran an add on 24 February 1847 stating that he “keeps constantly on hand, Blocks...and Patent Rolls” (*North State Whig* IV (36)). The “patent rolls” are probably patent roller bearings. Two 1853 *Boston Daily Atlas* ship launch announcements, *Flying Arrow* 11 January (Bruzeliuss 2005), and the *Queen of Clippers* (Maritimeheritage.org 2005), cite patent blocks as rigging appointments. Both entries refer to patent blocks as “all the improvements of the day.” Similar brass bearings were found on the *Scuppernong*, a mid-19th century North Carolina-built schooner (Turner 1999: 98), as well as on the U.S.S. *Monitor* (Lusardi 2002: 46), C.S.S *Neuse* (Bright 1981: 97), and the Ballast Cove Wreck A (8FR903), Franklin County, Florida (Damour 2002: 28-30). In accessing the efficacy of using such bearings to date site 0014PUR, the acquisition of these patent sheaves via a refit must also be considered. If this vessel is the *Star*, the roller sheaves might have been original equipment or might have been installed during the 1852 rebuild.

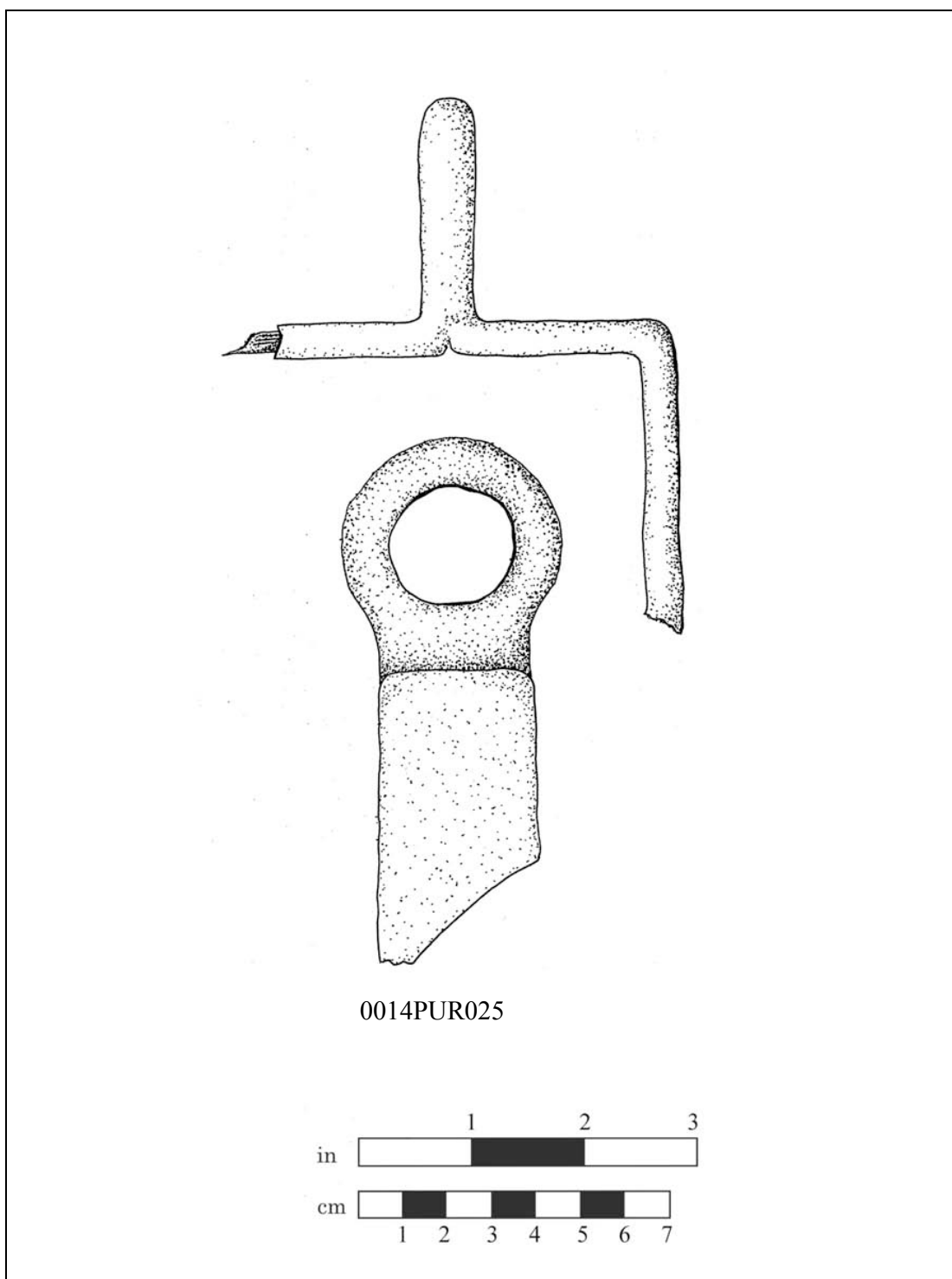


Figure VI-10. Iron block fragment (0014PUR025).

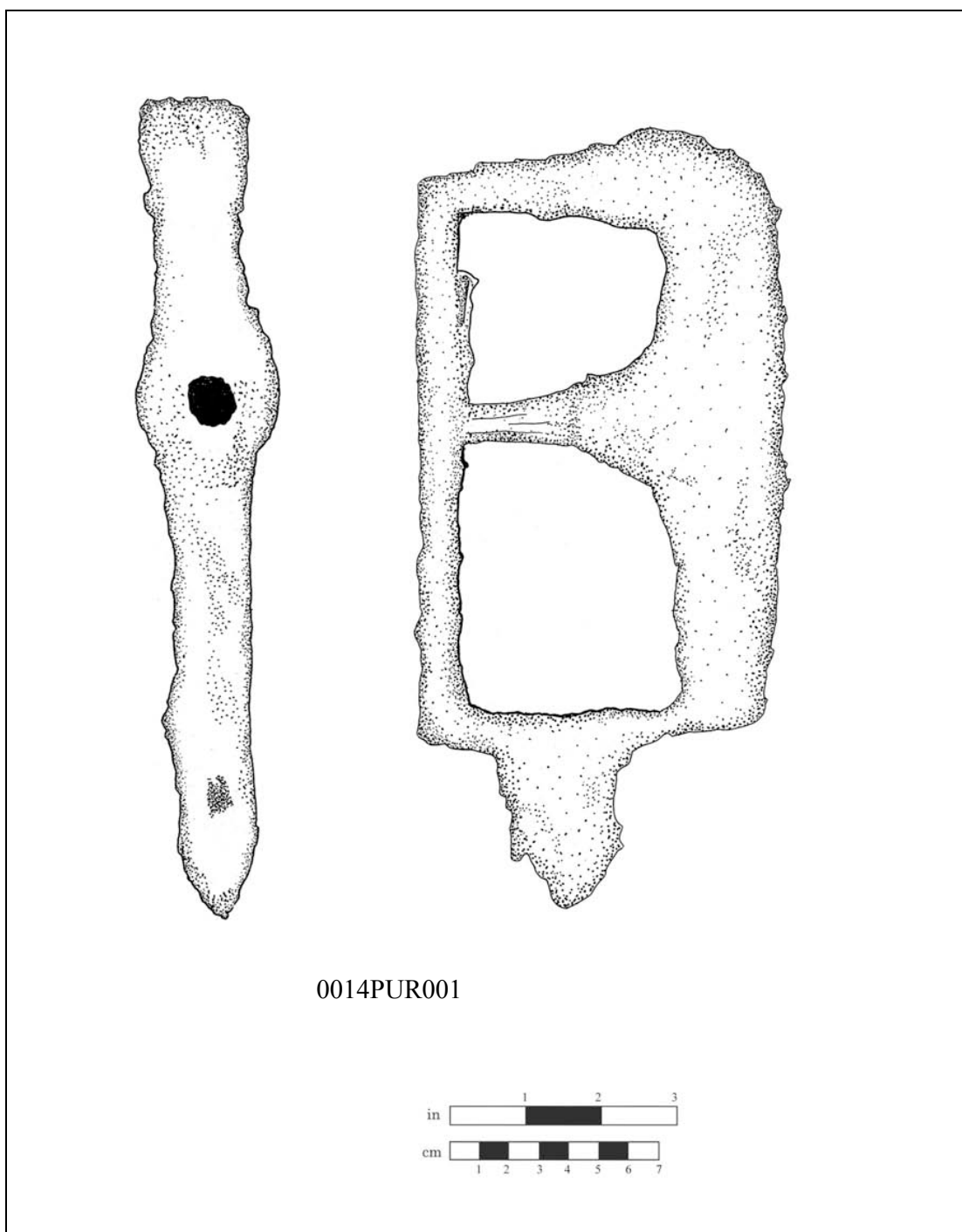


Figure VI-11. Iron block frame (0014PUR001).

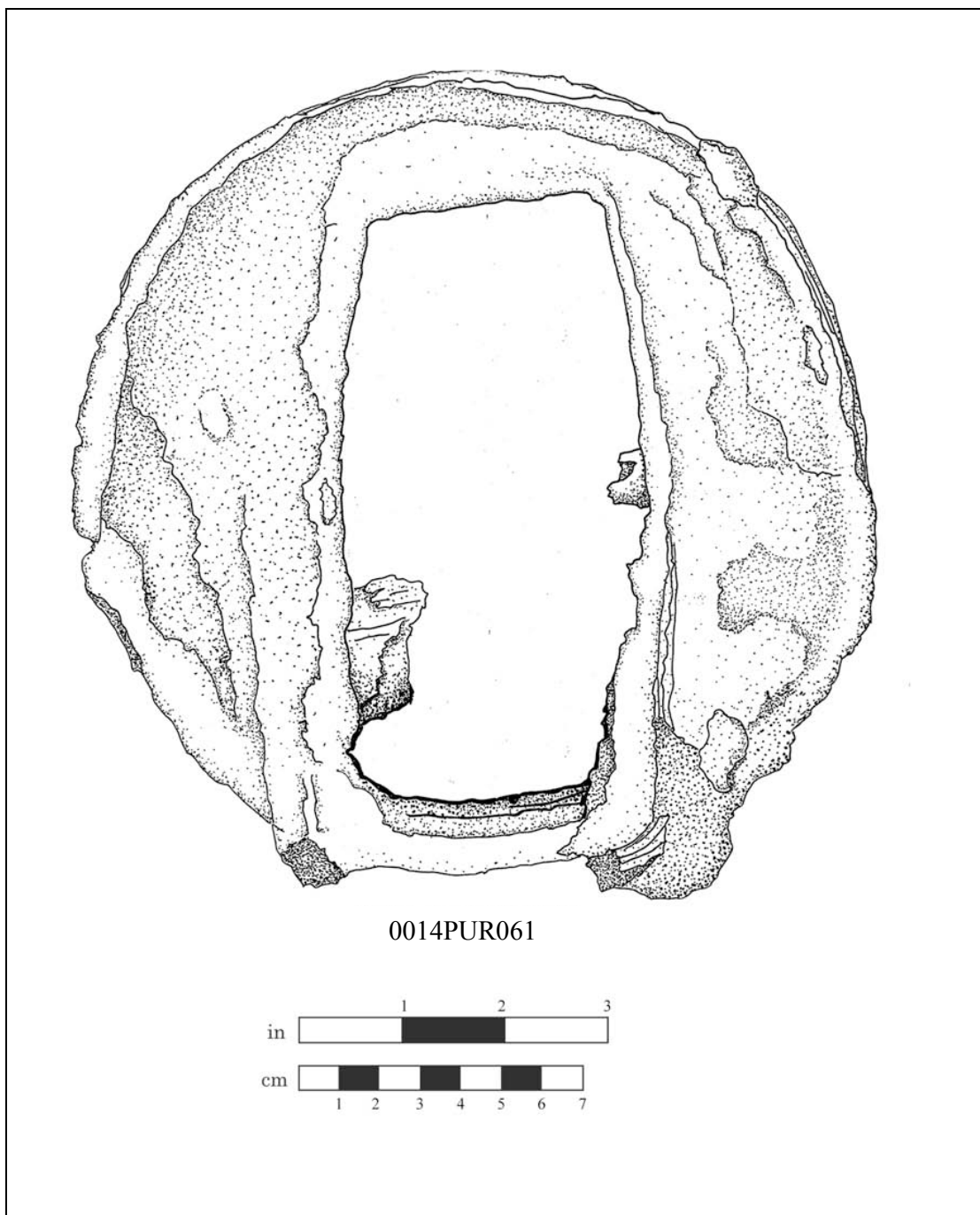


Figure VI-12. Concreted block remnant (0014PUR061).

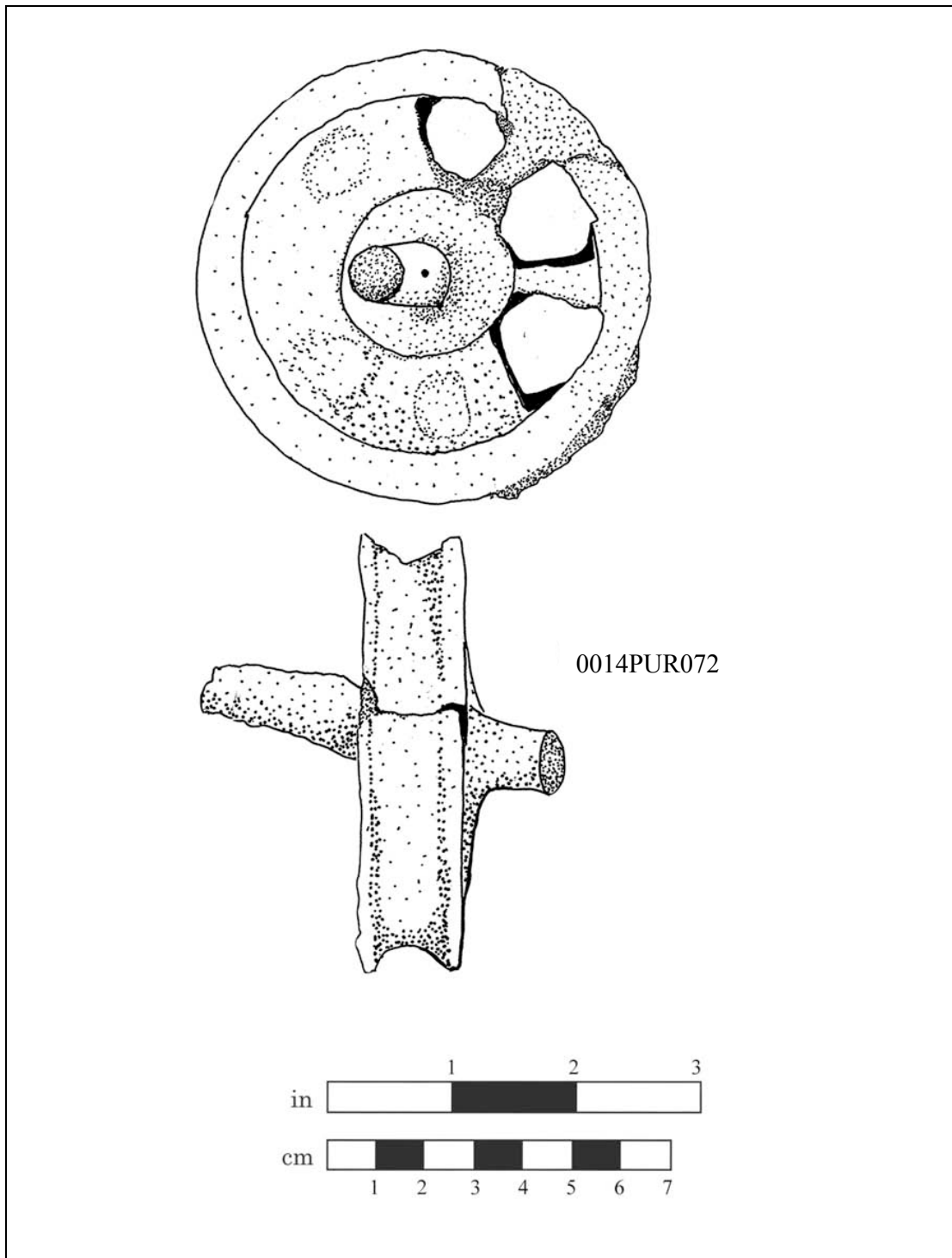


Figure VI-13. Iron sheave (0014PUR072).

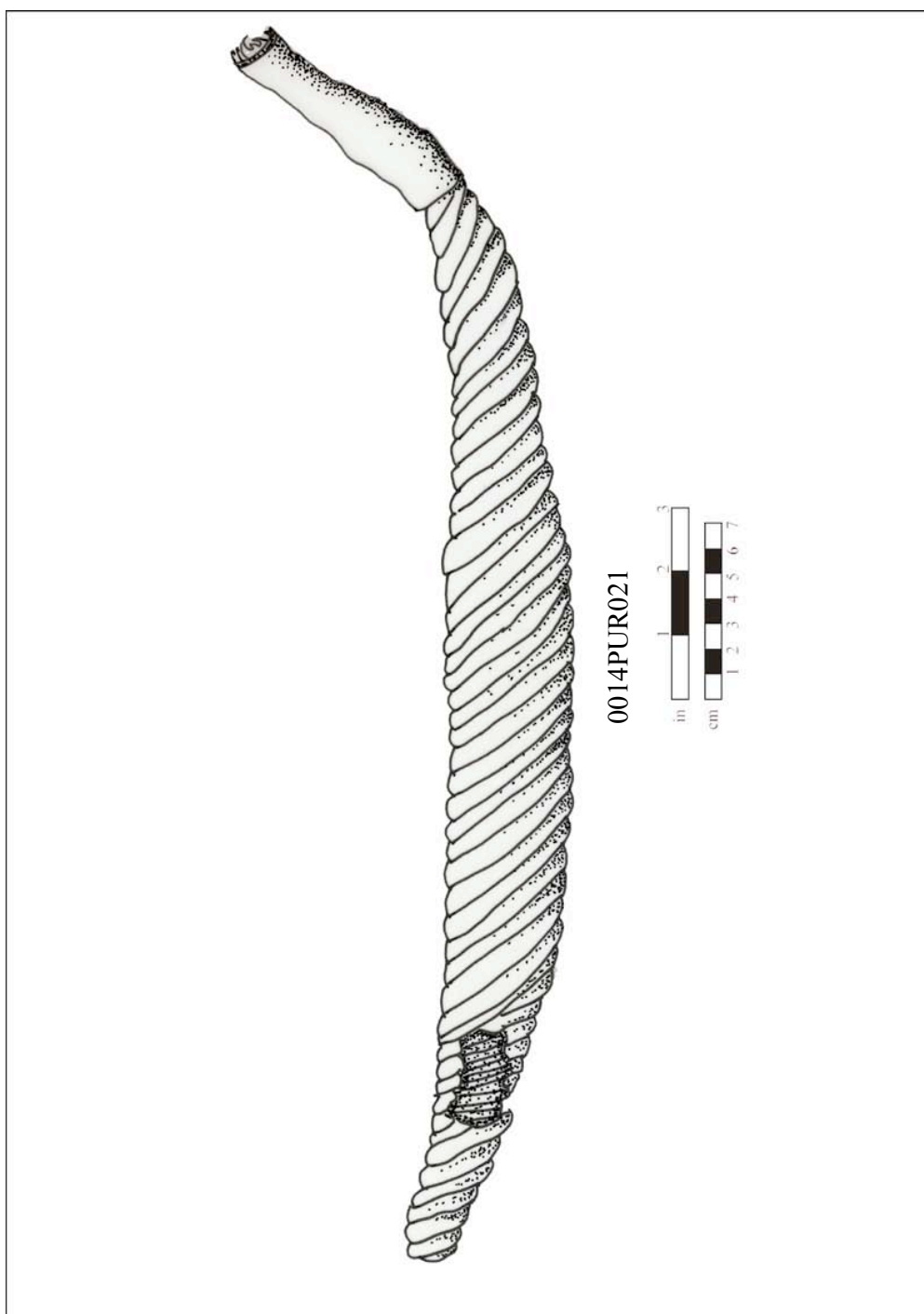


Figure V1-14. Tailblock line (0014PUR021).



Figure VI-15. Tailblock line photograph (0014PUR021).

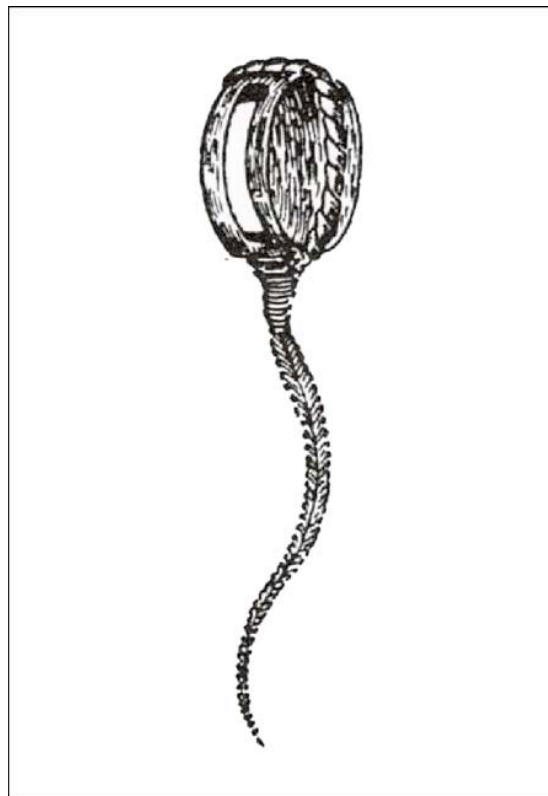


Figure VI-16. Tailblock illustration (Desmond 1998: 136).

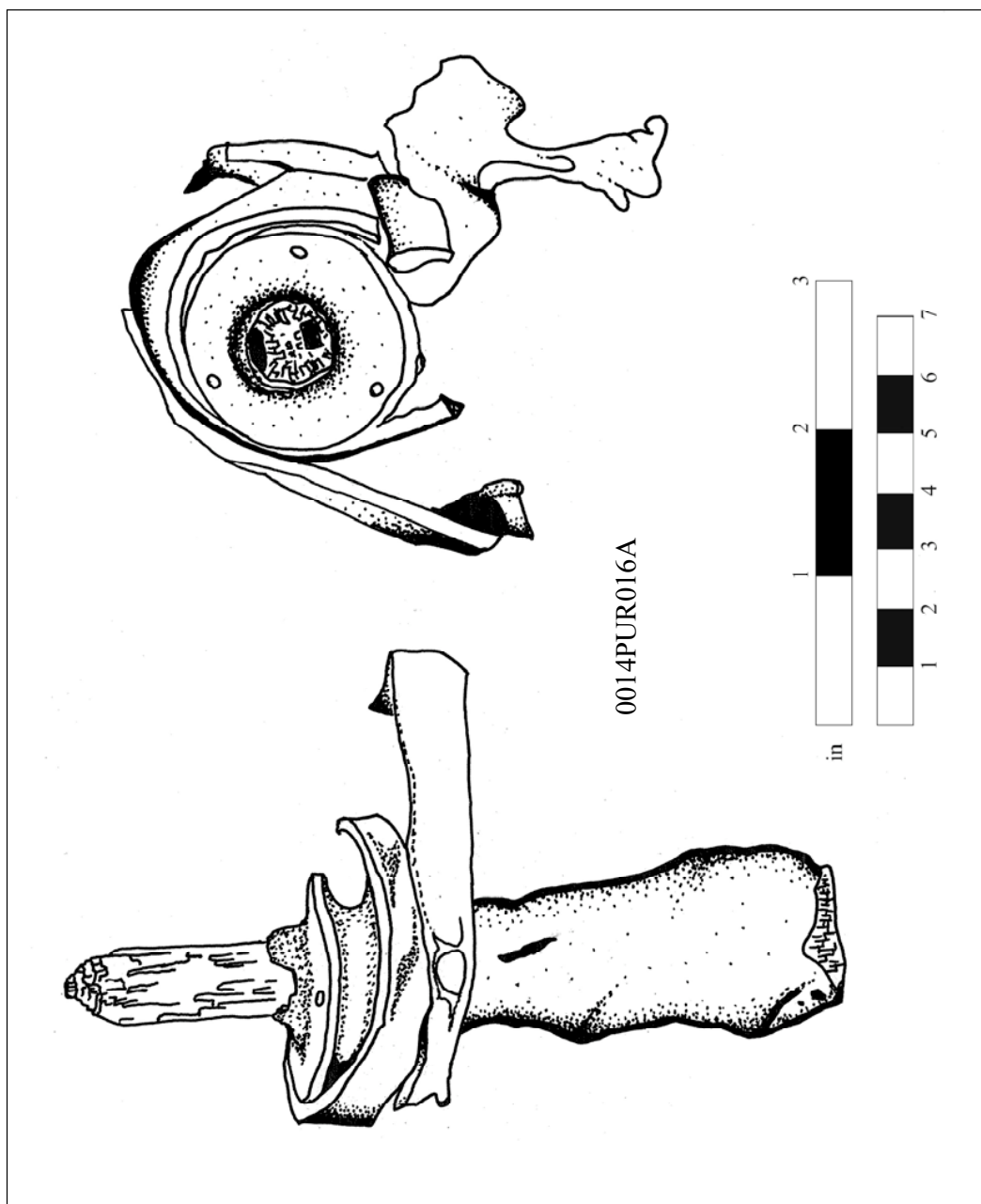


Figure VI-17. Brass roller bearing fragment (0014PUR016A).

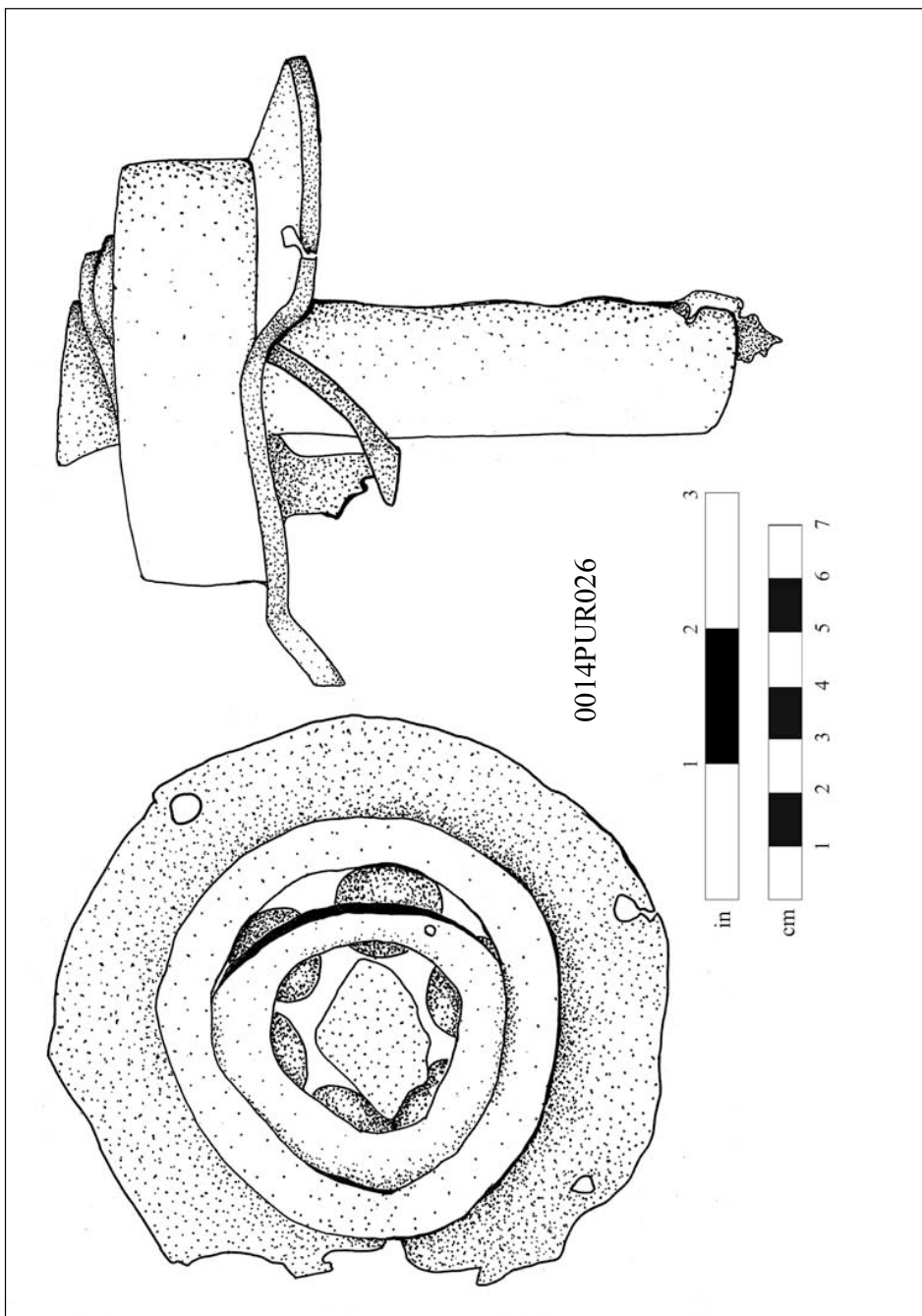
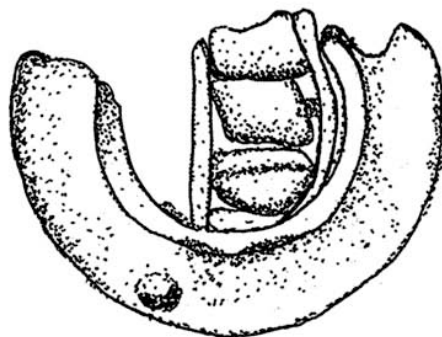


Figure VI-18. Brass roller bearing assembly (0014PUR026).



0014PUR034

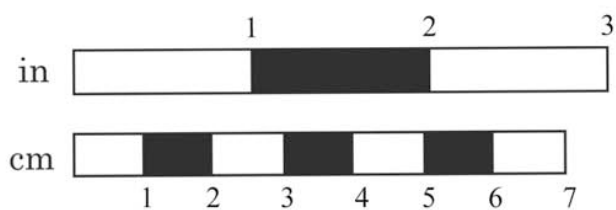
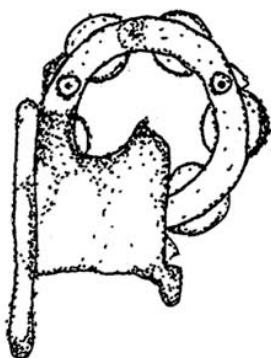


Figure VI-19. Brass roller bearing (0014PUR034).

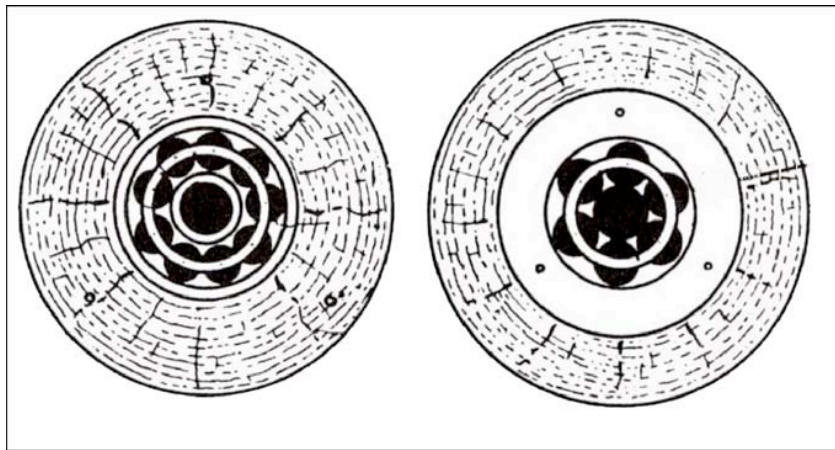


Figure VI-20. Patent sheave illustration (Desmond 1998: 136).



Figure VI-21. Photographs of patent sheave belonging to David Fletcher, Ocracoke, NC. For illustration purposes only.

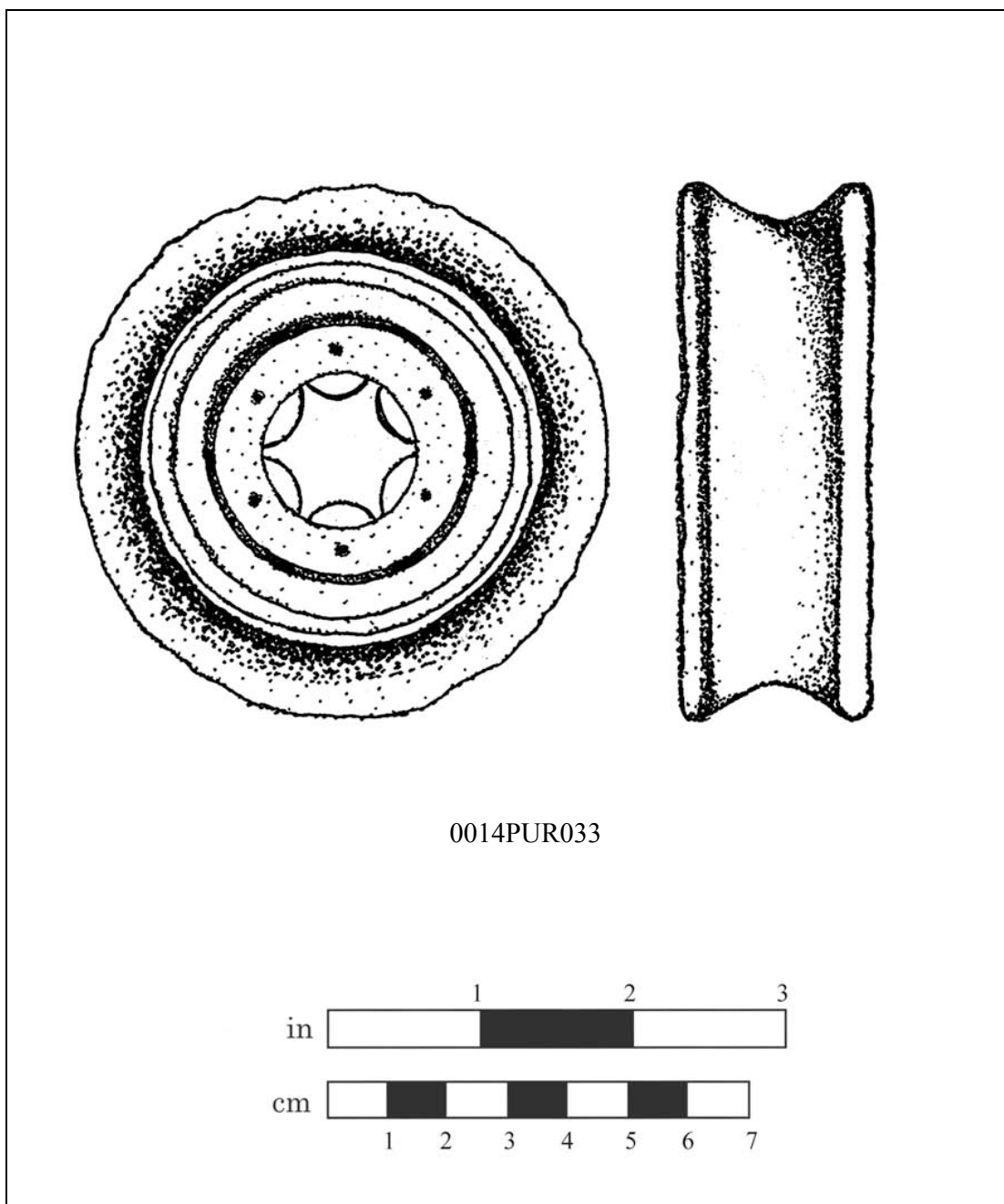


Figure VI-22. Brass roller bearing with iron sheave (0014PUR033).

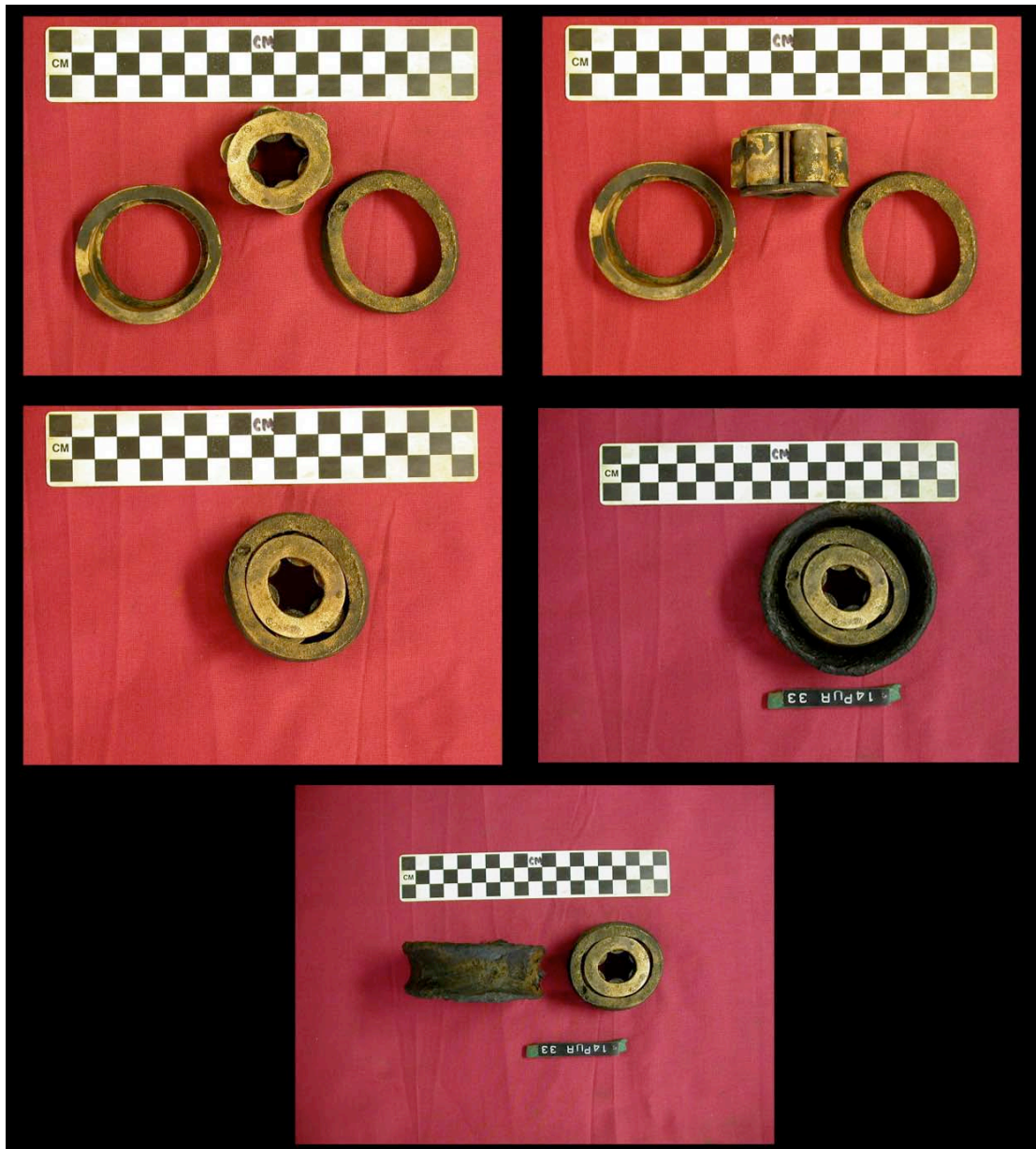


Figure VI-23. Brass roller bearing with iron sheave photograph (0014PUR033).

Bilge Pump Components

Bilge pump components located on the vessel are consistent with a “common” or “suction” pump (Figure VI-24), a prevalent pump typology for 19th century vessels (Oertling 1996: 74). The bilge pump artifact assemblage consists of several pump spear fragments, one intact pump spear with brake attachment bolt, a brass sieve, as well as the port pump remnants described in chapter VI.

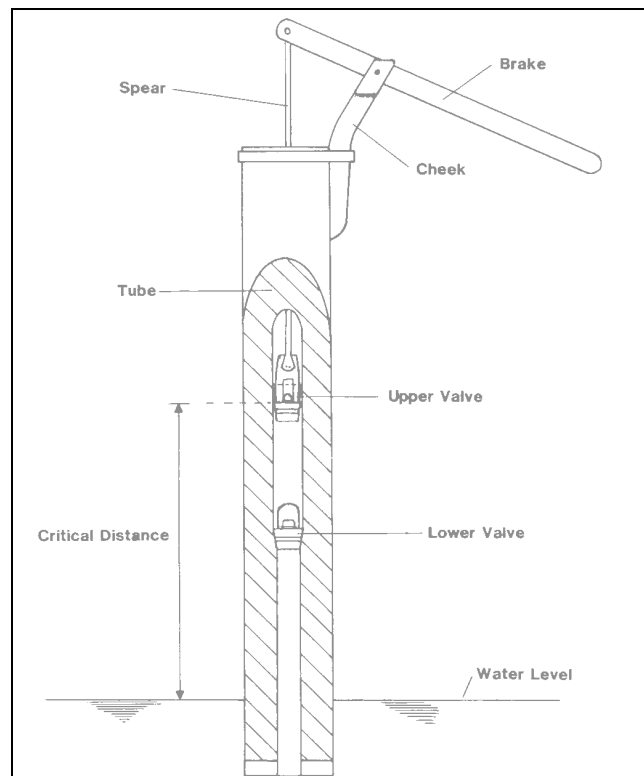


Figure VI-24. Common pump illustration (Oertling 1996: 24).

Pump Spear. One intact pump spear and several pump spear fragments were found along the keelson near the extant pump remnants. Artifact 0014PUR040 is a mostly intact pump spear measuring approximately 40 in (101.6 cm) long, and .75 in

(1.9cm) in diameter (Figures VI-26 and 27). At one end, half of the wishbone-shaped side plate is intact, but concreted. One attachment bolt is discernable. This side plate would have attached to the top of the upper valve body (see Figure VI-25 for valve body illustration). The brake attachment eye bolt is fastened to the other end.

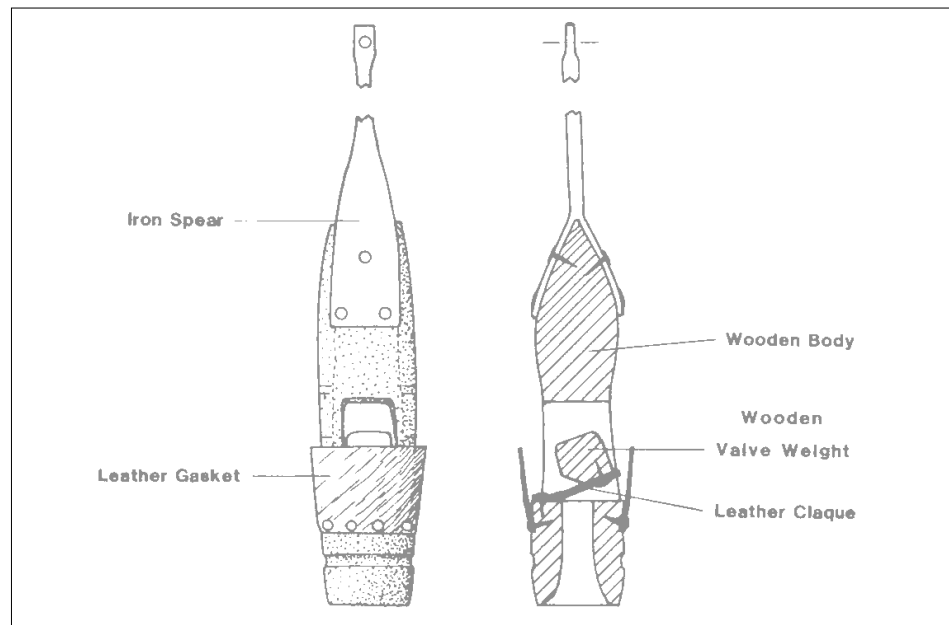


Figure VI-25. Upper valve illustration (after Oertling 1996: 27).

Artifact 0014PUR041 is similar in size and shape to the extant side plate on the spear. This is most likely the other half of the valve-body attachment point on the spear described above (Figure VI-28). Three bolt-like concretions protrude through the plate.

Artifacts 0014PUR011 and 0014PUR012 appear to be fragments of another pump spear (Figure VI-29). One end of artifact 0014PUR012 resembles the wishbone-shaped spear-valve attachment illustrated in Figure VI-25. Artifact 0014PUR011 was found inside the port pump, and artifact (0014PUR012) lay outside the pump box. Another side plate fragment (0014PUR010) was also located next to the box, but is not illustrated.

Strainer/Sieve. A brass strainer (0014PUR070) was found in stern space 5 (Figures VI-30 and 31). The strainer is approximately 3.1 in (8 cm) in diameter. A grouping of 26 crude perforations is present in the center, as are 15 nail holes along its outer edge. Seven copper nails are also present. The perforations look as though they were created with hammer and punch. The perforated section is also deformed, suggesting that the brass was punctured with the center unsupported, that is, after the strainer was attached to another object. The seven broad head nails pass through the strainer opposite of the direction the center perforations were created.

This artifact looks to be a sieve for one of the bilge pumps. “One of the most frequent difficulties with common pumps was that debris from the bilge could be drawn up into the tube and foul one or both valves. To guard against this occurrence, a perforated sheet of lead or copper, called a sieve, was sometimes fitted over the lower extremity of the pump” (Oertling 1996:30). The bore at the base of the port bilge pump is 2.75 in (6.9 cm) in diameter (Chapter V Figures V- 4 and 5) the sieve is 3.1 in (8 cm). This leaves a little over .25 in (.64 cm) of attachment area on the pump base, a tight, but possible fit.

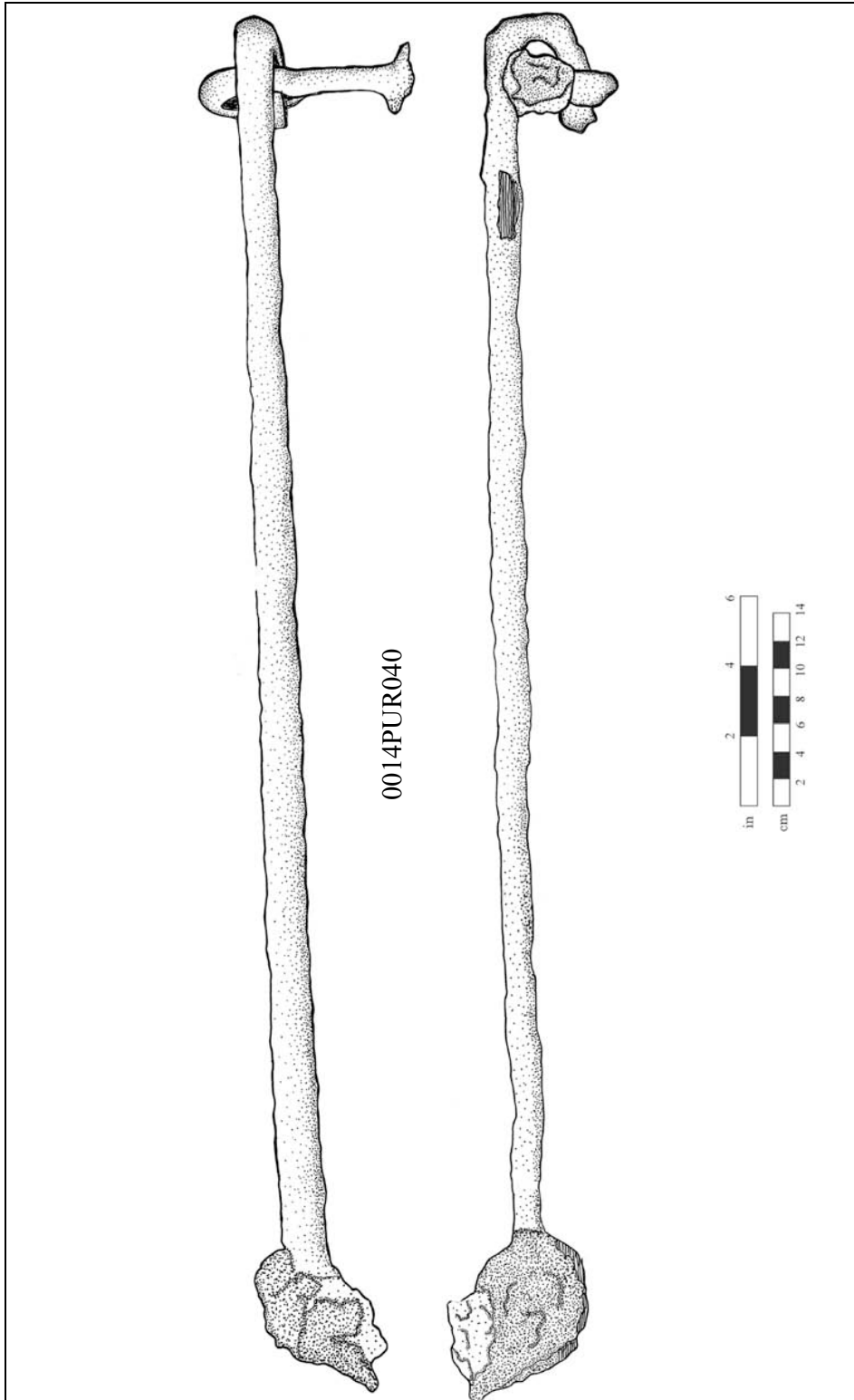


Figure VI-26. Pump spear (0014PUR040).

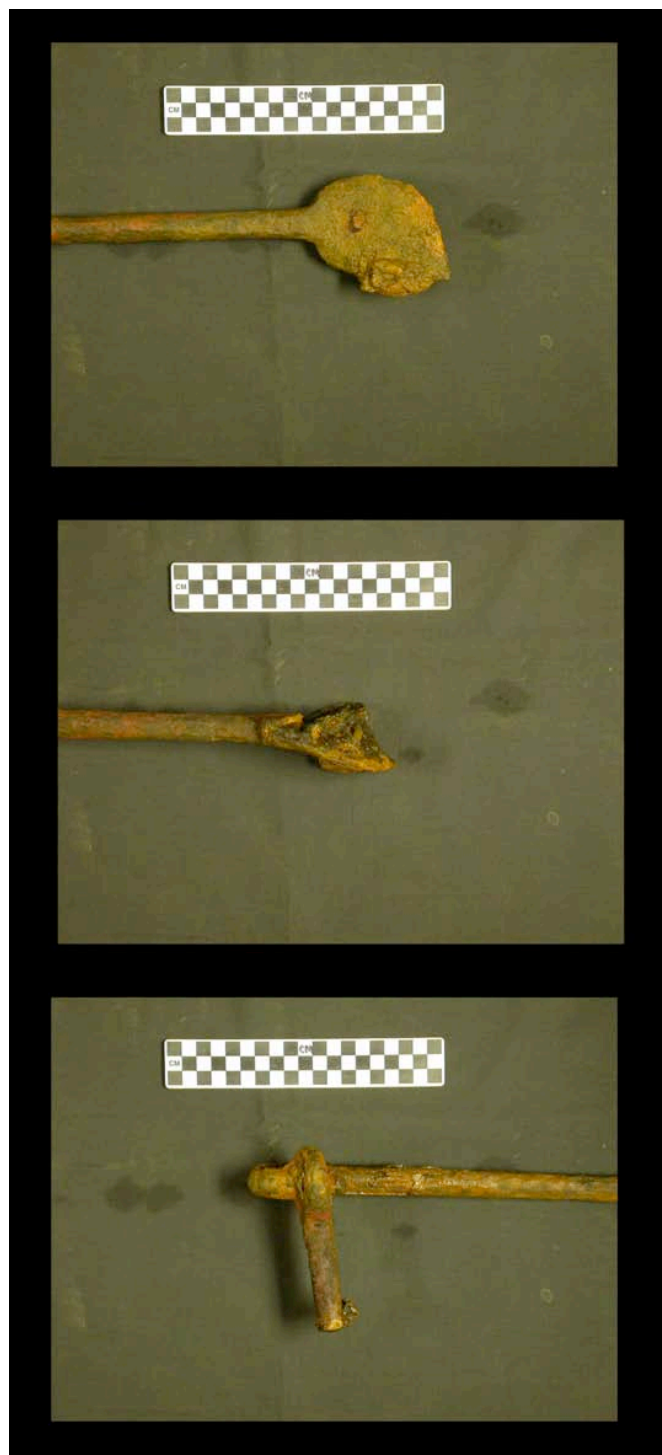


Figure VI-27. Pump spear photograph (0014PUR040). Top and middle pictures are of the spear's side plate. The bottom picture shows the brake attachment bolt.

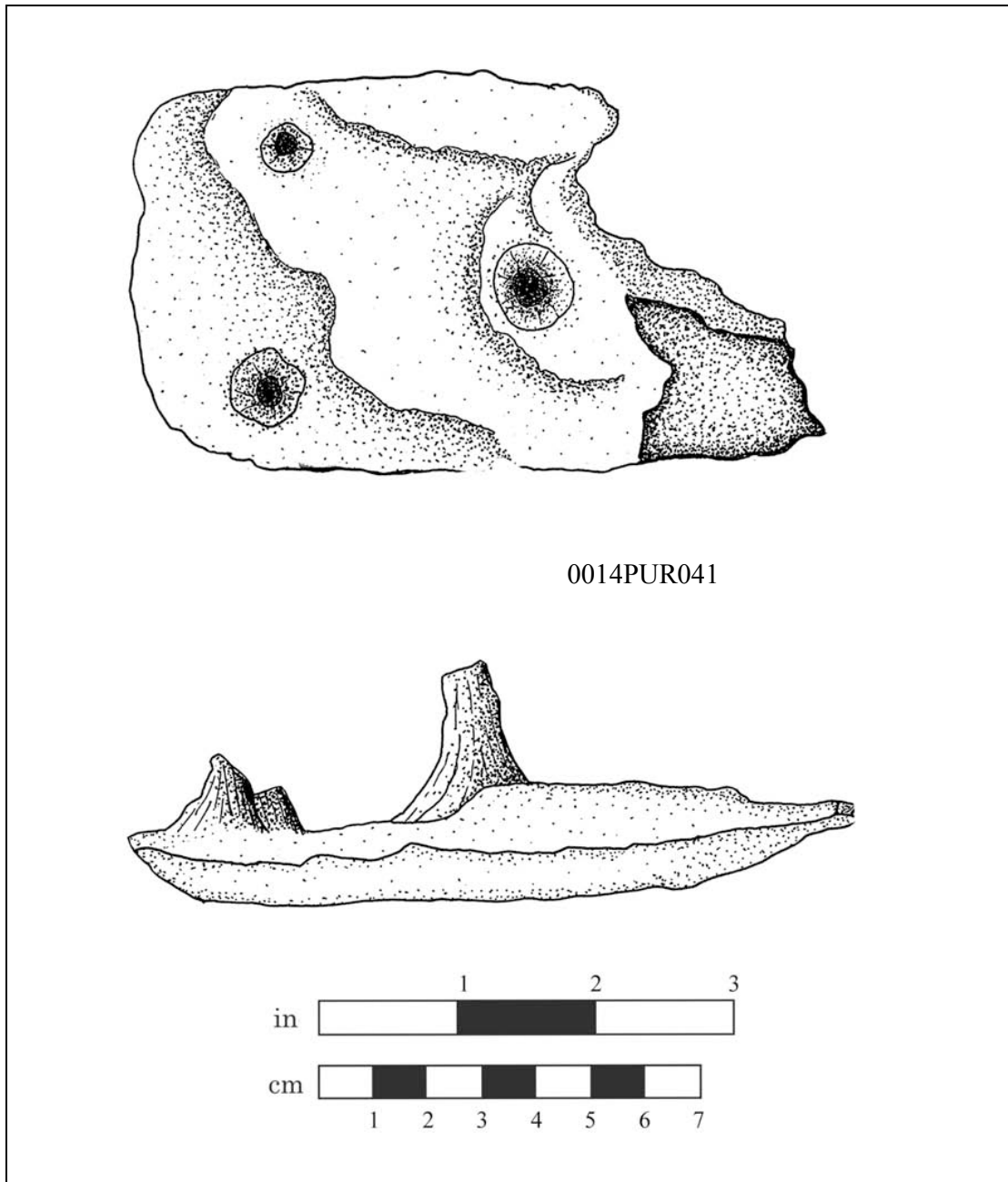


Figure VI-28. Pump spear side plate (0014PUR041).

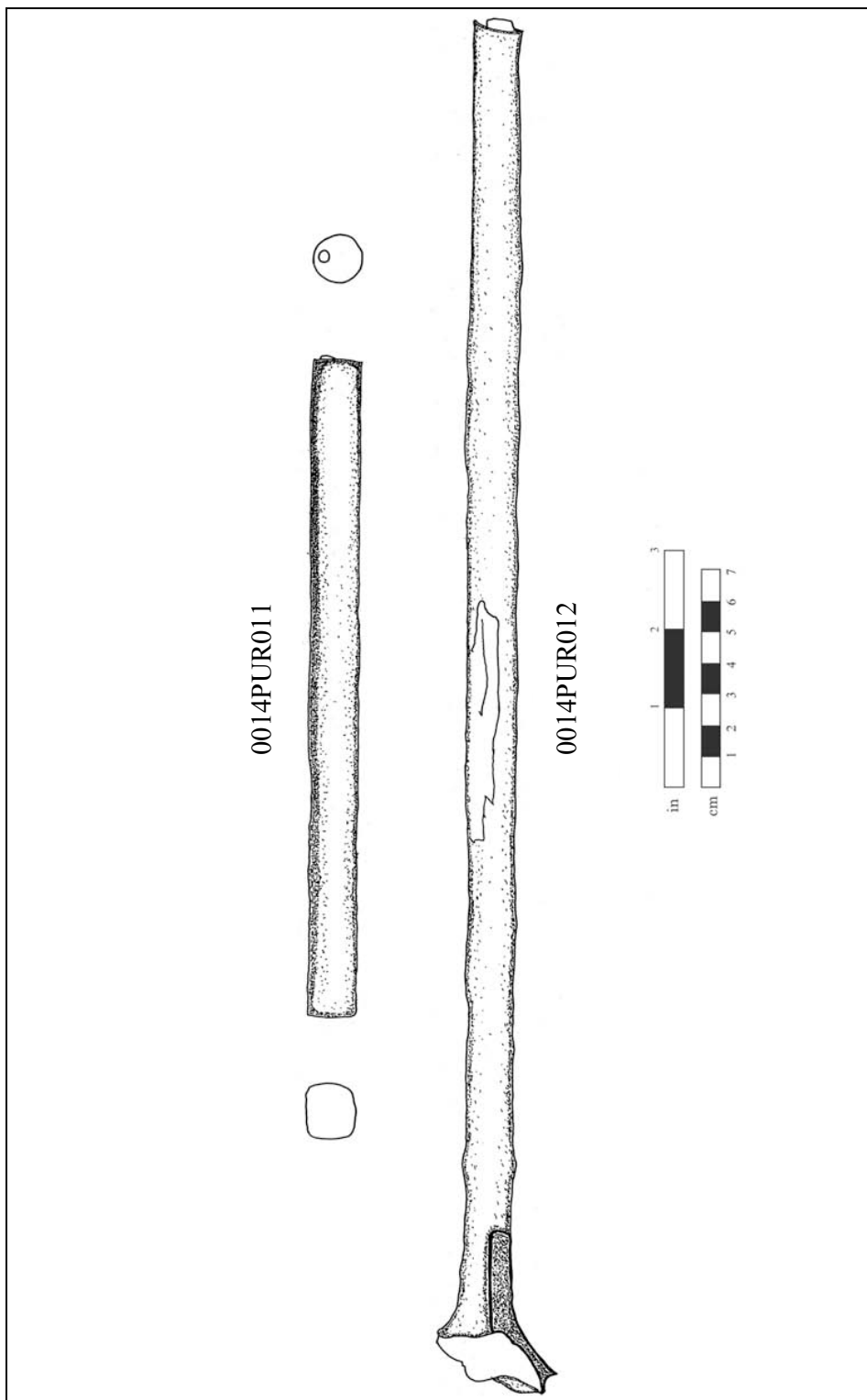
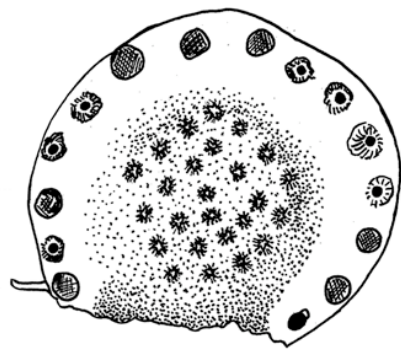


Figure VI-29. Pump spear fragments (0014PUR011 and 0014PUR012).



0014PUR070

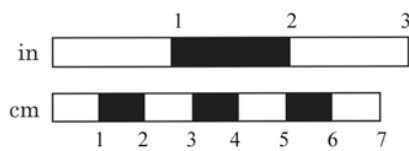
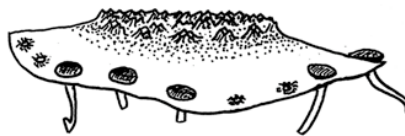


Figure VI-30. Brass strainer/sieve (0014PUR070).



Figure VI-31. Brass strainer/sieve photograph (0014PUR070).

Fasteners

Nine iron drift bolt fragments were recovered. Their proveniences covered most of the surveyed area. Most are shaft fragments measuring between 5 in (12.7 cm) to 18 in (45.7 cm) and .7 in (1.8 cm) to 1 in (2.54 cm) in diameter. Artifact 0014PUR003, however, is mostly intact, measuring 23 in (58.4 cm) x .9 in (2.3 cm) with a 2 in (5.1 cm) diameter head.

In addition to the nine drift bolts, four nail fragments were found. All were located in the bow excavation unit. Of the four, three have round heads, and one has a square head. The square head nail, artifact 0014PUR017, measures 4.3 in (10.9 cm) x .5 in (1.3 cm). Round head nails, artifacts 0014PUR055A and B are each less than 5 in (12.7 cm) long. Both are .4 in (1 cm) in diameter with .6 in (1.5 cm) diameter heads. The third round head nail (0014PUR018), measures 3.6 in (9.1 cm) by .5 in (1.3 cm).

Several yellow metal fasteners were also collected. They are small fragments, and several are fire damaged. Artifact (0014PUR029) is a grouping of six different fasteners collected between stern frame 8 and the inner sternpost (Figure VI-32). There are two 1.5 in (3.8 cm) nail fragments, one .75 in (1.9 cm) broad head nail fragment with a square indentation in the head, one machined screw remnant, and two miscellaneous square fragments. One square-head clenched copper nail (0014PUR036), a fire damaged brass slotted screw (0014PUR037), and a copper nail concreted to artifact 0014PUR065 were also recovered. All except the last were collected in the stern dredge bag.

It was hoped that the screw fragments might be dated using Roberts' classification (Roberts 1988: 169-171). Roberts' classification system is based on documented changes

in screw tips throughout the 19th century: Screws with uneven pointed tips (hand-cut screws) date before 1800, screws with blunt tips (machine-cut screws) date from 1800-1846, and screws with even, pointed tips (refined machine cut screws) date from 1846 on (Roberts 1988: 170). The screw fragments collected during this investigation, however, were either missing their tips or the tips had melted, leaving typology identification impossible.

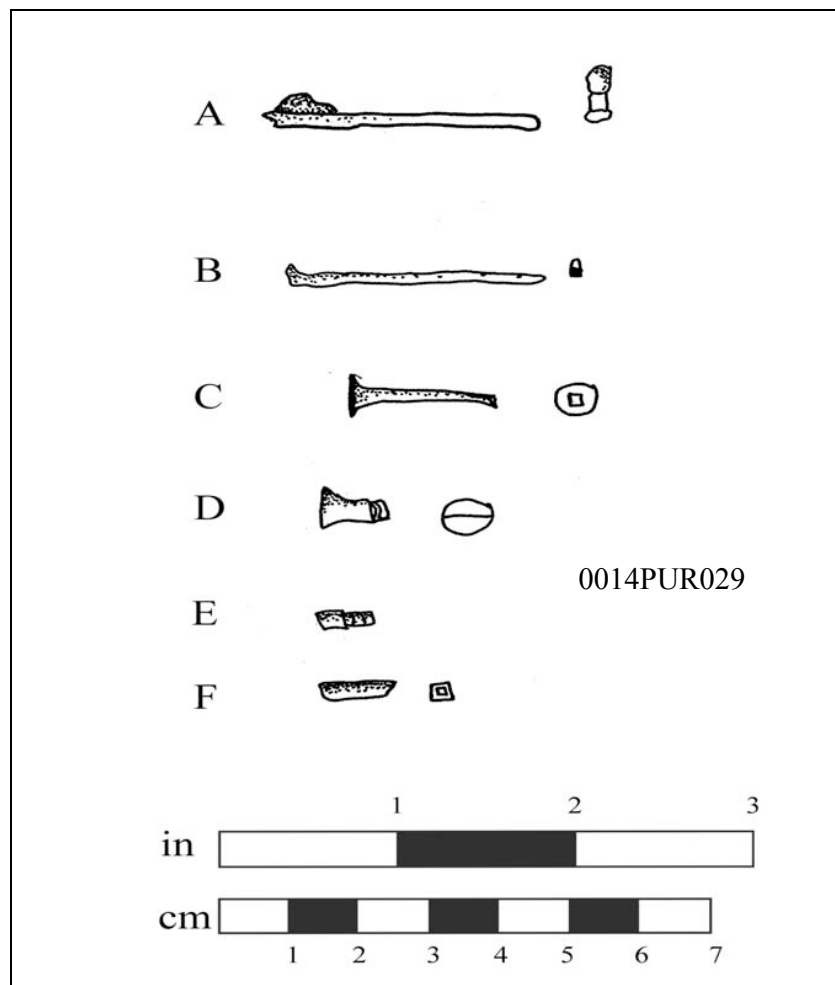


Figure VI-32. Yellow metal fasteners (0014PUR029A-F).

Additional Artifacts

Hinges. One machined brass hinge (0014PUR022) measuring 2.75 in (6.8 cm) by 1.125 in (2.8 cm) was found in stern space 3 (Figure VI-33). The hinge has six countersunk fastening holes .19 in (.48 cm) in diameter. In today's terms, these holes would accept a #8 wood screw. A larger brass and copper hinge fragment (0014PUR042) was found four feet forward of the inner sternpost (Figure VI-34). The fragment consists of a 3.9 in (9.9 cm) long by 1.5 in (3.8 cm) wide plate with a .5 in (1.3 cm) diameter pintle attached at one end. The pintle is 2.3 in (5.7 cm) long. The remnants of two mounting holes, one at the top and one at the bottom, are also present. This hinge fragment is most likely one half of a door hinge.

Lantern Fragments. Two brass artifacts resembling lantern remnants were recovered in the stern excavation unit in close proximity to one another. Artifact 0014PUR007 found in stern space 6, is a 4.5 in (11.4 cm) square piece of sheet brass resembling a lantern base (Figure VI-35). The edges are rolled, and several holes are present. The holes are probably vent holes. The sheet is less than .125 in (.32 cm) thick. A second artifact (0014PUR008), recovered in stern space 7, is thought to be the remnants of a corrugated lantern handle (Figure VI-36). The handle is 1 in (2.54 cm) wide by 2.25 in (5.7 cm) long, and has a distinct ribbed surface. A melted glass fragment (0014PUR050) was also found in close proximity to these two artifacts, and might have been part of the lantern glass.

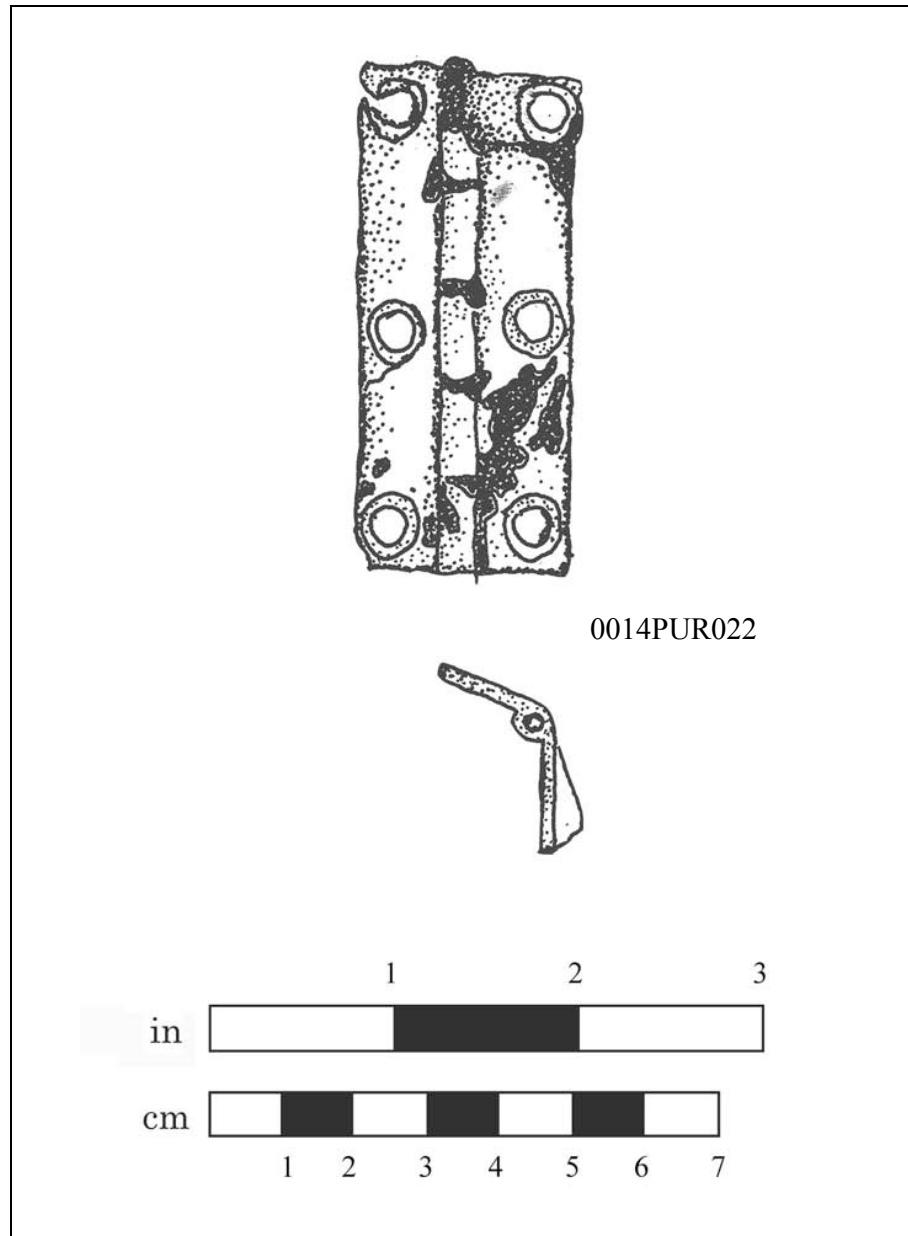


Figure VI-33. Brass hinge (0014PUR022).

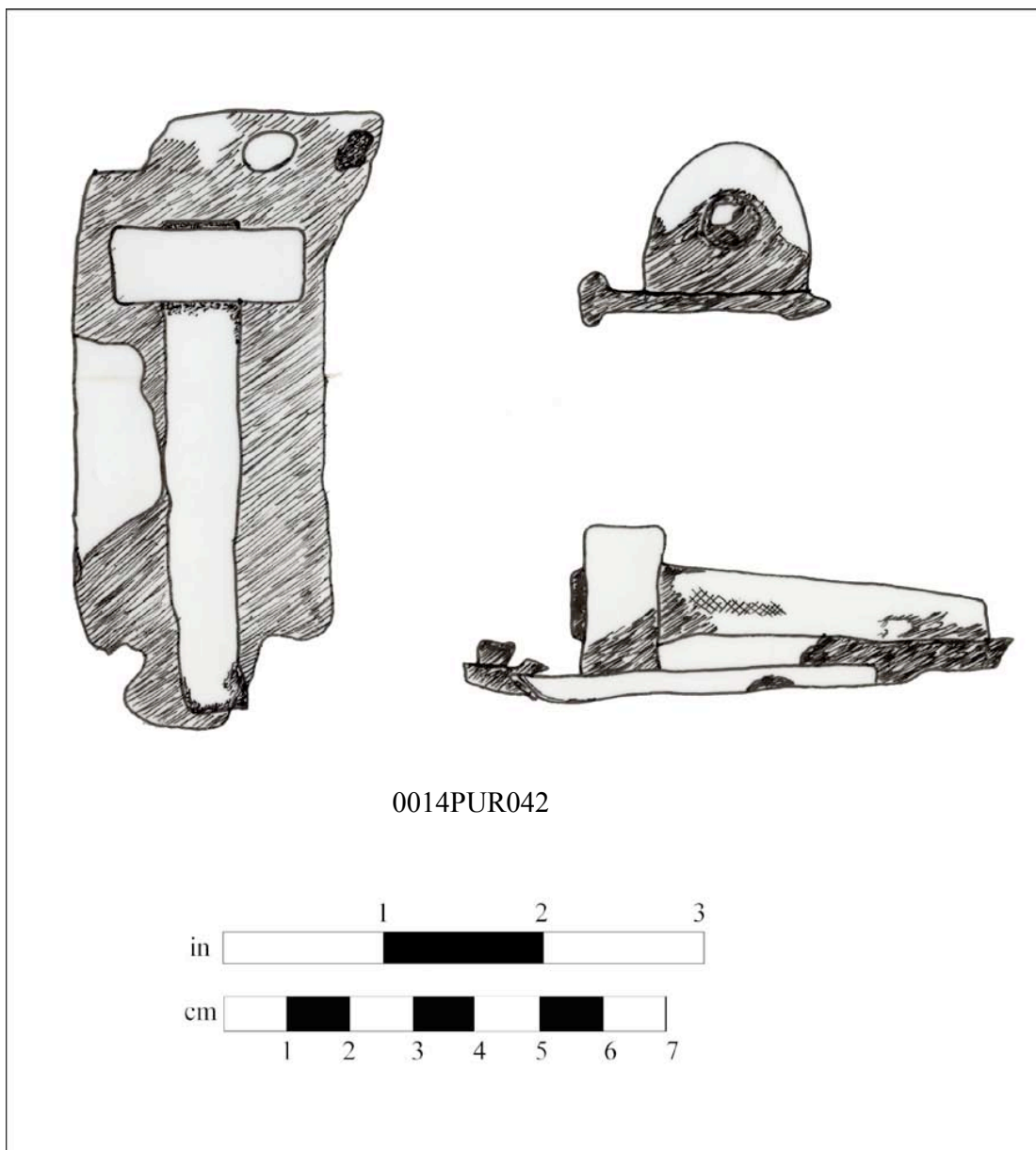


Figure VI-34. Brass hinge (0014PUR042).

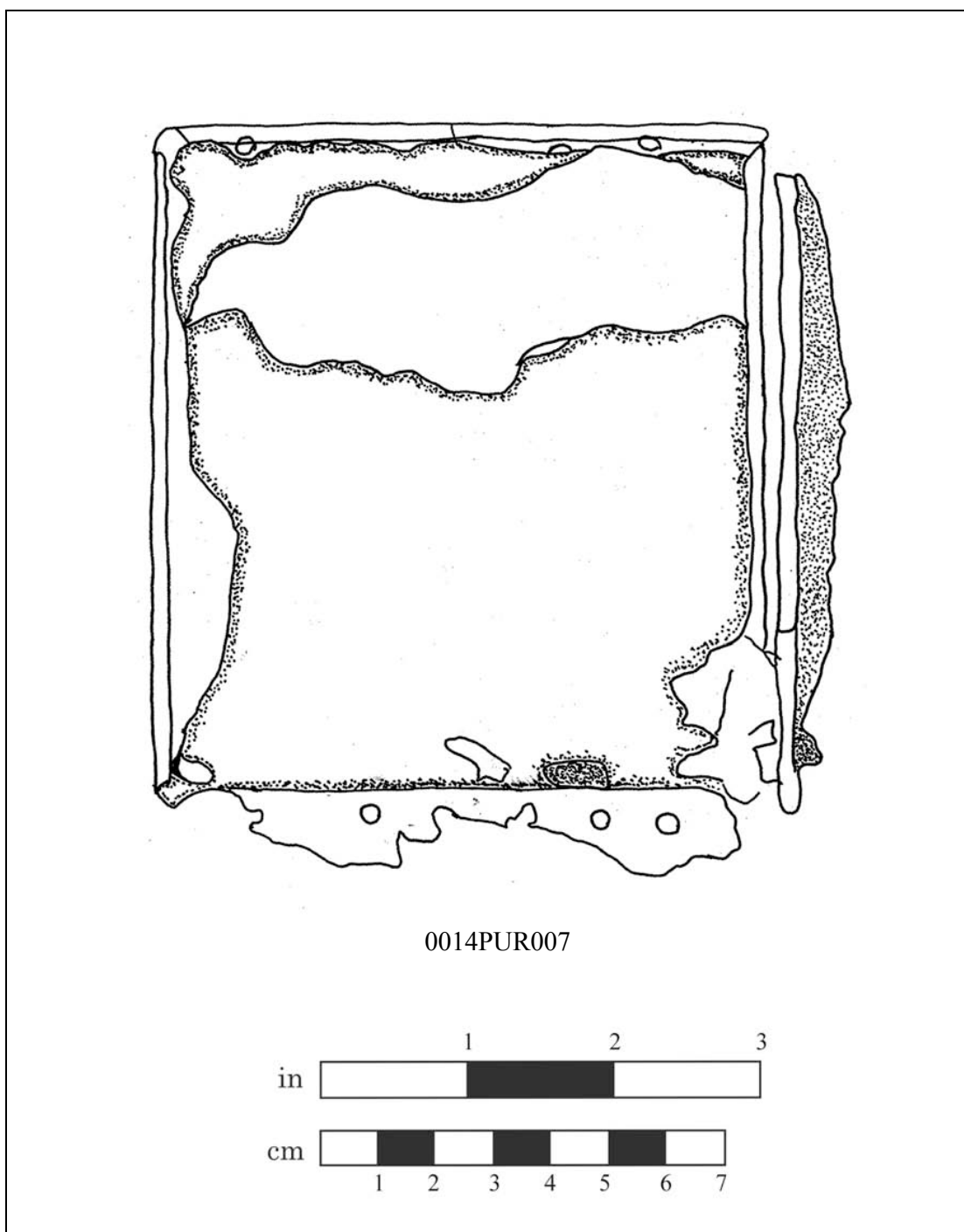


Figure VI-35. Sheet brass fragment (0014PUR007).

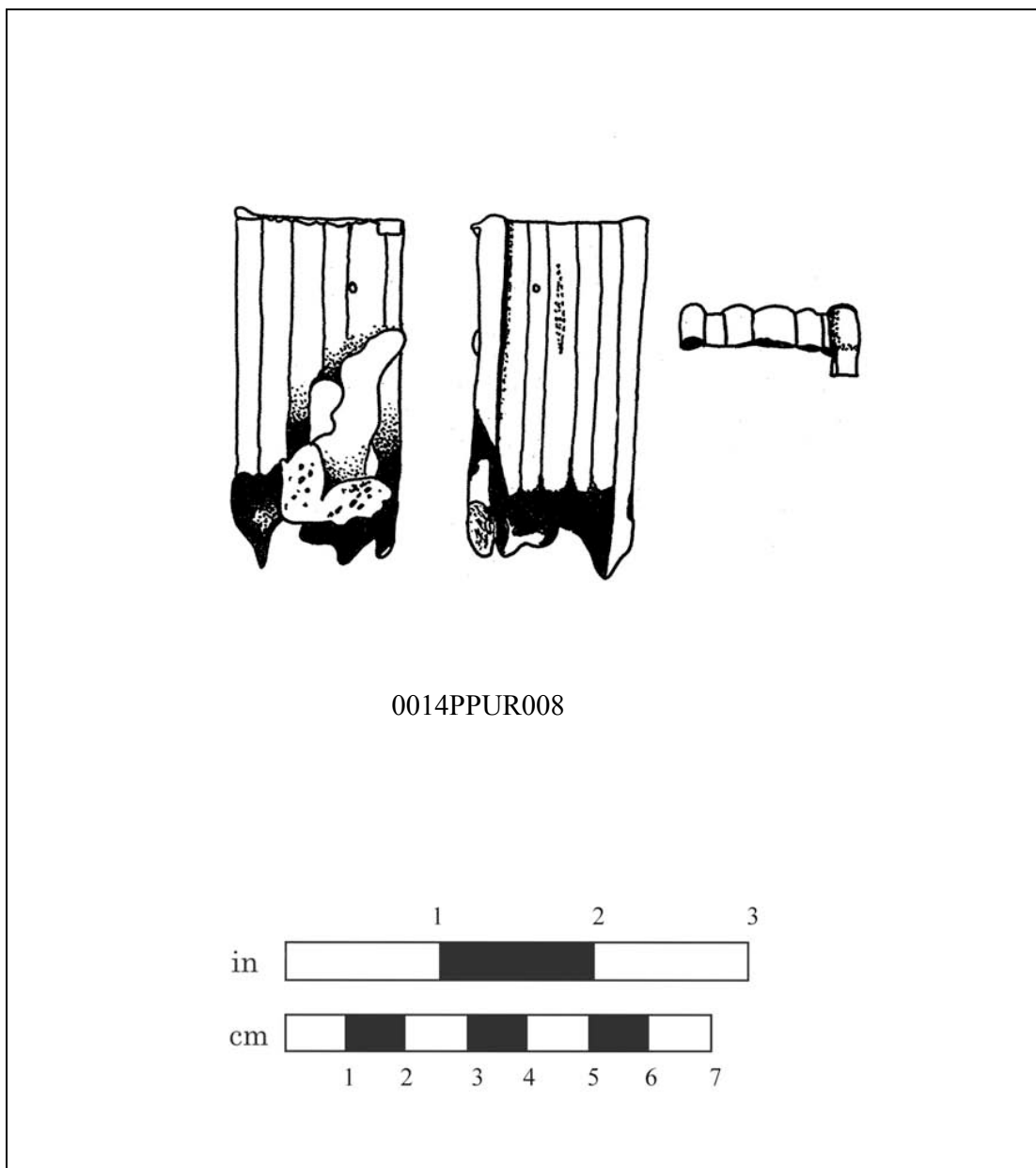


Figure VI-36. Corrugated lantern handle fragment (0014PPUR008).

Stove Remnants. Several cast iron stove parts were found. These included two cabriole legs (0014PUR030 and 0014PUR078), one 6.6 in (16.7 cm) diameter hot plate (0014PUR028), a top plate divider with spoon holder depression (0014PUR058), and an ovalized stove top with pipe fitting and fire box hole (0014PUR073) (Figures VI-37 and 38). These artifacts were spread throughout the vessel. The legs were found in the bow excavation unit, the top plate divider and plate in the midship excavation unit, and the stove top in the stern. The dispersal of these artifacts may have occurred when the vessel sank, or by people scavenging the vessel prior to its sinking.

After analyzing artifact drawings, Janet Garner of Homestead Vintage Stove Company said the following:

The oval stove part probably came from the top of a stove similar to the one in the attached catalog illustration [Figure VI-39]. This catalog illustration is circa 1928, but this is a very common type of stove made by hundreds of stove companies spanning a period of about 100 years. It's a simple, inexpensive wood heater. The smaller hole is the flue connection, probably 6 inches, and the larger hole held a removable 7 or 8 inch lid....The other 2 parts are top plates from a different stove (Garner 2006, pers.comm.).

Given this explanation, the legs could have been from either stove. The stove remnants located in the stern (see Chapter V) are undoubtedly those of the wood heater. The cook stove might still be beneath the starboard side mud bank.

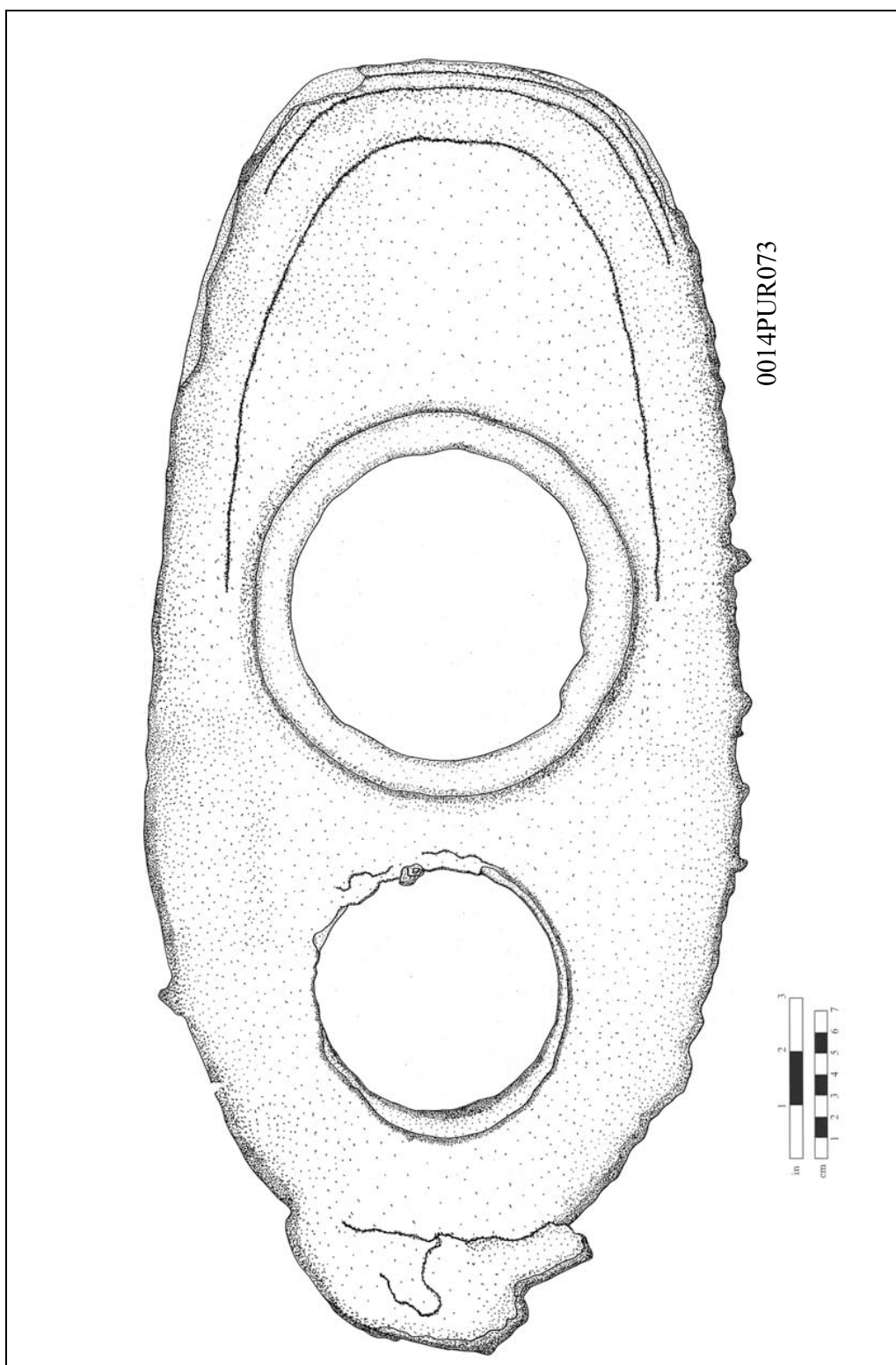


Figure VI-37. Iron stove top (0014PUR073).

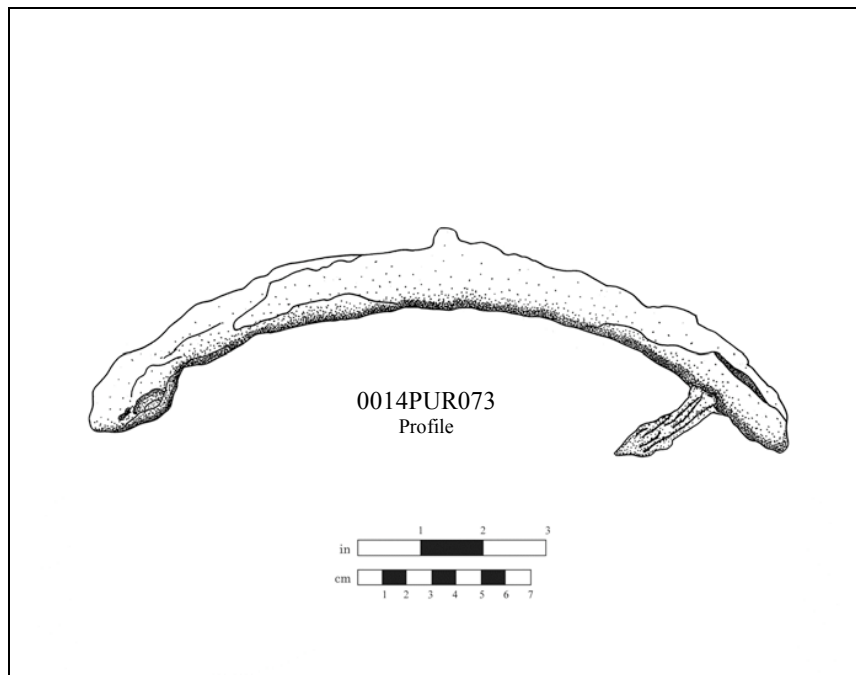


Figure VI-38. Artifact 0014PUR073 profile.

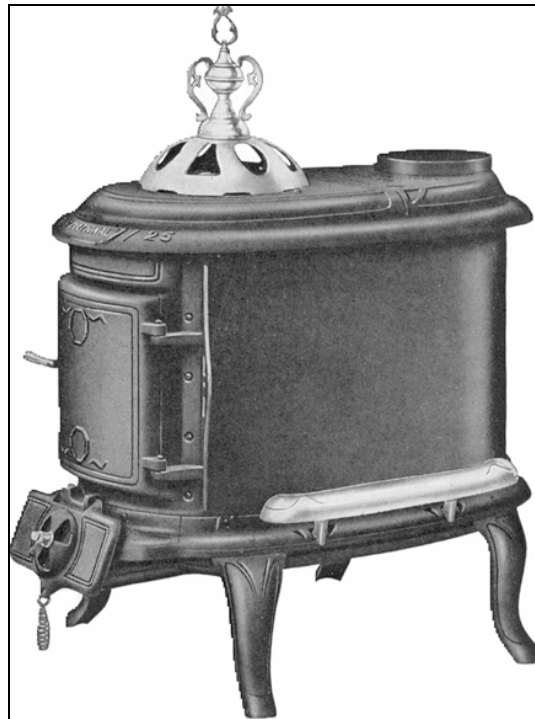


Figure VI-39. Wood Heater circa 1928 (Garner 2006, pers. comm.).

Miscellaneous Iron Artifacts. Artifact 0014PUR075 was found atop bow frame five (Figure VI-40). This artifact resembles a modern pipe-mounting flange, used to mount pipe to a wall or floor. The outer flange is 2.75 in (7 cm) and has a .75 in (1.9 cm) center hole. Three .5 in (1.3 cm) mounting bolt remnants are present on the outer flange. Artifact 0014PUR075 was covered with concretion and wood remnants. The exact function of this artifact is not known.

Artifact 0014PUR080 is a pear-shaped iron fitting 2.75 in (7 cm) long by 2.25 in (5.7 cm) wide (Figure VI-41). It was found 5 ft (1.5 m) forward of the sternpost. The pear-shaped portion is a flange with a 1.25 in (3.2 cm) tall by 1.5 in (3.8 cm) wide extension at its widest end. Two holes are present, one at either end. The larger hole is .75 in (1.9 cm) in diameter, and is drilled through the 1.25 in (3.2 cm) extension. The smaller hole is .25 in (.6 cm), and is drilled through the flange's other end. A faint "29" is stamped on the backside. This artifact looks to be some sort of shaft support. The large protrusion was probably recessed in to a piece of wood to hold a shaft, and the smaller countersunk hole was used to hold the fitting fast. This might be a block remnant, or it might be a stove component.

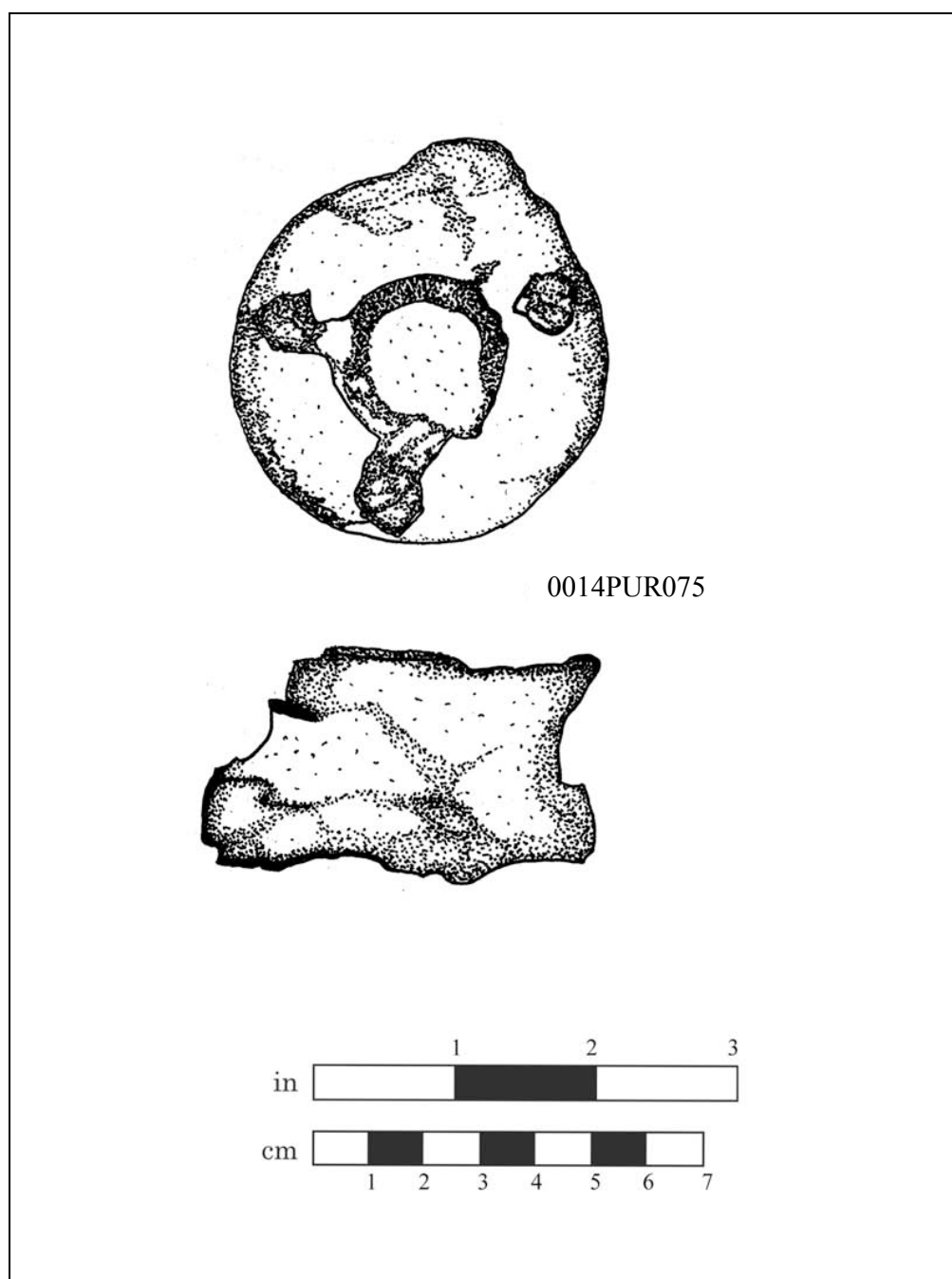


Figure VI-40. Artifact 0014PUR075.

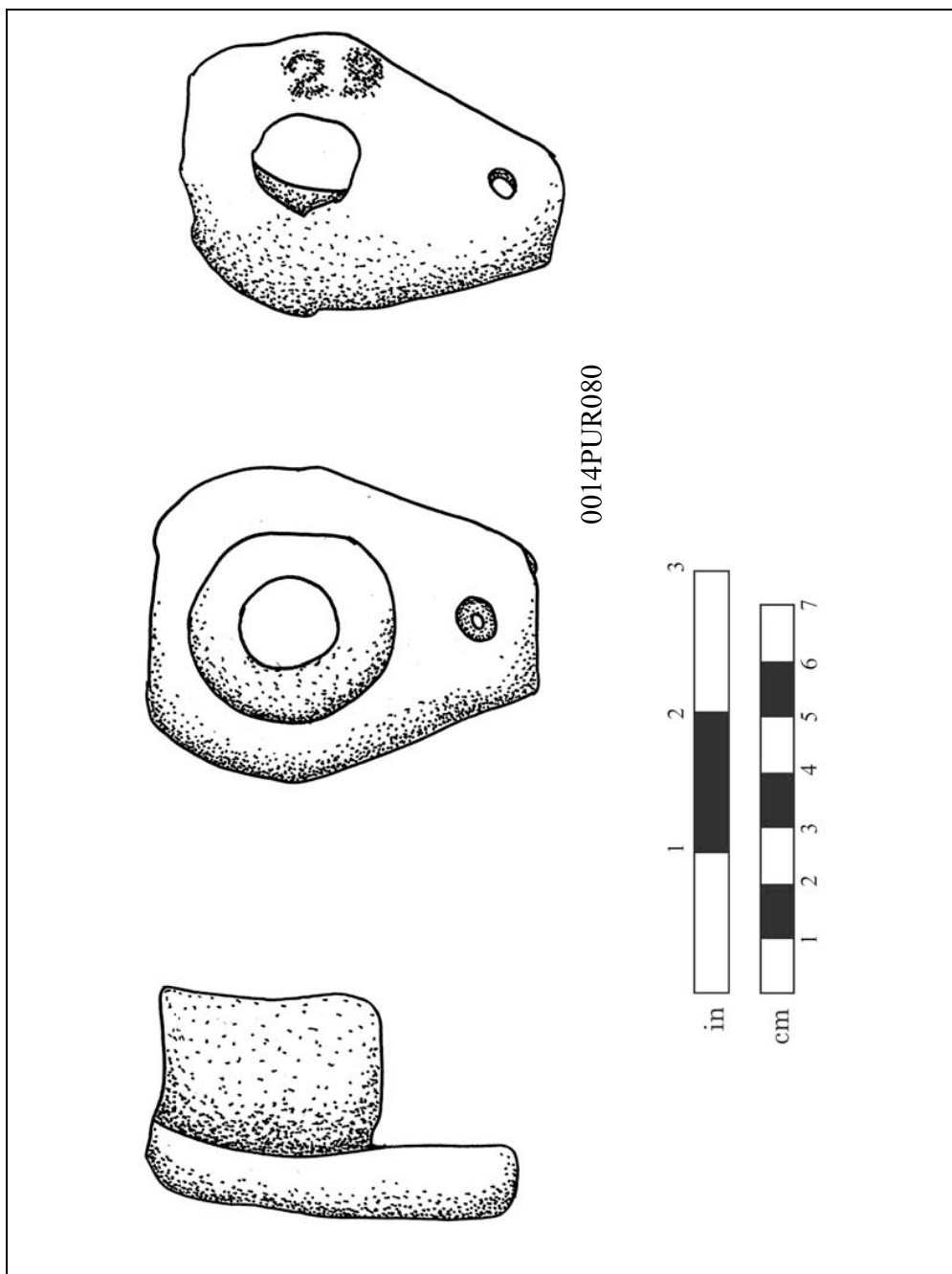


Figure VI-41. Artifact 0014PUR080.

VII. Conclusions and Recommendations

The 2003 investigation approached the site with several testable hypotheses. The aim was to obtain relevant data while limiting site disturbance. Local accounts of the vessel as well as preliminary historical research were helpful in developing these hypotheses. Investigation methodology was designed to provide optimal data recovery to address the research hypotheses.

Conclusions

Hypothesis 0. The Null Hypothesis (Platt 1964) was unnecessary: the existence of a submerged vessel was determined by both the 2001 exploratory dive and the 2002 UAB investigation.

There was no change to refute this hypothesis.

Hypothesis 1. The vessel is a wooden vessel. Previous investigations did reveal wood remnants, but their small scale was not sufficient to rule out composite construction. Evidence of an iron, steel, or fiberglass hull will disprove this hypothesis.

This hypothesis remains. No iron, composite, or fiberglass hull remnants were found. The site is indeed a wooden vessel.

Hypothesis 2. The vessel is a sailing vessel. Sail, steam, and other fuel powered vessel have, and continue to, ply the rivers and sounds of North Carolina. Existence of engine remnants will partially preclude this hypothesis. It remains, however, that 19th century steam vessels often relied on sail technology as well as steam for propulsion. Signs of both might be present. Evidence of engine remnants without evidence of sail

technology will disprove this hypothesis, whereas evidence of mast steps and rigging remnants devoid of other propulsion evidence will suggest that the vessel is a sailing vessel.

This hypothesis was not disproved. No steam or other mechanical remnants were found, but mast steps, chain plates, and several rigging elements were documented. Site (0014PUR) is a sailing vessel.

Hypothesis 3. The vessel is a two-masted schooner. Contingent on Hypothesis 2, if the vessel is a two-masted schooner, at least two mast steps should be present. If the vessel lacks steps, or the vessel contains only one step, this hypothesis can be disproved. Additionally, evidence of two steps will not prove that the vessel is a two-masted schooner. Several other rig patterns used two masts.

This hypothesis was not refuted because two mast steps were documented. The forward step is 11.8 ft (3.6 m) aft of the inner apron face, and the aft step is 40.6 ft (12.4 m) aft of the inner apron face. Both measurements are consistent with the ranges considered for similar sized schooners (Appendix H).

Hypothesis 4. The vessel contains a centerboard. Centerboards became increasingly common in coastal North Carolina during the second half of the 19th century, where myriad shoals and bars were navigational obstacles for deep keel vessels. The absence of a centerboard or remnants thereof will disprove this hypothesis.

This hypothesis was disproved. The vessel did not have a centerboard. The vessel's keel, however, is fairly deep at 1 ft (.3 m) molded. Disproving this hypothesis does not rule out the possibility that this vessel is the *Star*. Although 1840s Eastern

North Carolina would have seen an increase in centerboard construction, the documented archaeological evidence of known North Carolina-built centerboard schooners is limited to just two vessels: the *Scuppernong*, and the *Black Warrior* (formerly the *M.C. Etheridge*), constructed in 1853 and 1859 respectively (Turner 1999; Stevenson and Still 1993). Both vessels were built in the Albemarle region.

Since the 1844 Roberson shipbuilding indenture makes no mention of centerboards, it must be considered that resistance to new technology was as common in the 19th century as it is today. While some builders quickly assimilated new technology, others might have warmed slowly to change. Cost must also be considered. The more complicated a vessel was to build, the more time it took, and the more it cost. William Henry von Eberstein's account of the schooner *Independence's* lengthening and subsequent sailing did not mention a centerboard (Chapters I and II). The *Independence* was originally built at Washington in 1847, five years after the *Star* (U.S. Bureau of Navigation 1996D: Enrollment 20, 13 July 1847). If the *Star* was intended to be used solely for transporting items to and from Washington, a centerboard would have been an unnecessary financial expenditure. If, however, the vessel was used to make longer forays up local rivers, then a shallower draft, centerboard equipped vessel would have been more appropriate.

After enlargement of the Dismal Swamp Canal was completed in 1828, vessels built in the Albemarle region were soon adapted to pass through the canal (Turner 1999: 31-32). Vessels were limited to the canal's dimensions. Specifically, they were less than 17.5 ft (5.3 m) wide, and had drafts of less than 5 ft (1.5 m) (Turner 1999:32). Shallow

draft Dismal Swamp Canal schooners required centerboards for stable open water sailing (Turner 1999: 46). The *Scuppernong* was one of these vessels.

Since Albemarle builders were incorporating centerboards for canal use, it is arguable that the technology would have been used for larger, non-canal vessels earlier than in other parts of eastern North Carolina. The 94 ft (28.6 m) long 24 ft (7.3 m) wide *Black Warrior*, was too big for canal trade, but was centerboard equipped. Pamlico builders probably adopted the centerboard later than their Albemarle counterparts. A non-centerboard equipped vessel in 1842 Washington would not have been unusual. It is also possible that larger vessels in the Albemarle also adopted centerboards later than their canal-specific counterparts. The *Black Warrior* is the only positively identified North Carolina-built schooner too large for canal trade, and it was built in 1859. Considering these factors, it is likely that the *Star* was built without a centerboard.

Hypothesis 5. The vessel was lengthened. Enrollment records reveal that the *Star* was lengthened in 1852. Disproving this hypothesis will entail finding no evidence of lengthening. This might prove difficult because vessels could have been lengthened in several ways and evidence might not be readily identifiable. During the lengthening process, new sections of keel and keelson would have scarphs at their beginning and terminating points. The existence of scarphs along the keelson amidships might indicate lengthening, but would not be conclusive. The keelson might contain several sections. Conversely, the lack of scarphs along the keelson does not disprove vessel lengthening: the entire keelson might have been replaced. Similar changes in ceiling plank patterns will also suggest lengthening.

This hypothesis could not be disproved. No evidence to refute this hypothesis was found. On the contrary, evidence to suggest lengthening was found. The keelson changes along its length. In the bow section, it is notched to fit over the frames whereas in the midship section the keelson rides atop the frames. The keelson's sided dimensions also change over its length. Specifically, it widens amidships. The stern keelson is heavily charred, which could explain the narrower measurement in that area; however, the charring along the keelson in the bow excavation unit is minimal, leaving comparative measurements between the bow keelson and midship keelson fairly accurate. Furthermore, the large keelson scarf forward of amidships suggests that a new section was added at that point. This would explain the dimensional change as well as the change in joinery techniques. There is also a possibility that another keelson scarf was present toward the stern, but was not discernable because of the heavy charring.

After examining the plan view (Figure V-7) before the upper-hull drawing was added, Mike Alford indicated an area 4-5 ft (1.2 – 1.5 m) forward of the midship excavation unit as the vessel's widest point. This area is where lengthening would have occurred (Alford 2003, pers.comm.). This location corresponds with the ruptured keelson scarf. Upon reviewing the plan view with the upper hull section added, Alford added that "the keelson scarf by itself doesn't necessarily indicate lengthening. Because this one occurs in the "suspect" area though, it may be due to the hull being cut and stretched" (Alford 2005, pers.comm.).

There is also a framing pattern change along the upper hull. An 11 ft (3.4 m) section along the upper-hull corresponding to the area forward of the midship excavation

unit is tightly packed with ten frames. Frames are sparse along the rest of the upper hull.

Mr. Alford cautions,

[The] clustering of frames does occur where I would expect the master frame to lie in early-mid nineteenth century schooners. You only have that evidence from the topsides on one side. I haven't convinced myself yet that there is a significant difference in the frames in this area and those of the midship area...My "eyeball" tells me there is a difference (Alford 2005, pers.comm.).

Six of the ten frames in this section are grouped into three frame pairs spaced 2.4 in (6.1 cm) apart. Two additional frames are paired and spaced 4 in (10.1 cm) apart. These tight groupings differ from the fairly consistent spacing in the midship excavation unit.

Although not conclusive, these framing peculiarities suggest that some change is present in the unexcavated section. Coupling this evidence with the keelson differences, it is likely that vessel 0014PUR was lengthened. Uncovering the area forward of the midship excavation unit could provide a more conclusive interpretation.

Hypothesis 6. The vessel dates to the 19th century. Sailing vessels plied North Carolina waters since the 16th century. The vessel examined might date to a time frame other than 1862. Identification of particular construction traits will narrow the field.

This hypothesis was not refuted. Two data sets were used to evaluate this hypothesis. First, artifactual evidence recovered during the investigation is consistent with 19th century sailing craft. The patent roller bearings found on site 0014PUR have also been documented on other mid 19th century vessels. Historical documents relating to the 1843-built schooner *North Carolina* reveal that the vessel used "bushed blocks" as part of its fitting accompaniments (Turner 1999: 47). The term "bushed" refers to sheave construction typology. "The sheave is a solid wheel, made of lignum vitae, iron, or brass;

in which the centre is a hole for the pin, on which it turns. The *lignum vitae* sheave is bushed with brass or iron” (Brady 1887: 34). This typology was common throughout the 18th and 19th centuries (Clark 1976). Assuming that equipping a ship for speed was an important consideration, the use of bushed blocks on the *North Carolina* suggest that patent sheaves were not yet an alternative, or the use of such sheaves was cost prohibitive. Since the author’s earliest found reference to patent sheaves is the 1847 *North State Whig* pump making advertisement discussed in Chapter VI, patent sheaves most likely showed up some time between 1843 and 1847. The archaeological documentation of patent sheaves on the 1853-built *Scuppernong*, suggests that patent sheaves on North Carolina-built vessels became more common by the 1850s.

Another 19th century artifactual element found on site (0014PUR) is the bilge pump. Although common or suction pump usage covers a broad temporal range, the discovery of this particular pump type, coupled with the patent bearings, points to the mid 19th century. It must be assumed that both examples could extend beyond the mid-19th century and into the early 20th century. Oertling points out, however, that

[b]y the middle of the nineteenth century, the industrial manufacture of pumps had commenced. Iron became the predominant metal for all pump parts in the last half of this century, although copper and bronze continued to be used.... The Deluge or New Deluge suction pump...force pump and the diaphragm pump...appeared before the end of the nineteenth century (Oertling 1996: 74).

Since none of these new pump technologies or materials were used on this vessel, a later construction date is unlikely.

Structural features also point to mid 19th century construction. As described in the conclusion to *Hypothesis 4*, no centerboard was found. While considering that

centerboard technology might have taken hold later in the Pamlico region than in the Albemarle, it must be assumed that at some point the technology would have become incorporated. With no centerboard, it is likely that this vessel was built earlier than 1850. The patent sheaves were probably added later, perhaps during a refit (see *Hypothesis 5*). This resolves the inconsistency of a pre-1850 vessel having post 1850 technology.

The hull dimensions of 0014PUR also shed light on its construction date. Ship dimensions listed in the Stephenson and Still database from 1797-1800 were compared with those listed in 1850. By establishing length to beam ratios and length to depth of hold ratios, a change in hull structure is evident. For the years 1797-1800, the average length to beam ratio is 1:3.3, that is, the length is 3.3 times the beam. The length to depth of hold ratio for the same years is 1: 8.2, that is, the length is 8.2 times the depth of hold (Stephenson and Still 1993).

To maintain consistent vessel comparisons, average measurements for 1850 excluded vessels built for the canal trade. The narrower beams of these vessels are not representative of coasting schooners. For 1850-built vessels, the average length to beam ratio is 1:3.7, only slightly different to their pre-1800 counterparts. What is evident, however, is that these vessels were narrower than pre-1800 vessels. For example, a 70 ft (21 m) pre 1800 vessel would have a beam of 21 ft (6 m) whereas an 1850 vessel of the same length would have a 19 ft (5.8 m) beam. The average length to depth of hold ratio in 1850 is 1:12.8. This represents a significant difference. Vessels built in 1850 had much shallower holds than those built prior to 1800. Comparative average depth of holds for 70 ft (21m) long pre-1800 and 1850 vessels would be 8.5 ft (2.6 m) and 5.5 ft (1.7 m)

respectively. Site 0014PUR has a length to beam ration of 1:3.6 and a length to depth of hold ratio of 1:11.5. These ratios are consistent with mid 19th century-built vessels.

Hypothesis 7. The vessel is North Carolina-built. This is undoubtedly the most difficult of all hypotheses to disprove. The database for North Carolina-built vessels is very small, and historical documentation of North Carolina ship construction techniques is almost nonexistent.

This hypothesis was not disproved. When comparing vessel 0014PUR to Peccorelli's three low country building distinctions, only one can be completely ruled out. There is no appreciable sided dimensional change in the keel, and the keel is not rounded on top. The keelson does, however, widen amidships, and is notched in some areas but not in others. As explained in *Hypothesis 5*, these characteristics might be due to a new timber added during vessel lengthening. This vessel's frame-keel joints are similar to those of plantation-built vessels: they are not notched to straddle the keel. These characteristics are insufficient to establish site 0014PUR's origins.

By comparing the structural findings of site 0014PUR to those of the *Scuppernong* and the *Black Warrior*, a similarity can be drawn between the *Black Warrior's* framing pattern and site 0014PUR. Frames in the *Black Warrior* are spaced closer together than those of site 0014PUR (Lawrence 2002B: 5), but both vessels have the same alternating pattern described in Chapter V. The *Scuppernong* has both single and double frames. No double frames were found on 0014PUR.

Wood samples offer the most conclusive evidence that site 0014PUR is locally built. The samples of live oak (*Quercus virginian*), white oak (*Quercus alba*), loblolly

(*Pinus taeda*), and longleaf (*Pinus palustris*) obtained during the investigation are consistent with other local built vessels. This comparison is limited in its scope because these species were prevalent in the 19th century south, but were also shipped to northern yards for ship construction. The most telling wood sample is the sweet gum (*Liquidambar styraciflua*) keel. Considering that documented use of sweet gum is rare, its usage for the *Scuppernong*'s keel and keelson, along with E.R. Willis' *North State Whig* advertisement mentioned in *Hypothesis 7*, point toward a regional use of sweet gum for vessel construction. Since vessel 0014PUR uses the same rare ship building wood, it is reasonable to conclude that it is North Carolina built.

Hypothesis 8. The vessel was abandoned. Disproving this hypothesis would entail finding signs of wrecking processes. One useful distinguishing factor would be finding a cargo. If a cargo were still on board, it could be assumed that the vessel wrecked before the cargo could be offloaded, thus disproving the abandonment hypothesis. Conversely, signs of scuttling, such as holes drilled beneath the water line would point to an abandonment.

This hypothesis was not refuted. The artifact assemblage from site 0014PUR contains no evidence of cargo, and there are no signs of wrecking. This vessel was most likely driven ashore where its cargo could be easily offloaded. The extant rigging elements and stove fragments suggests that whoever abandoned the vessel intended to return, but was thwarted by patrolling Union gunboats.

There is also a possibility that scuttling was attempted. As stated in Chapter III, there are two known cases of masters scuttling their vessels when the war broke out, and

returning to raise them later. This might have been the intention of this vessel's master. Several things suggest that this was not the case. First, the master would most likely have removed the rigging elements in this scenario. They would have been useful in the interim. Second, local oral histories state that the vessel remained above water well into the 1920s. Third, the vessel's master would have known that successful scuttling would require deeper water than that along the river bank.

The most probable explanations of the vessel's disposition are that the vessel was abandoned in haste, leaving only enough time for cargo removal, or it was abandoned with its cargo that was later removed. If the vessel was being pursued by a Union gunboat, the cargo may have been recovered by the gunboat's crew.

An interesting side note to add is the vessel's location. The vessel lay just north of a sizeable island (Chapter IV, Figure IV-2). The island creates a natural turnabout. If the vessel was returning from Pine Grove Landing as stated in Chapter III, the master could have sailed the vessel around the island, and anchored it on the backside. If he intended to hide the vessel from advancing Union gunboats, he might have gambled that the island would hide his de-masted ship.

Hypothesis 9. The vessel was burned. We know from previous archaeological investigation that charring was present on the frames examined. Did this charring continue into the rest of the vessel? Several local accounts indicate that the vessel was burned. They differ, however, in how and who burned it.

This hypothesis was not refuted. Structural and artifactual findings are consistent with a fire. Fire damage was extensive, leaving few spots unscathed. There are several

possible explanations for the fire. It might have been started by fleeing Confederates or by Union gunboat crews. Both scenarios are suggested by oral histories. As shown in Chapter III, the Union Navy did conduct search and destroy missions in and around the Pungo River. Another possibility is that the vessel was ignited by field-clearing fires. According to Dewey Clayton, the Lowe brothers regularly burnt off the marsh reeds during the spring so that they could get good grass for cattle grazing (Babits 2003: 18 June).

The charring provided some support to claims that the Lowell brothers salvaged timbers from the vessel for use in boat and barn building (Chapter III). First, no deck beams or decking were found. Most probably disappeared with the fire, but nothing was found, not even a clamp or knee. Portions of deck timbers that remained following the fire could have been salvaged. Second, the vessel's inner apron face is smooth with no evidence of charring, the front edge of the keelson is scarfed as if to meet a missing timber, and there is a clenched drift bolt along the inner apron face. Since the face was unscathed by the fire, the area was probably covered by another timber, or a series of timbers that have since been removed. The clenched drift bolt supports this as a bolt standing straight up would have been hazardous to those removing timber.

Hypothesis 10. The vessel lay stern upstream. If the stern lay closest to shore with the bow facing downstream, it might indicate that the vessel was adrift and grounded, with the bow swinging downstream with the current. If the bow lay closest to shore, it might suggest that the vessel was driven ashore in that location, perhaps to offload cargo. Local history claims that the vessel is oriented upstream.

This hypothesis was rejected. The vessel's bow is driven upstream into the riverbank.

Considering the information gleaned from these hypotheses, site 0014PUR is a 19th century North Carolina-built schooner. Furthermore, it is the contention of this investigation that the vessel is indeed the *Star*. This conclusion is drawn from evidence obtained from the 2003 investigation as well as incorporating and documenting local oral history. The likelihood of this vessel being arbitrarily named in local history is slim considering the vessel's remote location and lack of other nearby vessels. The fact that site (0014PUR) dimensions are almost identical to the known *Star* dimensions supports the local history. The vessel was burned, as suggested by local history, however, no conclusive evidence of why this happened is available. No official records, Union or Confederate, document this act. It is a possibility that the vessel burning was caused by one of the Lowe brothers' field clearing fires.

Recommendations

It is recommended that the *Star* be included in the National Register of Historic Places. It is also recommended that future historic investigation be conducted if new resources become available. Finally, future archaeological investigation should be conducted as follows:

- 1- Document the lengthened area as follows:
 - a. Expose a 20 ft (6.1 m) section across the entire vessel, port-starboard, starting at the forward mast step (13 ft (4 m) aft the inner apron face) and moving aft.
 - b. Map the exposed section, noting any changes in framing patterns.
 - c. Obtain several wood samples to determine if any changes in frame speciation occur.
 - d. Examine the keel in this section to determine scarf typology, and obtain wood samples before and after the scarf to determine any change in keel speciation.
- 2- Document the starboard side upper hull, noting any deck remnants. The starboard upper hull might still be intact, considering that it is supported on both sides by overburden. This can probably be accomplished in conjunction with the dredging discussed above, thus limiting site disturbance.

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Appendix A

Enrollments and Registers for the Schooner *Star*, 1842-1860

The following page contains the known enrollment and registers for the schooner *Star*. An attempt has been made to provide a complete list, but some gaps in the data are present. In most cases, missing data can be deduced by looking at the *Description of Former Paper*, and *Port of Surrender* information. The author has filled in that information for continuity. These sections are highlighted. The only questionable time period is from 19 March 1860 to 19 July 1860. On 19 March, the vessel was registered in Philadelphia for foreign trade, but the next known enrollment gives 7 April 1860 as the date of former paper. What happened between 19 March and 7 April is puzzling. It is possible that the vessel was registered twice during the three-week gap, perhaps due to an ownership change, but when the vessel returned to Washington in July, Robinson and Dill were still the only listed owners. The two might have added an additional partner for an anticipated shipment, but the arrangement fell through. This would explain two registrations in the short time period.

Enrollments and Registers for the Schooner *Star*

					Description of Former Paper			Port of Surrender			
Date	#	Port	Owner	Master	Date	#	Where	Date	Reason	Where	
Oct 17, 1842	17	Washington, NC	John Tyler and James H. Tyler	Jacob G. Williams	E*	None		Jan 31, 1843	Register	Washington, NC	
Jan 31, 1843	4	Washington, NC	John Tyler and James H. Tyler	Jacob G. Williams	R	Oct 17, 1842	17	Washington, NC	Apr 11, 1843	Enrollment	Washington, NC
Apr 11, 1843	11	Washington, NC	James H. Tyler and John Tyler	Jacob G. Williams	R	Jan 31, 1842	4	Washington, NC	Jan 27, 1844	Register	Washington, NC
Jan 27, 1844	3	Washington, NC	John Tyler and James H. Tyler	Jacob G. Williams	E	Apr 11, 1843	11	Washington, NC	Apr 18, 1844	Enrollment	Washington, NC
Apr 18, 1844	7	Washington, NC	James H. Tyler and John Tyler	Jacob G. Williams	E	Jan 34, 1844	3	Washington, NC	Dec 8, 1848	Prop. Change	Washington, NC
Dec 8, 1848	30	Washington, NC	David Carter	James Farrow	E	Apr 18, 1844	7	Washington, NC	Apr 4, 1849	Prop. Change	Washington, NC
Apr 4, 1849	9	Washington, NC	Sylvester Brown and David Carter	James Farrow	E	Dec 8, 1848	30	Washington, NC	Jul 5, 1849	Prop. Change	Washington, NC
Jul 5, 1849	19	Washington, NC	Sylvester Brown, G.H. Brown, and P.W. Brown	William Allen	E	Apr 4, 1849	9	Washington, NC	Aug 20, 1850	Prop. Change	Plymouth, MA
Aug 20, 1850	4	Scituate, MA	Sylvester Brown, G.H. Brown, and P.W. Brown		R	Jun 5, 1849	19	Washington, NC	Dec 19, 1850	Enrollment	Washington, NC
Dec 19, 1850	27	Washington, NC	Sylvester Brown, G.H. Brown, and P.W. Brown	Perry Parker	E	Aug 10, 1850	4	Scituate, MA	Feb 7, 1851	Register	Washington, NC
Feb 7, 1851	2	Washington, NC	George H. Brown	Benjamin Bond	R	Dec 19, 1850	27	Washington, NC	May 6, 1851	Prop. Change	Washington, NC
May 6, 1851	8	Washington, NC	G.H. Brown and P.W. Brown		E	Feb 11, 1851	2	Washington, NC	Nov 13, 1851	Register	Washington, NC
Nov 13, 1851	9	Washington, NC			R	May 6, 1851	8	Washington, NC	June 1, 1852	Altered	Washington, NC
June 1, 1852	6	Washington, NC	G.H. Brown, P.W. Brown, and William Bond	Benjamin Bond	R	Nov 13, 1851	9	Washington, NC	Jun 1, 1852	Enrollment	Washington, NC
Jan 20, 1853	3	Washington, NC	P.W. Brown, G.H. Brown, and William Bond	John Spencer	E	Jun 1, 1852	6	Washington, NC	Feb 19, 1853	Prop. Change	Washington, NC
Feb 19, 1853	6	Washington, NC	Benjamin F. Hanks	James Longman	E	Jan 20, 1853	3	Washington, NC	Sep 18, 1856	Prop. Change	Washington, NC
Sep 18, 1856	27	Washington, NC	R.L. Myers, Joseph Potts, and R.S. Donnell	William W. Bowker	E	Feb 19, 1853	6	Washington, NC	Jun 5, 1857	Prop. Change	Washington, NC
Jun 5, 1857	13	Washington, NC	Edward Waters	William W. Bowker	E	Sep 18, 1856	27	Washington, NC	Nov 9, 1857	Register	Washington, NC
Nov 9, 1857	12	Washington, NC	Edward Waters	John Harris	R	Jun 5, 1851	13	Washington, NC	Jan 21, 1859	Enrollment	Washington, NC
Jan 21, 1859	1	Washington, NC	Edward Waters	John Harris	E	Nov 9, 1857	16	Washington, NC	Dec 8, 1859	Prop. Change	Washington, NC
Dec 10, 1859	23	Washington, NC	Joseph Robinson and David H. Dill	James Cahoon	E	Jan 21, 1859	1	Washington, NC	Jan 3, 1860	Register	Plymouth, NC
Jan 5, 1860	2	Plymouth, NC	Joseph Robinson and David H. Dill	James Cahoon	R	Dec 10, 1859	23	Washington, NC	May 13, 1860	Register	Washington, NC
Mar 13, 1860	7	Washington, NC	Joseph Robinson and David H. Dill	James Cahoon	R	Jan 5, 1860	2	Plymouth, NC	Mar 19, 1860	Register	Philadelphia, PA
Mar 19, 1860											
Apr 7, 1860	34	Philadelphia, PA									
Jul 19, 1860	15	Washington, NC	Joseph Robinson and David H. Dill	James Cahoon	E	Apr 7, 1860	34	Philadelphia, PA			

* Register is denoted by "R"

Enrollment is denoted by "E"

* Register is denoted by "R"

Enrollment is denoted by "E"

Appendix B

***Star* Marine Entries in Washington Newspapers 1842-1853**

The following pages contain all extant marine entries for the *Star* in the *Washington Whig*, and *North State Whig* newspapers from 1842-1853. The data is by no means complete, as an intact set of these newspapers does not exist. Gaps in the record are sometimes a full year or more. Information in the chart appears as it does in the marine entries except where the author has extended name abbreviations for clarity. The marine entries only list the master's last names. In the "Paper" category, *NSW* denotes the *North State Whig* and *WW* denotes the *Washington Whig*. All other categories are self explanatory except, perhaps the "C/A" category: "C" represents the vessel clearing port, and "A" represents arrival.

Year	Paper	Date	Vol.	No.	Master	C/A	C/A Date	Destination/Origin	Cargo	To Whom
1842	<i>NYW</i>	26-Oct	VII	407	Williams	C	20-Oct	New York		Jon Tyler
1842	<i>NYW</i>	9-Nov	VII	409	Williams	A		New York		Jon Tyler
1842	<i>NYW</i>	23-Nov	VII	411		C	17-Nov	New York		J. Tyler
1842	<i>NYW</i>	7-Dec	VII	413		A	12-Dec	New York		J. Tyler
1843	<i>NSW</i>	20-Apr	I	5	Williams	C	14-Apr	New York		J. Tyler
1843	<i>NSW</i>	3-Aug	I	20		A	30-Jul		Ballast	J. Tyler
1843	<i>NSW</i>	2-Nov	I	29		A	3-Nov		Merchandise	J. Tyler
1844	<i>NSW</i>	30-May	II	4	Williams	C	25-May	New York		
1844	<i>NSW</i>	27-Jun	II	8	Williams	A	17-Jun	New York		
1844	<i>NSW</i>	4-Jul	II	9	Williams	A	27-Jun	New York	Merchandise	J. Tyler
1844	<i>NSW</i>	1-Aug	II	13	Williams	A	26-Jul	New York	Ballast	J. Tyler
1845	<i>NSW</i>	17-Apr	II	48	Robbins	A	13-Apr	New York	Merchandise	J. Tyler
1845	<i>NSW</i>	16-Oct	III	21	Robbins	A	15-Oct	New York		
1845	<i>NSW</i>	16-Oct	III	21	Robbins	C	21-Oct	New York	Naval Stores	J. Tyler
1847	<i>NSW</i>	5-May	IV	46	Gautier	A	2-May	New York	Ballast	J. Tyler
1848	<i>NSW</i>	19-Jan	V	31	Rogers	C	18-Jan	Plymouth, NC		
1848	<i>NSW</i>	29-Mar	V	41	Rodgers	C	24-Mar	New York	Naval Stores	J. Tyler
1850	<i>NSW</i>	13-Feb	VIII	25	Stewart	C	11-Feb	New York	Grain	G. H. Brown and Brother
1850	<i>NSW</i>	6-Mar	VIII	28	Stewart	A	2-Mar	New York	Ballast	G. H. Brown and Brother
1850	<i>NSW</i>	6-Mar	VIII	28	Stewart	C		New York	Grain	G. H. Brown and Brother
1850	<i>NSW</i>	17-Apr	VIII	34	Stewart	A		New York	Ballast	Sylvester and G. H. Brown and Brother
1850	<i>NSW</i>	17-Apr	VIII	34	Stewart	C		Charleston	Grain	J. Myers and Sons
1850	<i>NSW</i>	5-Jun	VIII	41	Stewart	A		Charleston	Ballast	Sylvester and G. H. Brown and Brother
1850	<i>NSW</i>	5-Jun	VIII	41	Stewart	C		New York	Grain	Sylvester and G. H. Brown and Brother
1850	<i>NSW</i>	18-Dec	IX	16	Parker	A		Boston	Merchandise	G. H. Brown and Brother
1851	<i>NSW</i>	5-Feb	IX	22	Parker	A	1-Feb	New York	Merchandise	G. H. Brown and Brother
1851	<i>NSW</i>	12-Feb	IX	23	Parker	C	8-Feb	West indies	Lumber	G. H. Brown and Brother
1851	<i>NSW</i>	14-May	IX	34	Bond	C	7-May	Providence, RI	Shingles	G. H. Brown and Brother
1851	<i>NSW</i>	11-Jun	IX	38	Bond	A	10-Jun	Providence, RI	Ballast	G. H. Brown and Brother
1851	<i>NSW</i>	18-Jun	IX	39	Bond	C	13-Jun	New York	Naval Stores	G. H. Brown and Brother

Year	Paper	Date	Vol.	No.	Master	C/A	C/A Date	Destination/Origin	Cargo	To Whom
1851	NSW	27-Aug	VIII	49	Bond	A	20-Aug	Providence, RI	Ballast	G.H. Brown and Brother
1851	NSW	3-Sep	VIII	50	Bond	C	30-Aug	Baltimore	Lumber	S.R. Fowle
1851	NSW	1-Oct	X	3	Bond	A	24-Sep	Baltimore	Merchandise	G.H. Brown and Brother
1851	NSW	1-Oct	X	3	Bond	C	25-Sep	New York	Naval Stores	S.R. Fowle and Son
1851	NSW	12-Nov	X	9	Bond	A	6-Nov	Boston	Ballast	G.H. Brown and Brother
1851	NSW	19-Nov	X	10	Bond	C	12-Nov	West Indies	Lumber	G.H. Brown and Brother
1852	NSW	31-Jul	X	42	Bond	A	21-Jul	West Indies	Ballast	G.H. Brown and Brother
1852	NSW	8-Dec	XI	5	Bond	A	18-Nov	New York	Merchandise	G.H. Brown and Brother
1852	NSW	8-Dec	XI	5	Spencer	C	25-Nov	New York	Corn	W.H. Willard
1853	NSW	12-Jan	XI	9	Spencer	A	8-Jan	New York	Merchandise	G.H. Brown and Brother
1853	NSW	19-Jan	XI	10	Spencer	C	18-Jan	New York	Grain	G.H. Brown and Brother
1853	NSW	16-Feb	XI	14	Spencer	A	10-Feb	New York	Merchandise	G.H. Brown and Brother
1853	NSW	16-Mar	XI	18	Longman	A	10-Mar	New York	Merchandise	B.F. Hanks
1853	NSW	23-Mar	XI	19	Longman	C	17-Mar	Philadelphia	Lumber	B.F. Hanks
1853	NSW	11-May	XI	26	Longman	A	9-May	Baltimore	Merchandise	B.F. Hanks
1853	NSW	18-May	XI	27	Longman	C	14-May	Philadelphia	Lumber	B.F. Hanks
1853	NSW	8-Jun	XI	30	Newby	A	3-Jun]	Philadelphia	Ballast	B.F. Hanks
1853	NSW	8-Jun	XI	30	Tooker	C	7-[May]	Philadelphia	Lumber	B.F. Hanks
1853	NSW	29-Jun	XI	32	Tooker	A	27-Jun	Philadelphia	Ballast	B.F. Hanks
1853	NSW	6-Jul	XI	33	Tooker	C	3-Jul	Philadelphia	Lumber	B.F. Hanks
1853	NSW	27-Jul	XI	36	Tooker	A	22-Jul	Philadelphia	Coal	B.F. Hanks
1853	NSW	10-Aug	XI	37	Tooker	C	1-Aug	Philadelphia	Lumber	B.F. Hanks
1853	NSW	24-Aug	XI	39	Tooker	A	20-Aug		Coal	B.F. Hanks
1853	NSW	24-Aug	XI	39	Tooker	C			Lumber	B.F. Hanks
1853	NSW	14-Sep	XI	42	Tooker	A	12-Sep	New York	Merchandise	G. Buckman
1853	NSW	21-Sep	XI	43	Tooker	C	16-Sep	Philadelphia	Lumber	B.F. Hanks

Appendix C

List of Vessels Owned

The following pages chronologically list the *Star*'s owners and all the vessels they owned between 1839 and 1861. The start date of 1839 was chosen because it precedes the 1840 census. The end date represents the end of records at the war's outbreak. This list represents the extant data offered in the United States Bureau of Marine Inspection and Navigation's *Certificates of Enrollment and Registration issued at Washington, NC between 1815 and 1868*. Richard Stephenson and William N. Stills' *Statistical Analysis of Interstate and International Vessel Construction in North Carolina*, was used to fill holes in the data set where possible. The *Star* is the only exception regarding data sources. Information pertaining to the *Star* is composed of all found data.

Vessel: Vessel's name.

Type: Represents vessel type: schooner, sloop, brigantine etc.

Build Date and Location: Known Build date and location.

Co-Owners: Lists all identified co-owners. Specific years of the co-owners' involvement are not listed. For example, if two co-owners are listed, their ownership time periods might have occurred at different times, or they might have been joint owners for the entire period. The names are listed chronologically, that is, the first co-owner listed precedes the second master listed, unless they were joint owners for the same time period.

Masters: As with the co-owners, this list offers no time periods of master tenure. The names are, however, listed chronologically.

Vessel Size: Represents known vessel dimensions. Where necessary, changes in vessel dimensions and the date of the dimensional changes are noted.

Recorded Years: Represents the known dates of enrollment or registration. If a vessel is listed for only one year, that date is not necessarily representative of the entire period of ownership. If an enrolled vessel's status did not change, it would not have required a new enrollment.

Vessels Owned by John Tyler

Vessel	Type	Build Date and Location	Co-Owners	Masters	Vessel Size	Recorded Years
<i>Anaconda</i>	Schooner	1838 Washington, NC		Joseph Stuart James Longman	61'10" x 18'5" x 6'5" 63 33/95 Tons	1839-1843
<i>Frances</i>	Schooner	Unknown		James S. Robbins	Unknown 68 22/95 Tons	1847
<i>Edward J. Rudderow</i>	Schooner	1854 Brooklyn, NY		Spencer Midyette	78'4" x 21'2" x 6' 87 90/95 Tons	1854
<i>Sarah</i>	Schooner	1845 Carteret County, NC		Edward Mayo	59' x 17'4" x 4'10" 42 88/95 Tons	1855

Vessels Owned by John Tyler and James H. Tyler

Vessel	Type	Build Date and Location	Co-Owners	Masters	Vessel Size	Recorded Years
<i>Star</i>	Schooner	1842 Hyde County, NC		Jacob G. Williams James S. Robbins Benjamin Gautier (Unknown) Rogers	63'4" x 20'5" x 6'6" 70 63/95 Tons	1842-1848
<i>Deborah</i>	Schooner	1831 Chatham, MA	James S. Robbins	James S. Robbins John W. Gilgo John Harris Spencer Midyette	73'7" x 22'9" x 7'10" 113 86/95 Tons Enlarged in 1851 Washington, NC 74'2" x 23' x 7'10" 114 41/95 Tons	1846-1852
<i>Secretary Marcy</i>	Three-masted Schooner	1847 Philadelphia, PA	James S. Robbins	Benjamin Gautier James S. Robbins	79'1" x 23'2" x 7'5" 154 3/95 Tons	1852-1853
<i>Rio</i>	Schooner	1847 Carteret County, NC		William P. Bell William H. Beckley	68'9" x 21'8" x 6'11" 87 90/95 Tons	1851-1854
<i>Pathfinder</i>	Three-masted Schooner	1855 Washington, NC	James S. Robbins ¹	James S. Robbins	130' x 29'1" x 9'6" 328 37/95 Tons	1855
<i>Watauga</i>	Schooner	1856 Washington, NC		Spencer Midyette	99' x 24' x 7'6" 160 25/95 Tons	1856

¹ In one enrollment, the ownership is stated as John Tyler (7/16), James H. Tyler (7/16), and James S. Robbins (2/16).

Vessels Owned by David Carter

Vessel	Type	Build Date and Location	Co-Owners	Masters	Vessel Size	Recorded Years
<i>Camden</i>	Schooner	1831 Camden County, NC		Harris Beale	Unknown 44 10/95 Tons	1845
<i>Star</i>	Schooner	1842 Hyde County, NC	Sylvester Brown	James Farrow	63'4" x 20'5" x 6'6" 70 63/95 Tons	1848-1849
<i>Frances Anne</i>	Schooner	1847 Washington, NC		Chris E. Peterson William Farrow ² James H. Farrow Benjamin Nall	55'9" x 17'4" x 5' 41 22/95 Tons	1848-1849
<i>Nags Head</i>	Schooner	1845 Norfolk, VA		David Carter	71' x 17'2" x 5'2" 60 23/95 Tons	1851
<i>Dolphin</i>	Schooner	1845 Beaufort County, NC		Johnson W. Caffie	60'7" x 18'8" x 4'7" 44 41/95 Tons	1852
<i>L.G. Dobbin</i>	Schooner	1853 Currituck County		B.F. Styron	73' x 22'3" x 7'6" 104 76/95 Tons	1854-1857
<i>Orapeake</i>	Schooner	1851 Norfolk, VA	Tillman Farrow	Thos. W. Williams	78'3" x 17'5" x 5'5" 67 26/95 Tons	1854-1857

² In Enrollment 24, 25 September 1848, William Farrow and David H. Dill are listed as owners but swear that David Carter is the sole owner.

Vessels Owned by Sylvester Brown

Vessel	Type	Build Date and Location	Co-Owners	Masters	Vessel Size	Recorded Years
<i>Dolphin</i>	Sloop	1845 Beaufort County, NC	Isaiah Respass George H. Brown	J. Rodgers Hosea Credde James Simmons Edmund Dixon	47' x 17'9" x ____? 33 69/95 Tons	1845-1847
<i>Pactolus</i>	Schooner	1843 Beaufort County, NC	Isaiah Respass George H. Brown	James Simmons	64' x 17'5" x 5' 51 54/95 Tons	1846-1848
<i>Elizabeth</i>	Schooner	Unknown		James Simmons	Unknown 46 48/95 Tons	1848
<i>Star</i>	Schooner	1842 Hyde County, NC	David Carter George H. Brown Parson W. Brown	James Farrow ? Stewart William Allen Perry Parker	63'4" x 20'5" x 6'6" 70 63/95 Tons	1849
<i>Rio</i>	Schooner	1847 Carteret County, NC	George H. Brown Parson W. Brown	William P. Bell	68'9" x 21'8" x 6'11" 87 90/95 Tons	1850

Vessels Owned by George H. Brown

Vessel	Type	Build Date and Location	Co-Owners	Masters	Vessel Size	Recorded Years
<i>Saunders</i>	Schooner	1838 Brunswick, ME	Charles E. Jarvis William H. Howard	Leman D. Crabtree George Reen	79' x 23' x 7'6" 120 21/95 Tons	1844-1847
<i>Dolphin</i>	Sloop	1845 Beaufort County, NC	Sylvester Brown	Edmund Dixon	47' x 17'9" x ____' ? 33 69/95 Tons	1847
<i>Benjamin F. Hanks</i>	Schooner	1847 Beaufort County, NC	Amos Ireland Benjamin F. Hanks	Amos Ireland David Ireland	76'9" x 22'4" x 6'6" 97 3/95 Tons	1848
<i>Pactolus</i>	Schooner	1843 Beaufort County, NC	George H. Brown	George H. Brown	64' x 17'5" x 5' 51 54/95 Tons	1848
<i>Star</i>	Schooner	1842 Hyde County, NC	Sylvester Brown Parson W. Brown William Bond	William Allen ? Stewart Benjamin F. Bond John Spencer	63'4" x 20'5" x 6'6" 70 63/95 Tons Lengthened in 1852 74' x 20'10" x 6'4"	1849-1853
<i>Frances Anne</i>	Schooner	1847 Washington, NC	Parson W. Brown	Thomas Daniels George Smaw	54'9" x 17'4" x 5' 40 62/95 Tons	1850-1852

George H. Brown Continued

Vessel	Type	Build Date and Location	Co-Owners	Masters	Vessel Size	Recorded Years
<i>Rio</i>	Schooner	1847 Carteret County, NC	Sylvester Brown Parson W. Brown	William P. Bell Spencer Midyette	68'9" x 21'8" x 6'11" 87 90/95 Tons	1850-1857
<i>Thomas J. Beckett</i>	Schooner	1847 Snow Hill, NC		George Smau	76' x 24'7" x 6'2" 98 33/95 Tons	1854
<i>Gladiator</i>	Sloop	1851 Ocracoke, NC	Anson Swindell	Anson Swindell A.C. Davis	39' x 14'10" x 3'7" 21 10/95 Tons	1856-1858
<i>R.S. Donnell</i>	Schooner	1858 Hyde County, NC		C.B. Fulford	50'4" x 16'8" x 4'8" 36 80/95 Tons	1858

Vessels Owned by Parson W. Brown

Vessel	Type	Build Date and Location	Co-Owners	Masters	Vessel Size	Recorded Years
<i>Star</i>	Schooner	1842 Hyde County, NC	Sylvester Brown George H. Brown William Bond	William Allen ? Stewart Perry Parker Benjamin Bond John Spencer	63'4" x 20'5" x 6'6" 70 63/95 Tons Lengthened in 1852 74' x 20'10" x 6'4"	1849-1853
<i>Rio</i>	Schooner	1847 Carteret County, NC	Sylvester Brown George H. Brown	William P. Bell	68'9" x 21'8" x 6'11" 87 90/95 Tons	1850
<i>Frances Anne</i>	Schooner	1847 Washington, NC	George H. Brown	Thomas Daniels George Smau	54'9" x 17'4" x 5' 40 62/95 Tons	1850-1852
<i>W. J. Harris</i>	Schooner	Unknown		Parson W. Brown	Unknown 39 79/95 Tons	1859

Vessels Owned by William Bond

Vessel	Type	Build Date and Location	Co-Owners	Masters	Vessel Size	Recorded Years
<i>Delaware</i>	Schooner	1833 Berkley, MA	S.L. Collins (Darien, GA) R.M. Serville (New York)	William Bond	62'2" x 19'1" x 7'1" 71 31/95 Tons	1845
<i>Star</i>	Schooner	1842 Hyde County, NC	George H. Brown Parson W. Brown	Benjamin Bond John Spencer	63'4" x 20'5" x 6'6" 70 63/95 Tons Lengthened in 1852 74' x 20'10" x 6'4"	1851-1853

List of Vessels Owned by Benjamin F. Hanks

Vessel	Type	Build Date and Location	Co-Owners	Masters	Vessel Size	Recorded Years
<i>Clara Fisher</i>	Schooner	1835 Mount Desert, ME		Ed. R. Thompson Jeremiah Allen	66' x 19'9" x 8'4" 93 7/6/95 Tons	1844-1845
<i>Comet</i>	Schooner	Unknown		E. Ireland	Unknown 131 43/95 Tons	1845-1849
<i>Benjamin F. Hanks</i>	Schooner	1847 Beaufort County, NC	George H. Brown	David Ireland	76'3" x 22'4" x 6'6" 97 3/95 Tons	1848
<i>Alexander Chesire</i>	Schooner	1841 Edenton, NC		William Jones	64' x 16'10" x 5'8" 54 13/95 Tons	1848
<i>Cora</i>	Schooner	1845 Washington, NC		John B. Lewis	44'10" x 16'10" x 6'1" 64 49/95 Tons Lengthened between 1850 and 1852 77' x 19'18" x 5'9"	1850-1856
<i>Eliza</i>	Schooner	1836 Norfolk, VA		S. Forbes	70'2" x 17'2" x 5'4" 66 21/95 Tons	1850

Benjamin F. Hanks Continued

Vessel	Type	Build Date and Location	Co-Owners	Masters	Vessel Size	Recorded Years
<i>Oseola</i>	Schooner	1850 Elizabeth City, NC		Charles Tooker	72' x 17'2" x 5'9" 64 15/95 Tons	1850
<i>David Carter</i>	Schooner	1848 Norfolk, VA	Norton W. Cooke	James F. Cranley	81'5" x 16'11" x 5'4" 67 64/95 Tons	1851
<i>C.W. Skinner</i>	Schooner	1846 Norfolk, VA	Norton W. Cooke	H. Harrington	85'6" x 17'3" x 4'5" 60 26/95 Tons	1851
<i>Dolphin</i>	Schooner	1845 Beaufort County, NC		George Howard	60'7" x 18'8" x 4'7" 44 41/95 Tons	1852
<i>Nags Head</i>	Schooner	1845 Norfolk, VA		George Howard	71' x 17'2" x 5'7" 61 23/95 Tons	1852
<i>Post Boy</i>	Steamer	1847 Jersey City, NJ		James Longman	108'2" x 19'2" x 6'10" 133 26/95 Tons	1853 ³
<i>Star</i>	Schooner	1842 Hyde County, NC		James Longman	74' x 20'10" x 6'4" 85 39/95 Tons	1853-1856

³ No record of the steamer *Astoria*, purchased by Hanks the same year was found.

Benjamin F. Hanks Continued

Vessel	Type	Build Date and Location	Co-Owners	Masters	Vessel Size	Recorded Years
<i>L. G. Dobbin</i>	Schooner	1853 Currituck County, NC		Oscar F. Rice George Snaaw	73' x 22'3" x 7'6" 104 76/95 Tons	1854-1856
<i>Actor</i>	Schooner	1847 Washington, NC		William Branton	66'6" x 16'9" x 5'5" 59 30/95	1855-1856

Vessels Owned by Reading L. Myers

Vessel	Type	Build Date and Location	Co-Owners	Masters	Vessel Size	Recorded Years
<i>Sarah</i>	Schooner	1846 Newbern, NC	John Myers Joseph Robinson	Joseph Robinson	69' x 20'4" x 5'4" 66 32/95 Tons	1846
<i>Mary</i>	Schooner	1847 Washington, NC	John Myers William B. Myers	B.R. Richardson Samuel Cratch	68'6" x 20'4" x 5'11" 71 66/95 Tons	1847-1849
<i>Ella</i>	Schooner	1850 New Haven, CT	John Myers William H. Howard	David Ellis	75'9" x 21'7" x 7'1" 101 6/95 Tons	1851
<i>Lucy</i>	Schooner	1856 Washington, NC	John Myers	John Myers	48' x 16'7" x 3'11" 46 9/95 Tons	1856
<i>Actor</i>	Schooner	1847 Washington, NC	Joseph Potts R.S. Donnell	John Duffy	66'6" x 19'9" x 5'5" 59 3/95 Tons	1856
<i>C. W. Skinner</i>	Schooner	1846 Norfolk, VA	Joseph Potts R.S. Donnell	Ephraim Gautier	85'6" x 17'3" x 4'5" 60 26/95 Tons	1856
<i>Cora</i>	Schooner	1845 Newbern, NC	Joseph Potts R.S. Donnell	A. McRae	77' x 16'8" x 5'9" 77 55/95 Tons	1856
<i>David Carter</i>	Schooner	1848 Norfolk, VA	Joseph Potts R.S. Donnell	J.P. Hoover	Unknown 67 69/95 Tons	1856

Reading L. Myers Continued

Vessel	Type	Build Date and Location	Co-Owners	Masters	Vessel Size	Recorded Years
<i>L.G. Dobbin</i>	Schooner	1853 Currituck County, NC	Joseph Potts R.S. Donnell	Oscar F. Rice	73' x 22'3" x 7'6" 104 76/95 Tons	1856
<i>Star</i>	Schooner	1842 Hyde County, NC	Joseph Potts R.S. Donnell	William Bowker	74' x 20'10" x 6'4" 85 39/95 Tons	1856-1859
<i>Herndon</i>	Schooner	1857 Washington, NC	John Myers	J.W. Gaskill	88' x 24' x 7'9" 144 53/95 Tons	1857

Vessels Owned by Joseph Potts

Vessel	Type	Build Date and Location	Co-Owners	Masters	Vessel Size	Recorded Years
<i>Franklin</i>	Schooner	Unknown		Unknown	Unknown 87 8/95 Tons	1836-1840
<i>Hope</i>	Schooner	1818 Carteret County, NC		Thomas Degan	45' x 12' x 4' 20 Tons	1844
<i>Samuel S. Mitchell</i>	Schooner	1846 Washington, NC	John S. Gaskill	John S. Gaskill	89' x 25' x 8' 173 60/95 Tons	1846-1847
<i>Globe</i>	Schooner	1835 Carteret County, NC	John S. Gaskill ___? Burbank	John W. Simmons Charles Tooker Smith Camerton R.P. Conk Benjamin F. Gautier	71' x 22' x 7'8" 100 54/95 Tons Lengthened? Dimensions change in 1848 to: 71'9" x 22'9" x 7'2" 113 Tons	1847-1851
<i>Actor</i>	Schooner	1847 Washington, NC	William A. Potts Joseph Robinson Thomas J. Gaskill	William English	66'6" x 19'9" x 5'5" 59 3/95 Tons	1853
<i>Oregon</i>	Schooner	1853 Hyde County, NC	William A. Potts Benjamin F. Havens	Benjamin Gautier Augustus Krause Ephraim Gautier	72'2" x 21'11" x 7'3" 98 65 Tons	1853-1856

Joseph Potts Continued

Vessel	Type	Build Date and Location	Co-Owners	Masters	Vessel Size	Recorded Years
<i>Actor</i>	Schooner	1847 Washington, NC	Reading L. Myers R.S. Donnell	John Duffy	66'6" x 19'9" x 5'5" 59 3/95 Tons	1856
<i>C. W. Skinner</i>	Schooner	1846 Norfolk, VA	Reading L. Myers R.S. Donnell	Ephraim Gautier	85'6" x 17'3" x 4'5" 60 26/95 Tons	1856
<i>Cora</i>	Schooner	1845 Newbern, NC	Reading L. Myers R.S. Donnell	A. McRae	77' x 16'8" x 5'9" 77 55/95 Tons	1856
<i>David Carter</i>	Schooner	1848 Norfolk, VA	Reading L. Myers R.S. Donnell	J.P. Hoover	Unknown 67 69/95 Tons	1856
<i>L.G. Dobbin</i>	Schooner	1853 Currituck County, NC	Reading L. Myers R.S. Donnell	Oscar F. Rice	73' x 22'3" x 7'6" 104 76/95 Tons	1856
<i>Star</i>	Schooner	1842 Hyde County, NC	Reading L. Myers R.S. Donnell	William Bowker	74' x 20'10" x 6'4" 85 39/95 Tons	1856-1859
<i>Maria Louisa</i>	Schooner	1854 Elizabeth City, NC		Benjamin F. Gautier	86'9" x 23'1" x 7'7" 134 12/95 Tons	1859-1860

Vessels Owned by R.S. Donnell

Vessel	Type	Build Date and Location	Co-Owners	Masters	Vessel Size	Recorded Years
<i>Actor</i>	Schooner	1847 Washington, NC	Reading L. Myers Joseph Potts	John Duffy	66'6" x 19'9" x 5'5" 59 3/95 Tons	1856
<i>C. W. Skinner</i>	Schooner	1846 Norfolk, VA	Reading L. Myers Joseph Potts	Ephraim Gautier	85'6" x 17'3" x 4'5" 60 26/95 Tons	1856
<i>Cora</i>	Schooner	1845 Newbern, NC	Reading L. Myers Joseph Potts	A. McRae	77' x 16'8" x 5'9" 77 55/95 Tons	1856
<i>David Carter</i>	Schooner	1848 Norfolk, VA	Reading L. Myers Joseph Potts	J.P. Hoover	Unknown 67 69/95 Tons	1856
<i>L.G. Dobbin</i>	Schooner	1853 Currituck County, NC	Reading L. Myers Joseph Potts	Oscar F. Rice	73' x 22'3" x 7'6" 104 76/95 Tons	1856
<i>Star</i>	Schooner	1842 Hyde County, NC	Reading L. Myers Joseph Potts	William Bowker	74' x 20'10" x 6'4" 85 39/95 Tons	1856-1859

Vessels Owned by Edward Waters

Vessel	Type	Build Date and Location	Co-Owners	Masters	Vessel Size	Recorded Years
<i>Solomon Andrews</i>	Schooner	1847 Perth Amboy, NJ	E.H. Putnam	E.H. Putnam	66'6" x 21' x 7' 82 60/95 Tons	1855-1858
<i>Star</i>	Schooner	1842 Hyde County, NC		William W. Bowker John Harris	74' x 20' 10" x 6'4" 85 39/95 Tons	1857-1859

Vessels Owned by Joseph Robinson

Vessel	Type	Build Date and Location	Co-Owners	Masters	Vessel Size	Recorded Years
<i>Thomas Wymms</i>	Schooner	1827 Hyde County, NC	Henry Lavender	Nathan E. Buckman	67' x 22' x 7' 90 ? Tons	1836
<i>John Myers</i>	Schooner	1828 Straights ?, NC			71' x 21' x 8' 99 45/95 Tons	1838-1839
<i>Transport</i>	Schooner	1838 Washington, NC	Thomas Robinson	Joseph Robinson	57'5" x 18'3" x 5'8" 50 29/95 Tons	1839
<i>Sarah</i>	Schooner	1846 Newbern, NC	John Myers Reading L. Myers	Joseph Robinson	69' x 20'4" x 5'4" 66 32/95 Tons	1846
<i>Actor</i>	Schooner	1847 Washington, NC	John Myers Thomas J. Gaskill Joseph Potts	Joseph Robinson	66'6" x 19'9" x 5'5" 59 3/95 Tons	1847-1855
<i>Ospray</i>	Schooner	1850 Baltimore, MD	Comers of Baltimore	David Ellis	77'2" x 21'1" x 6'11" 98 70/95 Tons	1854
<i>Star</i>	Schooner	1842 Hyde County, NC	David H. Dill	James Calhoun	74' x 20'10" x 6'4" 85 39/95 Tons	1859-1860

Vessels Owned by David H. Dill

Vessel	Type	Build Date and Location	Co-Owners	Masters	Vessel Size	Recorded Years
<i>Independence</i>	Schooner	1847 Washington, NC		Reuben Willis G.R. Dixon	Lengthened in 1852 88' x 22'6" x 5'2" 102 67/95 Tons	1855-1857
<i>Star</i>	Schooner	1842 Hyde County, NC	Joseph Robinson	James Calhoun	74' x 20'10" x 6'4" 85 39/95 Tons	1859-1860

Appendix D

List of Census Entries for *Star* Owners

The following list represents the census entries for *Star* owners in the 1840, 1850, and 1860 censuses. All information is noted where available. Name searches were cover five counties: Beaufort, Hyde, Craven, Carteret, and Washington. Most of the names appear in the Beaufort or Hyde county records. Joseph Robinson, however, is listed as a ship carpenter and resident of Craven County in the 1850 census. Pinpointing a resident of a county other than Beaufort or Hyde as an owner is tenuous, but in this case, he is the only known person of that name, and since his joint ownership is with a known Beaufort County resident, it seems a likely possibility. Edward Waters is the only owner not found in the census record. The only official information placing him in the area is an undated record in the *Record of Marriages, 1851-1868, Beaufort County, NC* (Oden 1994: 75), describing his marriage to Sarah B. Ellison.

John Tyler (1842-1848)

County	Year	Census Information	Age	Estate Value
	1840			
Beaufort	1850	Merchant (Town of Washington)	60	10,000
	1860			

James H. Tyler (1842-1848)

County	Year	Census Information	Age	Estate Value
	1840			
Beaufort	1850	Merchant (Town of Washington)	29	2,000
	1860			

David Carter (1848-1849)

County	Year	Census Information	Age	Estate Value
	1840			
Hyde	1850	Farmer (Mattamuskeet District)	50	30,000
	1860			

Sylvester Brown (1849-1850)

County	Year	Census Information	Age	Estate Value
	1840			
Beaufort	1850	Merchant (Town of Washington)	60	
	1860			

George H. Brown (1849-1853)

County	Year	Census Information	Age	Estate Value
	1840			
Beaufort	1850	Merchant (Town of Washington)	27	
Beaufort	1860	Merchant (Town of Washington)	39	

Parson W. Brown (1849-1853)

County	Year	Census Information	Age	Estate Value
	1840			
Beaufort	1850	Merchant (Town of Washington)	22	
	1860			

William Bond (1851-1853)

County	Year	Census Information	Age	Estate Value
	1840			
Beaufort	1850	Farmer (South Creek District)	55	700
	1860			

Benjamin F. Hanks (1853-1856)

County	Year	Census Information	Age	Estate Value
	1840			
Beaufort	1850	Steam Milling (Town of Wash.)	38	
Beaufort	1860	Milling (Town of Washington)	48	

Reading L. Myers (1856-1857)

County	Year	Census Information	Age	Estate Value
	1840			
Beaufort	1850	Merchant (Town of Washington)	33	4,000
Beaufort	1860	Merchant (Town of Washington)	44	

Joseph Potts (1856-1857)

County	Year	Census Information	Age	Estate Value
	1840			
Beaufort	1850	Merchant (Town of Washington)	55	11,500
	1860			

R.S. Donnell (1856-1857)

County	Year	Census Information	Age	Estate Value
	1840			
Craven	1850	Lawyer (New Bern)	29	
	1860			

Edward Waters (1857-1859)

County	Year	Census Information	Age	Estate Value
	1840	Nothing Found		
	1850	Nothing Found		
	1860	Nothing Found		

Joseph Robinson (1859- ?)

County	Year	Census Information	Age	Estate Value
	1840			
Craven	1850	Ship Carpenter (New Bern)	36	
	1860			

David H. Dill (1859 - ?)

County	Year	Census Information	Age	Estate Value
	1840			
Beaufort	1850	Blacksmith (Town of Washington)	34	12,300
Beaufort	1860	Blacksmith (Town of Washington)	44	

Appendix E

List of *Star*'s Masters Compiled from Enrollment and Registers, and Washington Newspaper Marine Entries

Master	Known Dates of Service
Jacob G. Williams	October 1842 – August 1845
James S. Robbins	April 1845 – October 1845
Benjamin Gautier	May 1847 and May 6, 1851
James H. Farrow	December 1848 – April 1849
(Unknown) Rodgers (Probably J. Rodgers) ¹	January 1848 – March 1848
William Allen	July 1849
(Unknown) Stewart (Possibly Josephus Stuart) ²	March 1850 – June 1850
Perry Parker	December 1850 – February 1851
Benjamin Bond	May 1851 – December 1852
John Spencer	January 1853 – February 1853
James Longman	February 1853 – May 1853
Thomas Newby	May 1853 – June 1853
Charles Tooker	June 1853 – November 1853
William H. Bowker	September 1856 – June 1857
John Harris (Jack?)	November 1857 – November 1859
James Cahoon	December 1859 – July 1860
David Gaskill	March 1862

¹ Sylvester Brown used a J. Rodgers on the *Dolphin* in 1848. Rodgers is listed on the *Star* in the same year, just prior to Sylvester Brown's purchase of the vessel.

² A Josephus Stuart is listed as master of the Carteret-built schooner *Raleigh* from 1842-1844. This is the only Stuart found by the author.

Appendix F

Chronological List of *Star* Owners and the Masters they Employed, 1839-1861

Owner	Masters Employed
John Tyler	Joseph Stuart James Longman James S. Robbins (Robinson?) Spencer Midyette Edward Mayo
John Tyler and James H. Tyler	Jacob G. Williams James S. Robbins John W. Gilgo John Harris Spencer Midyette William P. Bell William H. Beckley
David Carter	Harris Beale James Farrow William Farrow Benjamin Nall David Carter Johnson W. Caffé Thomas W. Williams
Sylvester Brown	J. Rodgers Hosea Creddle James Simmons Edmund Dixon James Simmons James Farrow Perry Parker William Allen William P. Bell

Owner	Masters Employed
George H. Brown	John Roberts Lemman D. Crabtree George Reen Edmund Dixon Amos Ireland David Ireland William Allen Benjamin F. Bond John Spencer Thomas Daniels George Smaw Tillman Farrow William Henry von Eberstein William P. Bell Spencer Midyette Anson Swindell A.C. Davis C.B. Fulford
Parson W. Brown	William P. Bell William Allen Perry Parker Benjamin Bond John Spencer Thomas Daniels George Smaw Parson W. Brown
William Bond	William Bond Benjamin Bond John Spencer

Owner	Masters Employed
Benjamin F. Hanks	Edward R. Thompson Jeremiah Allen David Ireland William Jones John B. Lewis S. Forbes Charles Tooker James Longman James F. Cranley H. Harrington George Howard Oscar F. Rice William Branton
Reading L. Myers	Joseph Robinson B.R. Richardson Samuel Cratch David Ellis John Myers John Duffy Ephraim Gautier A. McRae J.P. Hoover Oscar F. Rice William Bowker J.W. Gaskill
Joseph Potts	Thomas Degan John S. Gaskill John W. Simmons Charles Tooker Smith Camerdon R.P. Conk Benjamin F. Gautier William English Augustus Krause Ephraim Gautier John Duffy A. McRae J.P. Hoover Oscar F. Rice William Bowker Benjamin F. Gautier

Owner	Masters Employed
R.S. Donnell	John Duffy Ephraim Gautier A. McRae J.P. Hoover Oscar F. Rice William Bowker
Edward Waters	E.H. Putnam William W. Bowker John Harris
Joseph Robinson	Joseph Robinson David Ellis James Cahoon
David H. Dill	Reuben Willis G.R. Dixon James Cahoon

Appendix G

List of the *Star*'s Masters and Other Vessels they Commanded Vessels Listed Chronologically

Master	Vessels
Jacob G. Williams	<i>Star</i>
James S. Robbins	<i>Star</i> <i>Deborah</i> <i>Frances</i> <i>Secretary Marcy</i> <i>Pathfinder</i> <i>Guide</i>
Benjamin Gautier	<i>Star</i> <i>Secretary Marcy</i> <i>Oregon</i> <i>Globe</i> <i>Mary Louisa</i>
James H. Farrow	<i>Frances Anne</i> <i>Star</i> <i>Pacific</i> <i>Mary E. Parmerle</i>
Rodgers (Probably J. Rodgers) ¹	<i>Dolphin</i> (sloop)
William Allen	<i>Frances Anne</i> <i>Star</i>
Stewart (Possibly Josephus Stuart) ²	<i>Raleigh?</i> <i>Star</i>
Perry Parker	<i>Star</i>
Benjamin Bond	<i>Star</i>

¹ Sylvester Brown used a J. Rodgers on the *Dolphin* in 1848. Rodgers is listed on the *Star* in the same year, just prior to Sylvester Brown's purchase of the vessel.

² A Josephus Stuart is listed as master of the Carteret-built schooner *Raleigh* from 1842-1844. This is the only Stuart found by the author.

Master	Vessels
John Spencer	<i>Margaret Jane</i> <i>Benjamin Harrison</i> <i>Star</i> <i>Alice (J. Spencer)</i>
James Longman	<i>Anaconda</i> <i>Cora</i> <i>Post Boy</i> <i>Star</i> <i>Friends</i> <i>Mecklenburg</i> <i>Louisa</i>
Thomas Newby	<i>Star</i>
Charles Tooker	<i>Osceola</i> <i>Globe</i> <i>Star</i>
William H. Bowker	<i>Star</i>
John Harris (Jack)	<i>Rough and Ready</i> <i>Deborah</i> <i>Edward J. Rudderow</i> <i>Star</i> <i>Pocomoke</i>
James Cahoon	<i>Melvina</i> <i>Star</i>
David Gaskill	<i>Champion</i> <i>Mary E. Parmerle</i> <i>Star</i>

Appendix H

Key Dimensions of Selected Two-Masted Schooners Discovered in North Carolina Waters

Site Name & Site Number	Body of Water	Length	Beam	Distance To Fwd. Mast Step	Distance to Aft Mast Step	Distance to Fwd. End CBT*	Distance to Aft End CBT*
<i>Black Warrior</i> Site (0034PQR)	Pasquotank River	87'6"	24'	**	**	**	**
<i>Scuppernong</i> Site (0002NCR)	North River (Currituck County)	75'9"	17'	11'6"	41'	21'	43'
New Bern Centerboard Wreck (0001TNR)	Trent River	72'7"	22'3"	12'6"	42'6"	27'6"	45'6"
Tranters Creek Wreck (0003TRR)	Tranters Creek/Tar River	72'6"	17'6"	12'6"	39'	22'	39'
Queen Anne's Creek Wreck (0002EDS)	Edenton Harbor	62'6"	17'	8'4"	35'11"	21'	35'4"
Belhaven Centerboard Wreck (0009PAR)	Pantego Creek	59'4"	17'	7'7"	30'7"	16'	34'
Otter Creek Wreck (0018NUR)	Otter Creek (Oriental)	58'	16'	10'	35'	No c/b	No c/b
Barry Cullens Site (0002LTR)	Little River (Perquimans) County	57'8"	--	8'7"	34'	22'	33'9"
Keel Creek Wreck (0001CWR)	Chowan River	56'	14'	7'6"	31'	21'10"	32'6"
Peddler Boat (0010SAR)	Salmon Creek	49'	10'	4'	31'	20'	30'
*CBT = Centerboard Trunk ** The keelson (with mast steps) is missing on the <i>Black Warrior</i> Site, and the centerboard area is buried							

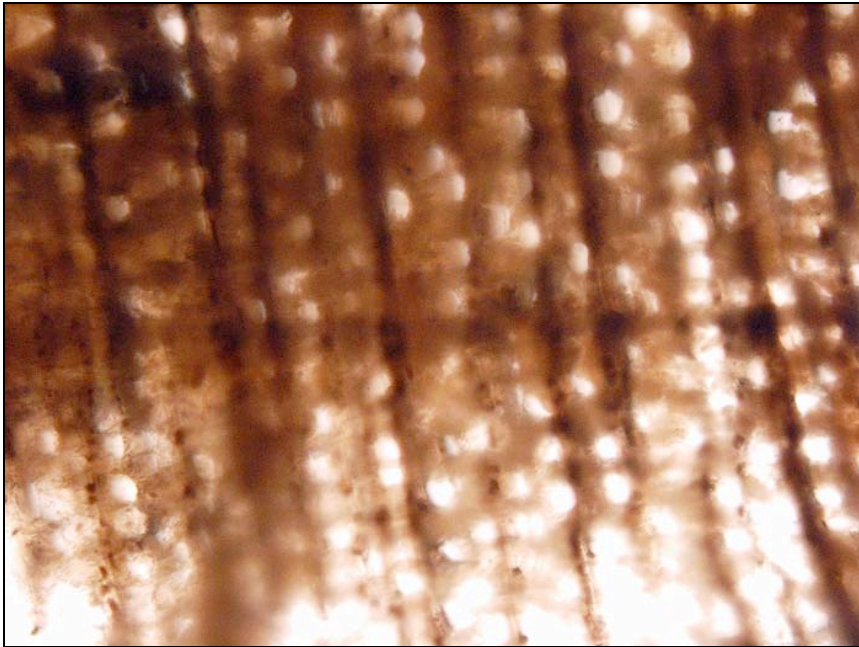
Compiled by Richard W. Lawrence, North Carolina Underwater Branch, Kure Beach, NC
(after Lawrence 2002B: 15).

Appendix I

Wood Samples

Sample Number	Location	Ship Part	Species	Comments
1	Stern	Rudder	<i>Quercus</i> sp.	Oak, White Oak anatomical group
2	Stern	Stern Post	<i>Quercus virginiana</i>	Live Oak
3	Stern	Keel	<i>Liquidambar styraciflua</i>	Sweet Gum
4	Stern	Frame	<i>Quercus</i> sp., cf. <i>Quercus virginiana</i>	Probably Live Oak
5	Midship	Covering Board	<i>Pinus</i> sp., <i>taeda</i> anatomical group	Southern Hard Pines, e.g. Longleaf Pine
6	Midship	Treenail	<i>Pinus</i> sp., <i>taeda</i> anatomical group	Southern Hard Pines, e.g. Longleaf Pine
7	Midship	Frame	<i>Quercus virginiana</i>	Live Oak
8	Stern	Keelson	<i>Pinus</i> sp., <i>taeda</i> anatomical group	Southern Hard Pines, e.g. Longleaf Pine
9	Bow	Frame	<i>Quercus virginiana</i>	Live Oak
10	Bow	Keelson	<i>Pinus</i> sp., <i>taeda</i> anatomical group	Southern Hard Pines, e.g. Longleaf Pine
11	Bow	Plug from forward step	<i>Pinus</i> sp., <i>taeda</i> anatomical group	Southern Hard Pines, e.g. Longleaf Pine

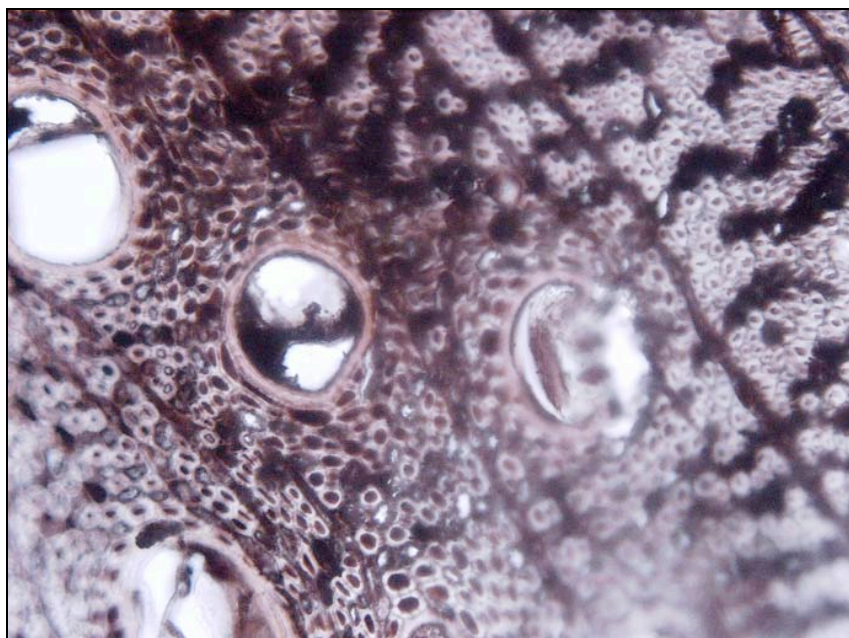
Wood samples analyzed in 2003 by Dr. Lee Newsom, Department of Anthropology,
The Pennsylvania State University.



Keel images: Sweet Gum (*Liquidambar styraciflua*) (Newsom 2003).



Keelson Image: Southern Longleaf Pine (*Pinus* sp., *taeda*) (Newsom 2003).



Sternpost: Live Oak (*Quercus virginiana*) (Newsom 2003).

Appendix J

Room and Space Dimensions

Location	Frame	Room	Space	Molded Dimension
Bow	1	4.8 in (12.1cm)	18 in (45.7 cm)	5.4 in (13.7 cm)
Bow	2	6 in (15.2 cm)	6 in (15.2 cm)	6.6 in (16.7 cm)
Bow	3	6 in (15.2 cm)	4.8 in (12.1cm)	6.6 in (16.7 cm)
Bow	4	5.4 in (13.7 cm)	1.2 in (3 cm)	7.2 in (18.2 cm)
Bow	5	6 in (15.2 cm)	2.4 in (6.1 cm)	6 in (15.2 cm)
Bow	6	6 in (15.2 cm)	Indeterminable	7.2 in (18.2 cm)
Midship	1	6.6 in (16.7 cm)	6.2 in (15.7 cm)	7.2 in (18.2 cm)
Midship	2	7.2 in (18.2 cm)	4.8 in (12.1cm)	7.2 in (18.2 cm)
Midship	3	6 in (15.2 cm)	4.8 in (12.1cm)	7.2 in (18.2 cm)
Midship	4	7.2 in (18.2 cm)	4.8 in (12.1cm)	7.2 in (18.2 cm)
Midship	5	6 in (15.2 cm)	7.2 in (18.2 cm)	7.2 in (18.2 cm)
Midship	6	7.8 in (19.8 cm)	6 in (15.2 cm)	7.2 in (18.2 cm)
Midship	7	6.6 in (16.7 cm)	6 in (15.2 cm)	7.2 in (18.2 cm)
Midship	8	6 in (15.2 cm)	6 in (15.2 cm)	7.2 in (18.2 cm)
Midship	9	6 in (15.2 cm)	4.8 in (12.1cm)	7.2 in (18.2 cm)
Midship	10	6 in (15.2 cm)	6 in (15.2 cm)	7.2 in (18.2 cm)
Midship	11	6 in (15.2 cm)	Indeterminable	7.2 in (18.2 cm)
Stern	1	6.2 in (15.7 cm)	10.8 in (27.4 cm)	5.4 in (13.7 cm)
Stern	2	5.4 in (13.7 cm)	6.6 in (16.7 cm)	4.8 in (12.1cm)
Stern	3	5.4 in (13.7 cm)	7.8 in (19.8 cm)	5.4 in (13.7 cm)
Stern	4	5.4 in (13.7 cm)	18 in (45.7 cm)	4.8 in (12.1cm)
Stern	5	6.6 in (16.7 cm)	7.8 in (19.8 cm)	4.8 in (12.1cm)
Stern	6	7.2 in (18.2 cm)	7.2 in (18.2 cm)	7.2 in (18.2 cm)
Stern	7	6.6 in (16.7 cm)	6.6 in (16.7 cm)	6 in (15.2 cm)
Stern	8	6 in (15.2 cm)	3.6 in (9.1 cm)	6.6 in (16.7 cm)
Stern	9	6 in (15.2 cm)	Not Applicable	6 in (15.2 cm)

Measurements taken at point where frame intersects keelson. Space refers to the space aft the designated frame number, e.g. the space aft of Bow Frame 1 is Bow Space 1. This chart does not include Upper-hull dimensions.

Appendix K

Artifact Inventory

Number	Description	Composition	Provenience
0014PUR001	Pulley block frame 10 in (25.4 cm)x 5 in (12.7 cm)	Iron	Stern space 7
0014PUR002	Strap fragment with putty-like substance 5 in (12.7 cm) x 3 in (7.62 cm)	Iron	Stern space 8
0014PUR003	Drift bolt with intact head 23 in (58.4 cm) x.9 in (2.3 cm) Head Diameter: 2 in (5.1 cm)	Iron	Atop keel in front of apron
0014PUR004	Heavily charred, notched wood fragment 13 in (33 cm) x 5.5 in (13.9 cm)	Wood	Midship space 6
0014PUR005	Stern deadwood 4 ft (1.2 m) x 10 in (25.4 cm) sided 8 in (20.3 cm) molded This timber is shown in Stern Profile.	Wood	Atop Stern frames 5, 6, and 7
0014PUR006	Drift bolt 14 in (35.5 cm) x .7 in (1.8 cm)	Iron	Stern space 4
0014PUR007	Brass sheet metal fragment with rolled and perforated edges. 4.5 in (11.4 cm) square x .125 (.32 cm) thick	Brass	Stern space 6
0014PUR008	Corrugated lantern handle fragment 1 in (2.54 cm) x 2.25 in (5.7 cm)	Brass	Stern space 7
0014PUR009	Bobstay remnant 47 in (119.4 cm) x 16 in (40.1cm) x 3 in (7.62 cm)	Wood with iron drift bolts	In front of Stem

Number	Description	Composition	Provenience
0014PUR010	Pump spear side plate fragment 4.2 in (10.6 cm) x 3 in (7.62 cm) x .4 in (1 cm)	Iron	Next to port bilge pump
0014PUR011	Pump spear fragment 8.3 in (21 cm) x .6 in (1.5 cm)	Iron	Inside port bilge pump
0014PUR012	Pump spear fragment 17.5 in (44.5 cm) x .6 in (1.5 cm)	Iron	Next to port bilge pump
0014PUR013	Sheet iron plate fragment 2.9 in (7.3 cm) x 2.6 in (6.6 cm)	Iron	Midship space 6
0014PUR014	Treenail fragment 6.4 in (16.2 cm) x .9 in (2.3 cm)	Wood	Bow space 5
0014PUR015	Drift bolt fragment 5.2 in (13.2 cm) x .9 in (2.3 cm)	Iron	Bow space 5
0014PUR016	Two melted brass roller bearing fragments Fragment A: 1.75 in (4.5 cm) x 5.5 in (13.9 cm) Fragment B: 6in (15.2 cm) x 2 in (5.1 cm)	Brass	Stern space 5
0014PUR017	Square head fastener 4.3 in (10.9 cm) x .5 in (1.3 cm)	Iron	Bow space 6
0014PUR018	Round fastener 3.6 in (9.1 cm) x .5 in (1.3 cm)	Iron	Bow space 6
0014PUR019	Hook 3.7 in (9.4 cm) x 2.2 in (5.6 cm) reach x .2 in (.5 cm) in diameter	Iron	Bow space 6
0014PUR020	Drift bolt 17.5 in (44.5cm) x 1 in (2.54cm)	Iron	Stern space 6

Number	Description	Composition	Provenience
0014PUR021	Tail block component 23 in (58.4 cm) x 2.25 in (5.72 cm) in diameter at its midpoint, and .75 in (1.9 cm) in diameter at its ends	Woven Line	Atop stern frame 8
0014PUR022	Hinge with six mounting holes 2.75 in (6.8 cm) x 1.125 in (2.8 cm)	Brass	Stern space 3
0014PUR023	Swivel hook 4 in (10.2 cm) x 2.5 in (6.4 cm) at the base	Iron	Stern space 3
0014PUR024	Bobstay chain link 6 in (15.2 cm) x 2.8 in (7.1 cm)	Iron	In front of Stem
0014PUR025	Block fragment 5 in (12.7 cm) x 4 in (10.1 cm) with a 2 in (5.1 cm) diameter eye	Iron	Forward of sternpost
0014PUR026	Roller bearing assemblage with iron pin 4.5 in (11.4 cm) in diameter x 1.3 in (cm) thick with a 5.5 in (13.9 cm) long x 1 in (2.54 cm) diameter iron pin	Brass and Iron	Forward of sternpost
0014PUR027	Brass sheathing fragment 4.2 in (10.6 cm) x 1.9 in (4.9 cm)	Brass	Atop stern keelson
0014PUR028	Stove hot plate with shell pattern 6.6 in (16.7 cm) in diameter	Iron	Stern space 6

Number	Description	Composition	Provenience
0014PUR029	Six fastener fragments (A-F) A: Nail 1.5 in (3.8 cm) x .1 (.25 cm) B: Nail 1.5 in (3.8 cm) x .1 (.25 cm) C: Nail Head 8 in (2.1 cm) x .2 in (.5 cm) head D: Flathead Screw .4 in (1 cm) with .25 in (.6 cm) diameter head E: Screw Shaft .3 in (.76 cm) x .12 in (.3 cm) F: Square Nail .3 in (.76 cm) x .1 in (.25 cm)	Brass and Copper	Stern dredge bag
0014PUR030	Cabriole stove leg 7.5 in (19 cm) x 2 in (5.1 cm) at its widest point	Iron	Bow space 6
0014PUR031	Brass metal fragment. Possible nail or bearing fragment. 4.2 in (10.6 cm) x .3 in (.76 cm)	Brass	Stern dredge bag
0014PUR032	Rectangular iron plate with rounded corners 8.7 in (22 cm) x 7.4 in (18.7 cm) x .5 in (1.3 cm) thick	Iron	Midship space 5
0014PUR033	Brass roller bearing with iron sheave Bearing is 2.5 in (6.4 cm) in diameter. Sheave is 3.5 in (8.9 cm) in diameter x 1.2 in (3 cm) wide	Brass and Iron	Bow space 2
0014PUR034	Brass roller bearing fragment 2.4 in (6.1 cm) diameter flange 1.3 in (3.3 cm) diameter roller cage	Brass	Stern dredge bag

Number	Description	Composition	Provenience
0014PUR035	Cargo hook with eye and grooved ring 11 in (27.9 cm) x 7.5 in (19 cm)	Iron	Outside sternpost
0014PUR036	Clenched square head nail .8 in (2 cm) x .1 in (.25 cm) with a .2 in (.5 cm) head	Copper	Stern dredge bag
0014PUR037	Melted screw fragment .8 in (2 cm) x .2 in (.5 cm)	Brass	Stern dredge bag
0014PUR038	Ovalized buckle fragment? 1.4 in (3.5 cm) x 1.2 in (3 cm) .1 in (.25 cm) thick	Brass	Stern dredge bag
0014PUR039	Sheathing fragment with fastener holes 14 in (35.5 cm) x 7 in (17.7 cm)	Brass	Unknown
0014PUR040	Bilge pump spear 40 in (102 cm) x .75 in (1.9 cm)	Iron	Atop keelson adjacent to pumps
0014PUR041	Pump spear side plate 2.9 in (7.4 cm) x 5.1 in (12.9 cm)	Iron	Adjacent to bilge pumps
0014PUR042	Hinge remnant with pintle 3.9 in (9.9 cm) x 1.5 in (3.8 cm) Pintle in .5 in (1.3 cm) in diameter x 2.25 in (5.7 cm) long	Brass	Four feet forward of sternpost
0014PUR043	Melted brass sheet with clenched copper nail 2.2 in (5.6 cm) x 2.4 in (6.1 cm)	Brass and Copper	Atop stern keelson
0014PUR044	Charred wooden fragment 11.3 in (28.7 cm) x 2.6 in (6.6 cm)	Wood	Atop keelson adjacent to bilge pumps
0014PUR045	Drift bolt 18 in (45.7 cm) x 1 in (2.54 cm) – 1.5 in (3.8 cm)	Iron	Bow excavation unit

Number	Description	Composition	Provenience
0014PUR046	Port bilge pump 26.5 in (67.3 cm) long. Base measures 5.75 in (14.6 cm) x 6.5 in (16.5 cm). Shaft is 2.75 in (6.9 cm) in diameter.	Wood	Port bilge pump box
0014PUR047	Wood fragment with treenail hole 6.4 in (16.2 cm) x 3 in (7.62 cm) x 1 in (2.54 cm)	Wood	Bow space 3
0014PUR048	Concreted drift bolt fragment 8.3 in (21 cm) x 2 in (5.1 cm)	Iron	Aft of sternpost
0014PUR049	Ring and eye bolt assemblage Bolt is 3.5 in (8.9 cm) x .7 in (1.8 cm). Ring is 3.5 in (8.9 cm) in diameter x .6 in (1.5 cm) thick	Iron	Bow space 5
0014PUR050	Melted glass fragment 1.9 in (4.8 cm) x 1.4 in (3.5 cm)	Glass	Five feet forward of sternpost
0014PUR051	Crumpled brass sheet 6 in (15.2 cm) x 5 in (12.7 cm)	Brass	Midship space 7
0014PUR052	Iron bar 20 in (51 cm) x 2 in (5. 1 cm) x .3 in (.76 cm)	Iron	Bow space 5
0014PUR053	Iron bar 8 in (20.3 cm) x 1.8 in (4.6 cm) x .125 in (.32 cm)	Iron	Stern space 6
0014PUR054	Fastener fragments A: 3 in (.76 cm) x .4 in (1 cm) B: 4.3 in (11 cm) x .4 in (1 cm) Both have rounded heads .6 in (1.5 cm) in diameter	Iron	Bow space 4

Number	Description	Composition	Provenience
0014PUR055	Drift bolt fragments A: 7.6 in (19.3 cm) x .8 in (2 cm) B: 6.4 in (16.2 cm) x 1.2 in (3 cm) C: 5 in (12.7 cm) x .7 in (1.8 cm)	Iron	Bow space 4
0014PUR056	Charred wood remnant 36 in (91 cm) x 4 in (10.1 cm)	Wood	Adjacent to bilge pumps
0014PUR057	Iron bar 18 in (45.7 cm) x 2 in (5 cm) x .4 in (1 cm)	Iron	Bow space 5
0014PUR058	Stove top plate divider with spoon recess 7 in (17.8 cm) x 7 in (17.8 cm) x .4 in (1 cm)	Iron	Midship space 4
0014PUR059	Concreted iron mounting plate. Possible stove component 11.5 in (29.2 cm) x 7 in (17.8 cm)	Iron	Atop stern keelson
0014PUR060	Drift bolt fragment 3.6 in (9.1 cm) x .9 in (2.3 cm)	Iron	Atop bow keelson
0014PUR061	Heavily concreted block remnant 8 in (20.3 cm) diameter circle with a 3 in (7.6 cm) x 6 in (15.2 cm) rectangular hole in the center.	Iron and Wood	Stern excavation unit
0014PUR062	Iron bar 17.5 in (44.4 cm) x 3 in (7.6 cm) x .6 in (1.5 cm)	Iron	Atop bow keelson
0014PUR063	Iron bar fragment 3.4 in (8.6 cm) x 2.8 in (7.1 cm)	Iron	Midship space 6
0014PUR064	Iron hook with eye 5 in (12.7 cm) x 2.5 in (6.4 cm)	Iron	Atop stern keelson

Number	Description	Composition	Provenience
0014PUR065	Concretion resembling an eye and bolt assembly. One copper nail included in concretion. 5 in (12.7 cm) x 4.6 in (11.6 cm)	Iron and Copper	Bow space 5
0014PUR066	Ballast stone 5 in (12.7 cm) x 2.7 in (6.9 cm)	Stone	Adjacent to bilge pumps
0014PUR067	Iron bar fragment with red lead paint 3.3 in (8.4 cm) x 1.6 in (4.1 cm) x .6 in (1.5 cm)	Iron	Bow space 5
0014PUR068	Iron bar fragment with two fastener holes 2.2 in (5.6 cm) x 2.2 in (5.6 cm) x 1 in (2.5 cm)	Iron	Midship space 4
0014PUR069	Folded brass sheet with circular depression in center. Slit in center depression with nail holes along its edge. 6 in (15.2 cm) x 4.5 in (11.4 cm) Depression is 3.3 in (8.4 cm) in diameter Slit is 2.5 in (6.4 cm) x .5 in (1.3 cm)	Brass	Midship space 9
0014PUR070	Strainer/ Sieve 3.1 in (8 cm) diameter	Brass	Stern space 5
0014PUR071	Deadeye and eyebolt assembly 9.5 in (24.1 cm) x 6 in (15.2 cm) with an 8 in (20.3 cm) eye bolt	Iron and Wood	Forward of stem
0014PUR072	Pulley wheel with axle 3.5 in (8.9 cm) in diameter x .75 in (1.9 cm) wide. Axle is 3 in (7.26 cm) x .7 in (1.8 cm)	Iron	Midship space 9

Number	Description	Composition	Provenience
0014PUR073	Stove top with chimney and fire box holes 24 in (60.1cm) x 11 in (28 cm) x 1 in (2.54 cm)	Iron	Atop stern frames 3-6
0014PUR074	Bobstay chain with seven links 18 in (45.7 cm) long Links are 3 in (7.6 cm) x 2 in (5.1 cm)	Iron	Forward of stem
0014PUR075	Iron pipe fitting/ flange with charred wood remnants 2.6 in (6.6 cm) in diameter x 1.7 in (4.3 cm) tall	Iron and Wood	Atop bow frame 5
0014PUR076	Aft port mast support 62 in (157.4 cm) x 12 in (30.4 cm) x 3.5 in (8.9 cm)	Wood	Adjacent to aft mast step
0014PUR077	Coconut shell halve 2.5 in (6.4 cm) x 1.8 in (4.6 cm)	Organic	Beneath bow keelson
0014PUR078	Cabriole stove Leg: heavily concreted 8 in (20 cm) x 3 in (7.6 cm) at its widest point	Iron	Bow space 6
0014PUR079	Battery component 5.6 in (14.2 cm) x 2.3 in (5.8 cm)	Unknown	Forward keelson trench aft of forward mast step
0014PUR080	Iron pipe Fitting with faint "29" stamping. Possible shaft support. 2.7 in (6.9 cm) x 2.2 in (5.6 cm) With a .7 in (1.8 cm) diameter hole	Iron	Forward of sternpost

Appendix L

Artifacts Conserved at UAB

Number	Description	Composition	Provenience
0014PUR011	Pump spear fragment 8.3 in (21 cm) x .6 in (1.5 cm)	Iron	Inside port bilge pump
0014PUR012	Pump spear fragment 17.5 in (44.5 cm) x .6 in (1.5 cm)	Iron	Next to port bilge pump
0014PUR021	Tail block component 23 in (58.4 cm) x 2.25 in (5.72 cm) in diameter at its midpoint, and .75 in (1.9 cm) in diameter at its ends	Woven Line	Atop stern frame 8
0014PUR033	Brass roller bearing with iron sheave Bearing is 2.5 in (6.4 cm) in diameter. Sheave is 3.5 in (8.9 cm) in diameter x 1.2 in (3 cm) wide	Brass and Iron	Bow space 2
0014PUR040	Bilge pump spear 40 in (102 cm) x .75 in (1.9 cm)	Iron	Atop keelson adjacent to pumps
0014PUR070	Strainer/ Sieve 3.1 in (8 cm) diameter	Brass	Stern space 5

Number	Description	Composition	Provenience
0014PUR071	Deadeye and eyebolt assembly 9.5 in (24.1 cm) x 6 in (15.2 cm) with an 8 in (20.3 cm) eye bolt	Iron and Wood	Forward of stem