

ABSTRACT

Matthew S. Lawrence. "A FAIR SPECIMEN OF A SOUTHERN RIVER STEAMER," THE *OREGON* AND TAR/PAMLICO RIVER STEAM NAVIGATION. (Under the direction of Dr. Bradley A. Rodgers) Department of History, May 2003.

Steam navigation began successfully on North Carolina's Cape Fear River in 1818 and within a decade all of North Carolina's rivers hosted steamers, except for the Tar/Pamlico River. The Tar/Pamlico River lagged behind other North Carolina rivers because its limited economy and shallow water made it less suitable for profitable navigation. Several steamboat owners tried to navigate the river between 1835 and 1848, but each venture ended after a short time. These attempts whetted Tarboro's appetite for consistent service and led the Tar River Steamboat Company to purchase the steamer *Oregon* in Baltimore, Maryland.

This thesis presents a case study in East Coast river steam navigation by chronicling the history of Tar/Pamlico River steam navigation using the *Oregon* as a focus. Beginning with its 1846 construction in Baltimore until its 1848 sale to the Tar River Steamboat Company, the vessel carried Baltimore's residents on excursions around the Patapsco River. Once on the Tar/Pamlico River, the steamer's owners found that it drew too much water to navigate the shallow Tar River. The company dissolved and sold the *Oregon* to Washington merchant William H. Willard who used it on the Pamlico River during the 1850s.

As the nation plunged into civil war, the *Oregon* became the *Colonel Hill* and operated in support of the Confederate cause. As a part of the Mosquito Fleet, it carried troops and supplies around Pamlico Sound during the war's first months.

After the Burnside Expedition moved into eastern North Carolina, the *Oregon* retreated up the Tar River. Ultimately, a Federal cavalry raid burned the *Oregon* and several other vessels at Tarboro, North Carolina, in 1863.

The *Oregon's* destruction created a unique opportunity to study the steamer's remains archaeologically. Investigation of a wreck site believed to be the *Oregon* yielded a conclusive vessel identification and provided ship construction information on a vessel that has not been thoroughly documented.

By placing the *Oregon* within the context of Tar/Pamlico River steam navigation, it was possible to draw a detailed picture of all Tar/Pamlico River vessels and their activities. Comparisons between the *Oregon* and its contemporaries showed the vessel to be unusual in both construction and use. Certain aspects of the steamer were common to its contemporaries, but overall the *Oregon* was not representative of steamers operating on the Tar/Pamlico River.

**"A FAIR SPECIMEN OF A SOUTHERN RIVER STEAMER," THE *OREGON* AND  
TAR/PAMLICO RIVER STEAM NAVIGATION**

**A Thesis**

**Presented to**

**the Faculty of the Department of History**

**East Carolina University**

**In Partial Fulfillment**

**of the Requirements for the Degree**

**Master of Arts in History**

**by**

**Matthew S. Lawrence**

**May 2003**

**“A FAIR SPECIMEN OF A SOUTHERN RIVER STEAMER,” THE *OREGON* AND  
TAR/PAMLICO RIVER STEAM NAVIGATION**

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**DEDICATION**

**To my parents, Scott and Sharon Lawrence.**

## ACKNOWLEDGEMENTS

As I have learned from the creation of this work, historical and archaeological research and writing come to fruition only through the combined efforts of many people. Several who deserve my deepest gratitude are: Richard Lawrence, who inspired me with the *Oregon's* mystery; Frank Cantelas, who tirelessly advised me, and Dr. Lindley S. Butler, who shared my interest in the steamers of the Tar/Pamlico River. Mr. David Stick also deserves special thanks for opening his home and allowing me access to the Henry Bridgers Collection.

During my time in the Maritime Studies program, Dr. Bradley Rodgers continually sharpened my interest in American maritime history and nautical archaeology. His field schools taught practicality and creative problem solving, while his seasoned eye spotted errors or misconceptions during the writing process.

Others who started me out or sent me down the right path were Dr. Lawrence Babits, Roger Kammerer, David Norris, Kim Kimball, and Mr. and Mrs. George Bason. I consider myself fortunate to have received the assistance of the 1999 Maritime Studies Summer Field School and its peerless crew chiefs Sarah and Larkin Post. Above all, I would like to thank Dede Marx for her support and guidance without which the trials of the past years would have been unbearable.

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## CHAPTER 1: BEGINNING OF TAR/PAMLICO RIVER STEAM NAVIGATION

### Introduction

Steam navigation on the Tar/Pamlico developed slowly and belatedly in comparison to steam navigation on North Carolina's other rivers. North of the Tar/Pamlico River, the Roanoke River and Albemarle Sound hosted a steamboat in 1818. South of the Tar/Pamlico River, steam navigation developed on the Neuse and Cape Fear Rivers at the same time. In the nineteenth century's first decades several steamers crossed the Pamlico Sound traveling between New Bern and Elizabeth City, but it is unlikely that any steamers ascended the Tar/Pamlico River.

Geographic and economic factors contributed to steam navigation's late arrival and slow development. The Tar/Pamlico River's navigable portion, above Washington, North Carolina, was relatively short, decreasing its influence. It also lacked easy access to the Atlantic Ocean or Chesapeake Bay enjoyed by the Cape Fear River and the Roanoke River respectively. Subsistence farming and limited naval stores production slowed the Tar/Pamlico region's economy at the start of the nineteenth century. The small-scale production was easily moved downriver onboard flats and other small human and current powered vessels.

During the 1830s, the Tar/Pamlico River region's economy finally expanded due to growth of the naval stores industry. In 1835, steam navigation came to the Tar River through the initiative of William Tannahill and Benjamin Lavender, two Washington, North Carolina, businessmen. The men secured exclusive right to navigate the Tar/Pamlico River from North Carolina's General Assembly and had local shipwrights

traditions, as well as the slightly different southern river environmental and economic conditions, created a distinct variety of American river steamer.

This thesis seeks to explore southern river steam navigation set against the backdrop of the Tar/Pamlico River of eastern North Carolina. The focus for this thesis will be the chronicle of the steamer *Oregon* that began life in 1846 in Baltimore's Inner Harbor Federal Hill shipyards and then operated on the Patapsco River as an excursion steamer for two years. After a reputation-ruining boiler explosion, the Tar River Steamboat Company bought the vessel and brought it to North Carolina in 1848. While George Jury, the steamer's builder and owner, designed the vessel to have a shallow draft, it still drew too much water to successfully navigate the Tar River. The *Oregon* again changed hands and was bought by a Washington, North Carolina, merchant, William H. Willard who employed the steamer on the Pamlico River's deeper waters throughout the 1850s.

Like its contemporaries on the Tar/Pamlico River, the Confederacy employed the *Oregon* for various military purposes on North Carolina's inland waters. During one such mission in June 1862, the *Oregon* steamed into Washington, North Carolina, carrying around four hundred repatriated Union soldiers. Observing the scene was a *New York Herald* reporter who described the diminutive steamboat as "a fair specimen of a Southern river steamer."<sup>3</sup> What the reporter did not know was that the *Oregon* was originally built in Baltimore. While the reporter could have been referring to the vessel's dilapidated shape as characteristic of all southern steamers at that time, his statement

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<sup>3</sup> *New York Herald*, 31 May 1862, 8.

suggests several larger questions pertaining to the *Oregon* specifically and to southern river steam navigation, generally, during the antebellum period.

Was the *Oregon* representative of southern river steamers? Since this thesis does not possess the scope to arrive at any conclusions about all vessels operating on southern waters, conclusions will be drawn from a detailed history of Tar/Pamlico River's steam navigation. By investigating the characteristics and activities of other Tar/Pamlico River steamers, the author ascertained that the *Oregon* was not wholly representative of other steamers on the Tar/Pamlico River; however, it had certain characteristics in common with most steamers.

In an attempt to discern the typical characteristics of a Tar/Pamlico River steamer, all of the antebellum vessels were examined for trends apparent in the group as a whole. The Tar/Pamlico River's geographic realities greatly influenced navigation trends along its length. By far the greatest single factor that influenced steamers operating on the river was its extremely variable water depth. By examining antebellum Tar/Pamlico River steamers as a group, the author identified several trends stemming from the river's geography that typified the vessels operating on the river.

Coincident with the *Oregon*'s historical investigation, an archaeological study of the steamer's remains was made. The study sought to answer the research question: Is site 0004TRR the *Oregon* using multiple working hypotheses to disprove all other possible candidates except the *Oregon*. Once identified, the site provided valuable clues about the vessel's construction unavailable in the historical record.



build a steamboat. The *Edmund D. McNair* successfully ascended the Tar River to Tarboro, but steam navigation did not develop smoothly after this first pioneering attempt. The 1837 recession forced the *Edmund D. McNair*'s sale, ending steam navigation attempts for nearly a decade. However in the late 1840s, renewed interest in Tar/Pamlico River steam navigation brought several different steamers to the river including the *Oregon*.

#### Beginning of Steam Navigation in North Carolina

The geography of eastern North Carolina provided a generally benign arena for the development of steam navigation. Agriculturalist Edmund Ruffin described North Carolina's sounds in 1860.

The larger of these sounds are shallow, and afford good navigation only to vessels drawing not more than eight feet of water. For vessels of no greater draft, the navigation of Albemarle and Pamlico is excellent, and is rendered safe from storms by the protection afforded by the reef, which makes the whole of the enclosed expanse of water one great and secure harbor.... Taking the whole space within the outlines of Pamlico, Albemarle and Currituck sounds, and their connecting waters, and of all the deep, still unobstructed waters of the many rivers discharging therein, there is not one of the Atlantic States, which has such great extent of good and smooth navigable water....But these remarkable and otherwise valuable characteristics are rendered almost nugatory by another remarkable feature of this region. There is now no access to the ocean, through the sand-reef, so good and deep as the narrow Ocracoke inlet, which now only permits vessels of six feet draft to pass over the bar across the inlet....<sup>1</sup>

North Carolina's sounds were an easily navigated highway for commerce and

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<sup>1</sup> Edmund Ruffin, *Agricultural, Geological, and Descriptive Sketches of Lower North Carolina, and the Similar Adjacent Lands* (Raleigh, North Carolina: Institution for the Deaf and Dumb and Blind, 1861), 114, 115.

communication within eastern North Carolina. Unfortunately, as Edmund Ruffin described, the Outer Banks prevented large ships from reaching port towns on the Pamlico and Albemarle Sounds. Eastern North Carolina's lack of deepwater ports greatly limited its economic development.

Aside from the difficulty of water communication with areas outside the state, eastern North Carolina's network of rivers and sounds was ideally suited to water travel. Thick underbrush and marshy conditions contributed to the region's dependence on water transportation; foot or wagon travel through the region was simply not practical. North Carolina's first inhabitants settled along the waterways throughout the region and used the rivers and sounds to travel between the Outer Banks and the coastal forests. European settlers, migrating into eastern North Carolina, confirmed this water transportation philosophy. The interstitial layer of the sounds between the Atlantic Ocean and the rivers afforded settlers a relatively calm highway for commerce and communication.

Population and agricultural growth during the eighteenth and early nineteenth centuries placed greater demands on North Carolina's inland waterways. The state's unimproved navigable waters forced residents to look to Virginia or South Carolina to get their produce to market. Nearly one-half of North Carolina's exports crossed the border to reach a market by the end of the eighteenth century.<sup>2</sup> Inefficient water transportation hindered communication within the state and contributed to North Carolina's east-west

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<sup>2</sup> Alan D. Watson, "North Carolina and Internal Improvements, 1783-1861: The Case of Inland Navigation," *North Carolina Historical Review* 74 (January 1997): 37.

sectional division. People in the state's eastern half were generally satisfied with their economic position and unwilling to spend money to improve the state's waterways; these individuals were most heavily represented in North Carolina's General Assembly. Self-sufficient interior subsistence farmers were cut off from most forms of communication and unfamiliar with life's luxuries. The eastern resident's unwillingness to change dovetailed with the Westerners' ignorance and isolation forming a stagnant economy. North Carolina was known to the rest of the nation as the "Rip Van Winkle" state.<sup>3</sup>

Compounding these attitudes was the fact that North Carolina was crippled by its lack of an efficient transportation system. Farmers had a difficult time moving their produce to market. In response, North Carolinians migrated west. During the first decades of the nineteenth century, 200,000 people moved to the Ohio, Tennessee, and Mississippi Rivers, drawn by the West's fertile land and efficient water transportation system. Land speculation replaced agricultural investment as a result of the agrarian economy's stagnation.<sup>4</sup>

Inland navigation on North Carolina's rivers in 1810 was no better than mid-eighteenth century. Entreaties by Governors Alexander Martin in 1784 and Nathaniel Alexander in 1806 to improve navigation fell on the legislature's deaf ears. North Carolinians continued to believe in individualism and self-reliance.

In 1812, the state legislature's attitude changed, resulting in an appropriation for

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<sup>3</sup> William S. Powell, *North Carolina Through Four Centuries* (Chapel Hill, North Carolina: University of North Carolina Press, 1989), 245.

<sup>4</sup> William Henry Hoyt, ed., *The Papers of Archibald Murphey*, vol. 2 (Raleigh, North Carolina: E. M. Uzzell, 1914), 20.

navigation improvements. Orange County senator, Archibald DeBow Murphey brought about the change. Senator Murphey was a progressive legislator who wanted to awaken North Carolina from its stupor with a program of state aid for internal improvements and a public school system. He chaired the legislature's Committee on Internal

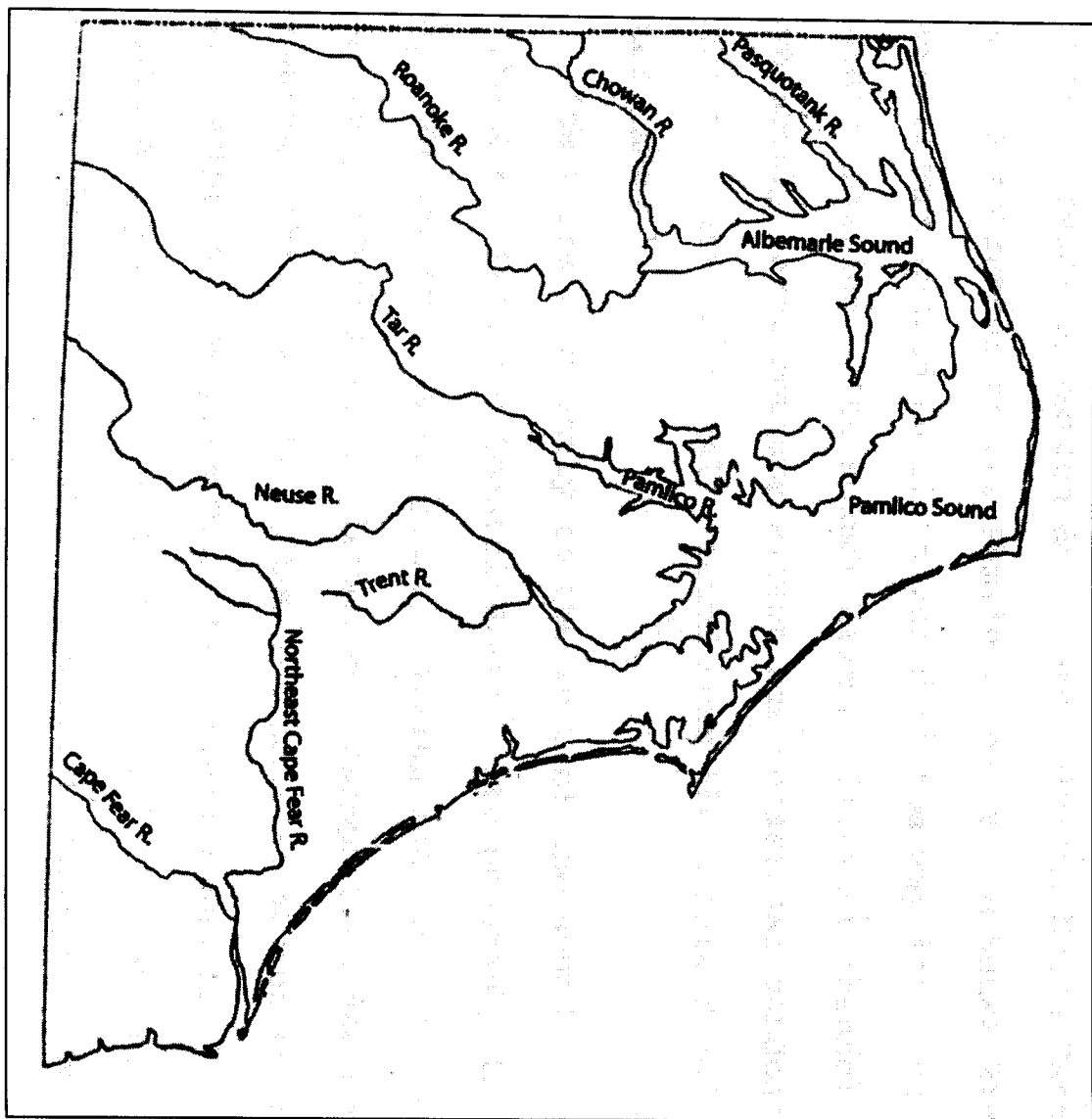


Figure 1.1 North Carolina's Rivers (Christopher Olson, "An Historical and Archaeological Investigation of the Steamboat *Curlew*" Master's thesis, East Carolina University, 1997, 9).

Improvements that studied possibilities for improving navigation.<sup>5</sup> His committee concluded: "The time has come when it behooves the legislature of North Carolina to provide efficiently for the improvement of the inland navigation of the state."<sup>6</sup>

Senator Murphey's greatest step toward improving the state's inland navigation came in 1819 when the General Assembly established a corporation entitled "The President and Directors of the Board for Internal Improvements." The corporation centralized state improvement projects and managed the "Fund for Internal Improvements" that provided a permanent source of revenue.<sup>7</sup>

Attempts at navigating North Carolina's inland waters by steam began shortly after Robert Fulton demonstrated steam navigation's commercial feasibility and coincided with Murphey's attempts to improve inland navigation. John Stevens, one of America's steamboat pioneers, took the first steps to bring steam navigation to North Carolina's inland waters. In 1808, Stevens built the *Phoenix* in New York and successfully navigated the Hudson River.<sup>8</sup> Robert Fulton's monopoly on New York steam navigation forced Stevens to move his vessel elsewhere before beginning his commercial enterprise. He moved the *Phoenix* south to the Delaware River near Philadelphia before pressure from another Fulton monopoly forced him to move again.

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<sup>5</sup> Watson, "North Carolina and Internal Improvements, 1783-1861," 45-46.

<sup>6</sup> Hoyt, *The Papers of Archibald Murphey*, 20.

<sup>7</sup> Watson, "North Carolina and Internal Improvements, 1783-1861," 46, 74.

<sup>8</sup> William N. Still, Gordon P. Watts, and Bradley Rodgers, "Steam Navigation and the United States," in *The Advent of Steam*, ed. Robert Gardiner (Annapolis, Maryland: Naval Institute Press, 1993), 45.

Arriving in North Carolina in 1812, he secured a steam navigation monopoly from the state legislature. The terms granted him a twenty-year steam navigation monopoly, provided he had two steamboats operating within two years. The monopoly only covered rivers utilized by Stevens after two years and it could only be extended another ten years. Robert Fulton's agent, John Delacy, challenged Stevens's monopoly in North Carolina, based upon Fulton's patent rights and a supposed agreement between the two men in which Stevens promised not to navigate on North Carolina waters.<sup>9</sup> Ultimately, Stevens failed to operate a boat in North Carolina and alternate steamboat lines run by Delacy never appeared.

Finally, North Carolina steam navigation came to fruition in 1818. James Seawell operated two steamers on the Cape Fear River between Fayetteville and Wilmington. Seawell built the 158-ton *Henrietta* at his plantation, while Beaufort shipwrights built the *Prometheus's* hull. The *Prometheus* was then towed to Wilmington for its machinery. In 1822, Seawell and his financial backers formally chartered the Cape Fear Steam Boat Company, which held a steam navigation monopoly on the Cape Fear River until 1826. The Cape Fear Steamboat Company operated the *Henrietta* and the *North Carolina*; the *Prometheus* left the river shortly after its launch when it was found to be underpowered. Seawell's monopoly prevented others from using steam navigation on the Cape Fear River. After the Cape Fear Steam Boat Company's monopoly expired, several new corporations opened for business. The Henrietta Steamboat Company, composed of a Wilmington shipbuilder and two Fayetteville businessmen, bought the steamer from

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<sup>9</sup> Alan D. Watson, "Sailing Under Steam: The Advent of Steam Navigation in North Carolina," *North Carolina Historical Review* 75 (January 1998): 31.

Seawell and ran it on the lower Cape Fear. Several more Fayetteville businessmen ran the locally built steamer *Cotton Plant* under the Cotton Plant Steam Boat Company. Both vessels operated until the end of the 1830s. Steamboats traversed the Cape Fear River consistently from the first attempts in 1818 through the nineteenth century.<sup>10</sup>

At the same time steam navigation began on the Cape Fear River, steam navigation started in the Albemarle Sound region. A Norfolk merchant ran the New York-built steamer *Sea Horse* between Weldon on the Roanoke River and Elizabeth City, beginning in April 1818. His abortive attempt to navigate the Roanoke River and Albemarle Sound lasted until October.<sup>11</sup> Coincident with the *Sea Horse*'s failure was the arrival of another New York-built vessel, the *Albemarle* in January 1819. The *Albemarle*, a 60-foot long, 20-foot wide New York ferry, ran on the sound between Edenton and Plymouth during 1819. The steamer operated successfully, expanding its route to include Williamston and Elizabeth City, until early 1822. Ultimately, the *Albemarle* suffered from a lack of customers and a Norfolk resident bought the steamer at auction for a quarter of its purchase price.<sup>12</sup>

Virginia residents, closely tied to the economy of northeastern North Carolina, brought steam navigation to the Albemarle region. Steam navigation attempts in the Albemarle region stopped, then started again in 1828, when Norfolk individuals organized the Virginia and North Carolina Transportation Company. The company

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<sup>10</sup> Watson, "Sailing Under Steam," 52-54.

<sup>11</sup> John C. Emmerson Jr., *The Steamboat Comes to Norfolk Harbor, and the Log of the First Ten Years 1815-1825* (Portsmouth, Virginia: John C. Emmerson Jr., 1949), 56, 57, 91, 93.

<sup>12</sup> Watson, "Sailing Under Steam," 35.

purchased the steamer *Petersburg* from the James River Line in Virginia in 1829. In April 1829, after several aborted attempts, the steamer arrived in Elizabeth City from Norfolk and commenced towing barges up the Roanoke River. In short order, the steamer towed several barge loads of cotton to Elizabeth City from Weldon. As summer approached, decreasing Roanoke River water levels demonstrated that the *Petersburg's* draft was too great. Undaunted by the setback, the Virginia and North Carolina Transportation Company had a shallower draft steamer, the *North Carolina*, built. It first journeyed up the Roanoke River in March 1830. The *Petersburg* continued to operate between the Roanoke River's mouth and Elizabeth City. Despite an initial lack of patronage, other steamers did prove their utility by transporting the region's agricultural produce to Elizabeth City and the Dismal Swamp Canal.<sup>13</sup>

Steam navigation on the Neuse River also began in 1818 when the Newbern Steamboat Company bought the *Norfolk*, previously operated on the James River, and ran it between New Bern and Elizabeth City. The Newbern Steamboat Company discontinued service only four months after the *Norfolk's* arrival. Too few passengers traveled to Elizabeth City to support the line.<sup>14</sup> The Newbern Steamboat Company's failure tempered steam navigation expectations on the Neuse River for more than a decade. In January 1829, the iron steamer *Codorus* arrived in New Bern to attempt navigation on the Neuse River. Measuring 50 feet long, 16 feet in beam, and drawing 2 ½ feet, the *Codorus* was especially suited to connect New Bern with Beaufort through the

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<sup>13</sup> John C. Emmerson Jr., *Steam Navigation in Virginia and Northeastern North Carolina, 1826-1836* (Portsmouth, Virginia: John C. Emmerson Jr., 1949), 92, 93; Watson, "Sailing Under Steam," 38.

<sup>14</sup> Watson, "Sailing Under Steam," 33.



shallow Clubfoot and Harlowe Creek Canal.<sup>15</sup> Through the canal New Bern's population and produce could access the Atlantic Ocean by way of Beaufort's deepwater port. Another attempt was made to connect New Bern with Elizabeth City. In July 1829, the Virginia and North Carolina Transportation Company dispatched the *Petersburg* to New Bern to make an experimental trip. The steamer connected with stages at Elizabeth City to carry passengers to Norfolk, where they could catch a steamer to Baltimore. As experienced by the *Norfolk* eleven years earlier, insufficient passenger traffic made the route unprofitable. Within a year, the *Petersburg* ceased operating and moved to the Albemarle Sound. The *Codorus* also lacked patronage and left the Neuse River the same year.<sup>16</sup> These pioneering attempts failed as a result of New Bern's small passenger and freight market. The ultimate success of Neuse River steam navigation in the 1830s and 1840s depended upon connecting New Bern with the upstream towns.

Ulrich B. Phillips described in his book, *A History of Transportation in the Eastern Cotton Belt to 1860*, two common features of the South's centers of trade. First, the center of trade must have access to the outside world and second; it must have a hinterland, or tributary area around or behind it.<sup>17</sup> South of the Pamlico Sound, steamboats navigated the Cape Fear River earlier and more consistently than on North Carolina's other rivers. The success of Cape Fear River steam navigation was due to the river's direct link to the Atlantic Ocean and, upstream, to commercially viable towns.

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<sup>15</sup> Emerson, *Steam Navigation in Virginia*, 86.

<sup>16</sup> *New Bern North Carolina Centinel*, 25 July 1829; Watson, "Sailing Under Steam," 44.

<sup>17</sup> Ulrich B. Phillips, *A History of Transportation in the Eastern Cotton Belt to 1860* (New York: Columbia University Press, 1908), 6.

Ships navigating between the ocean and the Cape Fear River did not face shallow inlets in the Outer Banks that impeded communication with North Carolina's other rivers. Large, oceangoing ships stopped at Wilmington to pick up the Cape Fear region's produce and transported it to the outside world. The steamers of this early period operated effectively by bringing naval stores, lumber, and agricultural products to Wilmington's market thereby connecting the center of trade with its tributary region.

North of the Pamlico Sound, the Albemarle Sound was connected with steam navigation enterprises in southern Virginia through the Dismal Swamp Canal. Norfolk's merchants developed steam navigation in the Albemarle Sound to take advantage of the region's agricultural production and lack of a market city with easy access to the Atlantic Ocean. In essence, Norfolk became the region's primary market and its center of trade. Furthermore, steam navigation on Albemarle Sound and the Roanoke River was the expansion of a larger transportation network that linked southern Virginia with Baltimore, Philadelphia, and New York.

While New Bern hosted a steamboat early on, steam navigation's failure on the Neuse River was due to New Bern's lack of a hinterland as well as its lack of access to the outside world. Without an efficient means of transporting regional produce to New Bern, the passenger and freight market was severely limited. New Bern's position as the largest town in eastern North Carolina, made steamboat service a possibility, but the town's wealth and size did not assure success.

During the nineteenth century's first decades, the Tar/Pamlico River consisted of a relatively short tributary system without easy access to the outside world through a

deepwater port. Ships outbound from the Washington contended with Ocracoke Inlet's shallow and shifting swash. The towns of Tarboro, in the interior, and Washington, the river's port, dominated activity on the river. Several smaller communities along the river occasionally contributed to the river's traffic. The Tar/Pamlico River's geography, and the lack of a deepwater port, played an important role in the development of steam navigation and ultimately influenced how the region's communities developed.

#### Tar/Pamlico River Geography and Transportation

Arising in North Carolina's Person and Granville Counties along the North Carolina-Virginia border, the Tar River travels in a southeasterly direction through North Carolina's Piedmont and Coastal Plain. The river drains roughly five thousand square miles during its four hundred foot drop in elevation and extends a distance of roughly 180 miles from its headwaters to the Pamlico Sound.<sup>18</sup> During the antebellum period, the Tar/Pamlico River's navigable portion ran wholly within North Carolina's Coastal Plain.

The Coastal Plain was created over millions of years by the deposition of unconsolidated sand, clay, and calcareous material when much of the Eastern United States lay beneath the Atlantic Ocean. Navigation from the Coastal Plain into North Carolina's Piedmont was restricted by a series of terraces created by erosion of the slate rock by prehistoric shorelines at the two regions' convergence, the fall zone. Waterfalls created by slate rock outcroppings on the coastal plain's western edge at Rocky Mount, North Carolina, technically delineated the Tar River's head of navigation. Additionally, the Tar River below Rocky Mount was exceedingly shallow and winding; only lightly

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<sup>18</sup> State Board of Agriculture, *North Carolina and its Resources* (Raleigh, North Carolina: Government Printing Office, 1896), 126.



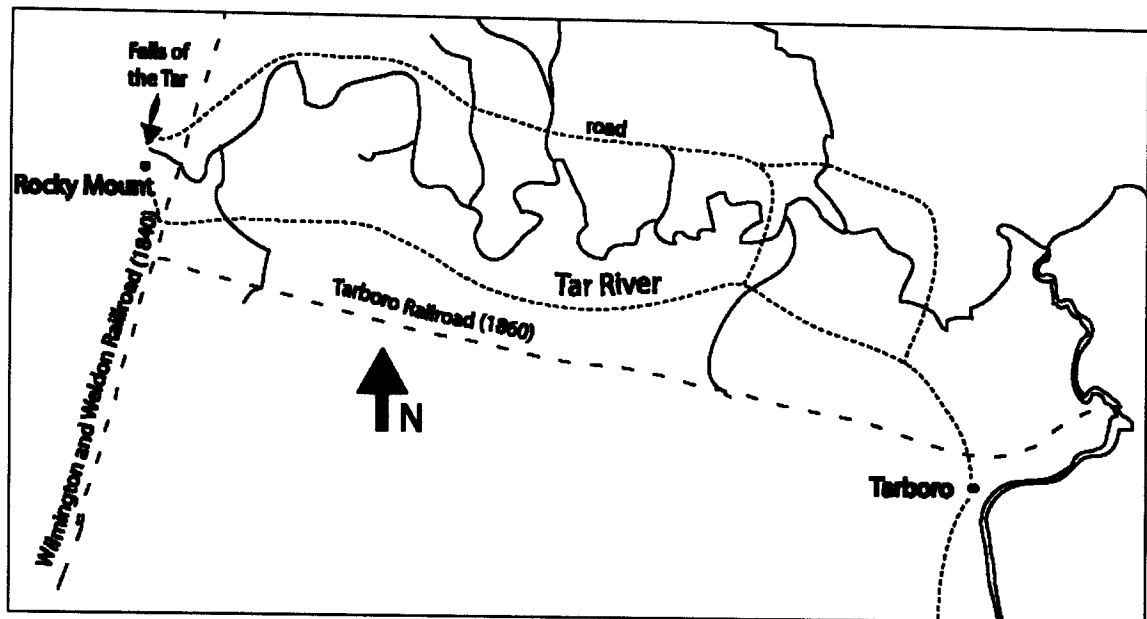


Figure 1.3 The Tar River between Rocky Mount and Tarboro.

High water generally ran during the winter and spring, tapering to a fraction of its winter output during the summer. Summer water levels temporarily rose during “freshets,” heavy rains that fell over several days.

Tarboro, the Edgecombe County seat, was at the center of a very productive agricultural region, where farmers grew maize, oats, peas, rye, potatoes, flax, and cotton. The region also produced lumber and naval stores. As the nineteenth century progressed and cotton cultivation began to dominate the local economy, Edgecombe County led the state in the innovation of cotton production by using manure and marl to grow larger crops.<sup>20</sup>

Before the arrival of steamboats at Tarboro, Edgecombe County’s produce and

<sup>20</sup> *Edgecombe Farm-Journal (Tarboro, North Carolina)*, September 1860, 1; Alan D. Watson, *Edgecombe County, A Brief History* (Raleigh, North Carolina: North Carolina Department of Cultural Resources, Division of Archives and History, 1979), 59.

residents traveled out of the county by several means. Produce traveled by wagonload along the county's relatively well developed road system or down the Tar River aboard flats. Passengers traveled by stage to Rocky Mount, Raleigh, Washington, or New Bern. Stages to and from Tarboro also carried mail, as the town was a stop on one of the two United States mail routes operated in North Carolina. Completion of the Wilmington and Weldon Railroad in 1840 opened a new transportation route for Tarboro's produce. Farmers were forced to wagon their produce fifteen miles to reach the railroad, which ran just east of Rocky Mount. A railroad spur eventually reached Tarboro in August 1860, providing another outlet for the county's produce.<sup>21</sup>

Continuing downstream from Tarboro, the river straightened, widened, and deepened slightly. The hamlets of Sparta (seven and one half miles downstream from Tarboro) and Falkland (eight and one third miles downstream from Sparta) clustered around bridges across the Tar River. Scattered along the riverbanks were small landings, such as Penny Hill (three and two tenths miles downstream from Sparta) that provided places for local farmers to load flats with produce for the larger markets downriver.<sup>22</sup>

Greenville is on the Tar River's south side, twenty-six river miles from Tarboro. It was the next settlement of any size below Tarboro. Twenty-one miles separated the towns on a direct line. The river followed a much more direct course from Tarboro to Greenville, the Pitt County seat. Primarily a small farming community, Greenville was

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<sup>21</sup> Watson, *Edgecombe County*, 56, 58.

<sup>22</sup> Jeremy F. Gilmer, *Map of a Part of Eastern North Carolina* (Chief Engineers Office, Department of Northern Virginia, Confederate States of America, 1864, reprinted by North Carolina Department of Archives and History); James M. Cox, "The Pamlico-Tar River and Its Role in the Development of Eastern North Carolina" (Master's thesis, East Carolina University, 1989), VI.

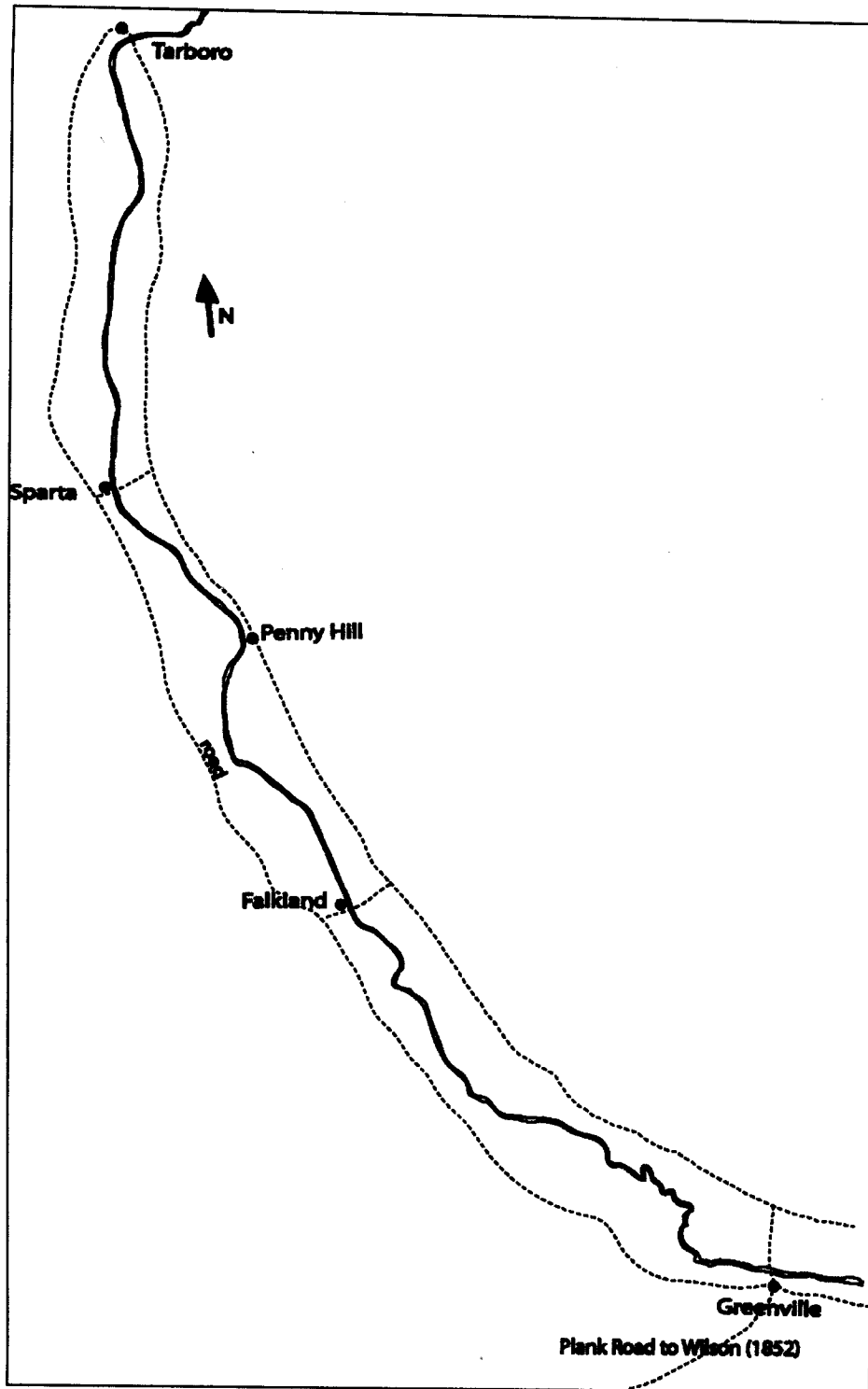


Figure 1.4 The Tar River between Tarboro and Greenville.

not large enough in 1835 to support a newspaper for more than a short while.

Greenville's economic growth coincided with its inclusion in the Tar River transportation system. In 1850, North Carolina's legislature chartered the Greenville and Raleigh Plank Road. Completed in 1852, the plank road connected Greenville to Wilson, and the Wilmington and Weldon Railroad, making Greenville an inland transportation hub.<sup>23</sup>

Downriver from Greenville, several more small landings, such as Pactolus, developed along the river's banks. Washington occupied a position on the river's north bank twenty-one miles downstream from Greenville in an area where the Tar River's banks decreased in height and the river spread into marshes. It was at Washington, the Beaufort County seat, that the arbitrary dividing line between the Tar River and the Pamlico River was drawn. Ships from northern ports and the West Indies called there to exchange manufactured goods and island produce for the region's naval stores and agricultural produce.

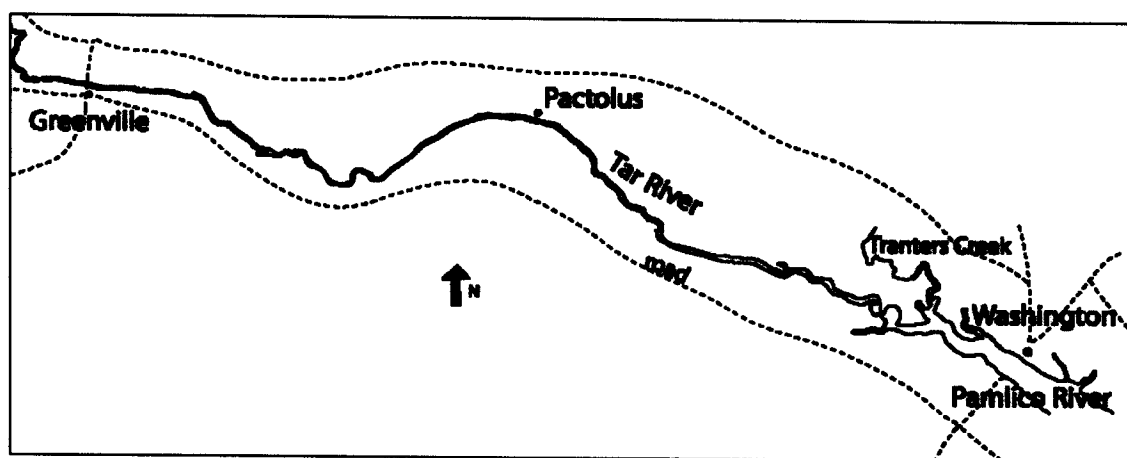


Figure 1.5 The Tar River between Greenville and Washington.

<sup>23</sup> Henry T. King, *Sketches of Pitt County* (Raleigh, North Carolina: Edwards and Broughton, 1911), 113,114.



Washington, incorporated in 1782, was not always the Tar/Pamlico River's primary port. Eighteen miles further downstream on the Pamlico River was the town of Bath. First settled at the very beginning of the eighteenth century, Bath was the colonial center of Pamlico River activities and the region's main eighteenth century port. The shift to Washington as the Tar/Pamlico River's main port occurred in the late eighteenth and early nineteenth century. In 1783, the post road that ran between Edenton and New Bern shifted from Bath to Washington, sidestepping the lengthy ferry crossing at Bath. Bath's importance dimmed when its customs duties moved to Washington after the War of 1812.<sup>24</sup>

East of Bath, the area surrounding the Pamlico River was low and marshy. Small settlements were scattered along the river's northern shore. Initially, these settlements were very small, consisting of no more than a few families engaged in farming or timber cutting along the river. As the nineteenth century progressed, the small settlements developed into the farming communities of Germantown, Swan Quarter, Wysocking, and Middletown. No obvious geographic feature divided the Pamlico River and Pamlico Sound; headlands bordering the sound marked the name change. In total, the Pamlico River (actually more of an estuary) stretched 43 miles from Washington to Pamlico Sound. Washington's situation almost halfway up the Tar/Pamlico River's length hindered its ability to cheaply market the Pamlico River region's produce as downriver farmers were forced to move their produce against the river's current to get it to market.

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<sup>24</sup> Ursula Loy and Pauline Worthy, *Washington and the Pamlico* (Washington, North Carolina: Washington-Beaufort County Bicentennial Commission, 1976), 1-5.

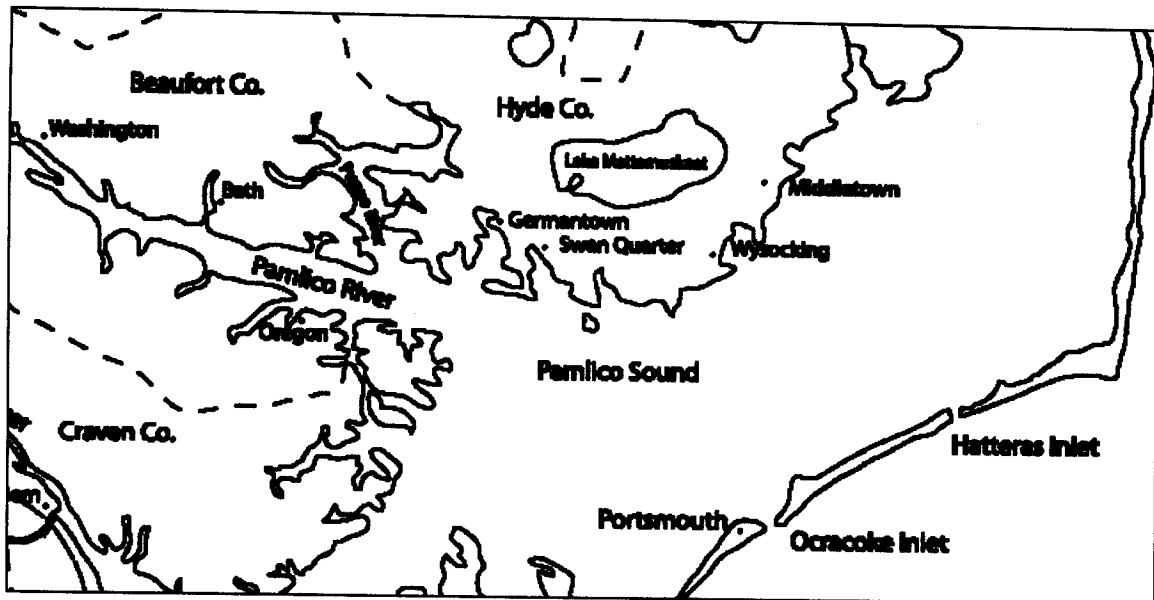


Figure 1.6 Pamlico River and Sound Map.

#### Tar/Pamlico River Navigation

Prior to the arrival of steam navigation on the Tar River, the region's produce traveled down the river onboard flats or other small watercraft. An example of the river's use was found in the correspondence addressed to John Gray Blount, prominent Washington resident and owner of a mercantile business. His son, John Gray Blount Jr., ran a satellite office in Tarboro, while Blount's business partner operated a branch at Shell Castle Island near Ocracoke Inlet. The firm relied upon the river to collect agricultural produce, naval stores, and lumber from various points on the Tar River and Pamlico River for shipment from Washington to Shell Castle Island and thence onto northeastern cities and the West Indies.<sup>25</sup>

<sup>25</sup> David T. Morgan (ed.), *The John Blount Gray Papers*, vol. IV 1803-1833 (Raleigh, North Carolina: North Carolina Department of Cultural Resources Division of Archives and History, 1982), xiv.

From Tarboro, John Blount Jr., sent shipments of cotton down the river onboard flats. The flats carried more than forty bales, each weighing between three hundred and four hundred pounds. Some cotton onboard was grown on John Blount Jr.'s own land; he instructed his father to use proceeds from the cotton's sale to settle his debts as well as to purchase flour and twine to be sent up river on the next flat.<sup>26</sup>

Flats moving downriver depended upon the river's current for propulsion. Long sweeps at either end directed the flat, keeping it in the strongest current and away from the riverbanks. Downriver speed depended upon the level of water in the Tar River. Even during the heaviest flow, it took several days for a flat to traverse the river from Tarboro to Washington. The Blounts did not construct a new flat for each load sent down river, instead the vessels were returned to Tarboro with cargo. Moving a flat upriver required extreme physical exertion; the Blounts' slaves were undoubtedly responsible for the grueling task. The slaves walked the flat's length pushing it upriver with long poles stuck into the river bottom. Only light loads could be moved upriver in this fashion.

Blount not only received produce from his son, but from other Tar River residents as well. In 1816, J. W. Worthington of Pitt County sent several barrels of flour and meal down river onboard a canoe and he was in the process of gathering a shipment of shingles to be sent to Washington. In return, Worthington requested a shipment of peas and salt be sent upriver by flat. When the shipment of roughly 100,000 shingles was ready, Worthington found that he could not use his largest flat because it drew too much water to get out of the creek where it was loaded to the Tar River. Worthington not only

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<sup>26</sup> Ibid., 370, 448.

produced the shingles; he also prepared 10,000 board feet of scantlings and inch boards for shipment to Blount.<sup>27</sup>

Not only were flats used on the Tar River, but farmers living along the Pamlico River sent their crops to Washington onboard the versatile vessels as well. Flats used on the Pamlico River's open water had sails for propulsion. Slaves were often responsible for sailing cargos of corn and cotton to Washington.<sup>28</sup> John Gray Blount's correspondence provided examples of the goods shipped on the Tar/Pamlico River. Flat cargoes could be quite large, but the difficulty of moving flats and cargoes upstream limited the exchange of goods along the Tar/Pamlico River.<sup>29</sup>

#### Economy of the Tar/Pamlico River Region

Agriculture, lumber, and naval stores production formed the Tar/Pamlico region's economic backbone. Subsistence level farming served the needs of most of the region's inhabitants. Farmers with minimal land holdings engaged in the market economy by growing a small surplus that was then shipped downriver to Washington to exchange for manufactured goods. Slave-owning farmers with larger property holdings engaged in more intensive agriculture or lumber and naval stores production, but still had the same problem of moving product to market.

The discovery of camphene as a substitute for whale oil greatly influenced the Tar/Pamlico River region's economy. Camphene, a mixture of turpentine, camphor, and

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<sup>27</sup> Ibid., 269, 271. Inch boards refer to planking one-inch thick.

<sup>28</sup> Ibid., 506; Ann M. Merriman, *The Cypress Landing Shipwreck of Chocowinity Bay: A North Carolina Sail Flat*, Research Report No. 9 (Greenville, North Carolina: Program in Maritime History and Nautical Archaeology, East Carolina University, 1997).

<sup>29</sup> Morgan, *The John Blount Gray Papers*, vol. IV 1803-1833, 271.

alcohol developed in 1835, increased the market for the area's turpentine. Farmers, living at the subsistence level or slightly above, earned hard currency by extracting the sap from the region's long leaf pine trees by cutting into the tree's bark and outer layers.<sup>30</sup> Unfortunately the process killed the tree after several years, resulting in an ever-expanding search for suitable trees.

Demand for turpentine changed the Tar/Pamlico region's balance of trade; the flammable liquid was readily exchanged for hard currency in northern ports. Farmers were at the lowest end of those who profited from the trade. Turpentine put cash into the pockets of those who tapped the long leaf pine, but commission merchants and shipbuilders profited the most. Commission merchants purchased the raw pinesap and distilled it into turpentine for export to northern markets. Profits from turpentine purchased manufactured and luxury goods that were then shipped back to the Tar/Pamlico River. Farmers, with their newly acquired currency and developing sense of consumer identity, purchased imported goods from commission merchants completing the cycle of the market revolution.

The region's shipbuilders, primarily working in Washington, profited by building new ships to carry turpentine north and return with manufactured goods. Washington's shipbuilding industry grew rapidly from around 1830 to 1850, when it boasted the most ship carpenters of any county in the state.<sup>31</sup> More ships meant more sailors, further

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<sup>30</sup> Cox, "The Pamlico-Tar River," 35.

<sup>31</sup> William N. Still, *Of Tar Heel Towns, Shipbuilders, Reconstructionists and Alliancemen* (Greenville, North Carolina: East Carolina University Publications in History, 1981), 33-35.

increasing the pool with hard currency.<sup>32</sup>

### Beginning of Tar/Pamlico River Steam Navigation

The initiative of two Washington merchants brought sustained steam navigation to the Tar River. William Tannahill and Benjamin Lavender owned a considerable maritime empire in Washington. The men ran a successful ship's chandlery and a commission merchant business that bought and sold cargoes. Tannahill and Lavender also owned a sawmill and turpentine distillery that supplied naval stores. Tar River residents cut their pine trees and then sold the timber to Tannahill and Lavender. The *Washington Whig* attributed 20,000 board feet of lumber and 100 barrels of turpentine per day to the merchants' enterprise. The firm's manufacturing activities set the stage for its foray into steamboat construction.<sup>33</sup>

Following the example of steam navigation pioneers on North Carolina's other rivers, Tannahill and Lavender sought a navigation monopoly. North Carolina's General Assembly was willing to contribute to the firm's success. Granted during the 1835 session, the firm received exclusive navigation rights for fifteen years, in exchange for a ten percent freight rate decrease and the firm's guarantee to put a boat in service in four years.<sup>34</sup>

Three Washington individuals built the vessel for the firm. Samuel Peabody and Jesse Wilkinson constructed the hull, while a Mr. Baxley engineered the steam

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<sup>32</sup> Cox, "The Pamlico-Tar River," 36.

<sup>33</sup> *Washington (North Carolina) Statesman and Third Congressional District Advertiser*, 7 February 1835; *Tarboro' (North Carolina) Press*, 30 January 1836.

<sup>34</sup> *Tarboro' Press*, 9 January 1836; Watson, "Sailing Under Steam," 48.

machinery. Baxley had learned his trade in Baltimore, his previous home.<sup>35</sup> The *Edmund D. McNair* was described in the newspapers as 80 to 85 feet in length by 23 feet in breadth with a 5-foot depth of hold. Its Washington enrollment listed these more specific dimensions: 83 feet, 10 inches in length by 16 feet, 8 inches in breadth with a 5-foot 6-inch depth of hold. The *Edmund D. McNair* rated 71 23/95 tons burden.<sup>36</sup> The vessel's steam engine generated twenty horsepower. Three tow boats and a passenger cabin completed the steamboat's economic facilities.<sup>37</sup> On 15 January 1836, the *Edmund D. McNair* took its first passengers on a pleasure cruise.

Tannahill and Lavender planned service to Tarboro in the spring of 1836. Before the company tried to reach Tarboro, they cleared snags from the Tar River. The activities of Tannahill and Lavender sparked a small economic boom in Washington. Residents expected increased prosperity from the connection forged among the river towns of Washington, Greenville, and Tarboro.<sup>38</sup>

The *Edmund D. McNair* first reached Greenville in April 1836. It departed Washington at six o'clock A. M. and arrived in Greenville at noon. Captain Chamberlain piloted the steamer upriver at an average speed of five miles per hour for the thirty-mile trip. After a three-hour stop, the *Edmund D. McNair* returned to Washington averaging twice the speed of the upriver trip. The *Washington Whig* editorialized that the *Edmund*

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<sup>35</sup> *Tarboro' Press*, 30 January 1836.

<sup>36</sup> Records of the Bureau of Marine Inspection and Navigation, Washington, North Carolina, Enrollment Certificate, RG 41, National Archives, Washington, D. C.

<sup>37</sup> *Tarboro' Press*, 26 December 1835, 30 January 1836.

<sup>38</sup> *Tarboro' Press*, 30 January 1836.

*D. McNair* proved its worth during the trip.<sup>39</sup>

Tarboro residents anticipated a similar visit. The *Edmund D. McNair*'s arrival received a great deal of fanfare. Cannon salutes and shouts echoed across the town when the steamer first docked in May 1836. It delivered merchandise and passengers that first trip. The following day, the *Edmund D. McNair* steamed to Tarboro. As town's people enjoyed a short round trip to Sparta and back, "Music, dancing, and refreshments gave a zest to the entertainment."<sup>40</sup> Tarboro residents expected service to continue on schedule. Regular service continued for about a year, but the venture failed to turn a profit. Tannahill and Lavender sold the *Edmund D. McNair* to William Southerland on the Cape Fear River.<sup>41</sup> Economic difficulties arising from the financial Panic of 1837 undoubtedly caused the steamer's sale to a stronger market.

Southerland's venture on the Cape Fear River also failed and he sold the steamer in 1838 to New Bern's William Farrow and the Burgwyn merchant group.<sup>42</sup> On the Neuse, the *Edmund D. McNair* encountered a bridge forty miles upstream from New Bern that blocked upriver passage. Mr. Doherty, the bridge owner, refused to modify the bridge to allow the steamer to pass. Irritated by the disagreeable bridge owner, Craven County representatives wrote and pushed a bill through the state legislature preventing private individuals from obstructing public way fares. Mr. Doherty was required by law

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<sup>39</sup> *Tarboro' Press*, 30 April 1836.

<sup>40</sup> *Tarboro' Press*, 14 May 1836.

<sup>41</sup> *Wilmington (North Carolina) Advertiser*, 28 April 1837.

<sup>42</sup> Watson, "Sailing Under Steam," 44.



to incorporate a draw into his bridge. The legislation arrived too late for Farrison and the Burgwyn merchants who sold the steamer to James Whitfield of Lenoir County. After the offending bridge was modified, *Edmund D. McNair* reached Waynesboro 21 February 1839; penetrating further up the Neuse River than any other steamer to that time.<sup>43</sup> Steam navigation continued to expand up the Neuse River, but it was not until 1847 that a steamboat again reached Tarboro.

Tarboro residents continued shipping produce to Washington using flatboats after the departure of *Edmund D. McNair*. As the nation's financial crisis settled during the early 1840s, the Tar River region's agricultural economy expanded and farmers marketed new varieties of produce, such as sweet potatoes.<sup>44</sup> Steam navigation bypassed the Tar River until Tuesday, 27 April 1847, when the steamer *Wayne* reached Tarboro. Captain Way surprised Tarboro's residents with his unexpected arrival. The following day, *Wayne* again steamed upriver from Washington to Tarboro; this time it took sightseers on a pleasure trip downstream to Sparta. On Friday, another sightseeing group of thirty-five people steamed from Tarboro to Washington in five hours, spent the night and then returned on Saturday. On Sunday, the *Wayne* carried a party of Washington parishioners to Bath to hear a sermon. After returning the parishioners to Washington, the *Wayne* departed for New Bern. Prior to *Wayne's* Tar River visit, its owners, New Bern merchants Dibble and Brothers, had operated it on the Neuse River since December

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<sup>43</sup> *New Bern (North Carolina) Spectator*, 22 June 1838; *Tarboro' Press*, 14 July 1838; Sarah Turlington, "Steam Navigation in North Carolina Prior to 1860" (master's thesis, University of North Carolina, 1933), 57; *New Bern Spectator*, 4 January 1839; *Tarboro' Press*, 9 March 1839.

<sup>44</sup> *Tarboro' Press*, 12 November 1845.

1843. Enthusiastic about the Tar River's possibilities, Dibble and Brothers decided to bring the steamer back in the fall. They believed that the sightseeing tours successfully assessed the viability of a Tar River navigation enterprise.<sup>45</sup>

In response to the favorable trips made by the *Wayne*, Dibble and Brothers introduced the newly built *Governor Graham* to Washington in February 1848. Constructed in Hartford, Connecticut, the steamer was slated to run on either the Neuse or Tar River. Newspapers characterized the vessel as a Mississippi River steamboat without a hurricane deck, indicating that the vessel had two decks.<sup>46</sup> The bottom level contained the machinery and cargo, while passengers rode on the top level. The passenger cabin was carpeted, had eighteen berths, and a piano. Propulsive power originated from double, horizontal, independent engines with a combined rating of one hundred horsepower supplied by a locomotive boiler. The engines turned side paddle wheels. Measuring 125 feet in length by 37 feet in extreme width with a five-foot depth of hold, and only drawing 20 inches of water when unloaded, the vessel dwarfed the *Edmund D. McNair*.<sup>47</sup>

However, upon starting service the steamer encountered navigation problems. A toll bridge spanned the Pamlico River at Washington. Without a drawbridge or gate, the bridge prevented the steamer from traveling upstream. The bridge owners refused to

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<sup>45</sup> *Tarboro' Press*, 1 May 1847; *Washington (North Carolina) North State Whig*, 5 May 1847; *New Bern (North Carolina) Journal*, 22 June 1882.

<sup>46</sup> Joe J. Simmons III, "Steamboats on Inland Waterways: Prime Movers of Manifest Destiny." *Ships and Shipwrecks of the Americas*. ed. George Bass (New York: Thames and Hudson, 1988), 195

<sup>47</sup> *Tarborough Press*, 5 February 1848; *Raleigh Register*, 19 April 1848.

build an opening even though their charter and state law required it.<sup>48</sup> Angry Washington citizens held a public meeting and resolved to pay two-thirds of any judgment rendered against Dibble and Brothers if they opened a passage through the bridge without waiting for the due process of law. Shortly after a meeting on 19 February 1848, the *Governor Graham* arrived in Tarboro with a load of passengers. Tarboro's residents expected it to return on a schedule.<sup>49</sup>



Figure 1.7 Tar/Pamlico River drawbridge at Washington as it looked in 1862 (*Frank Leslie's Illustrated Newspaper*, 14 June 1862).

The loud chuffing caused by the explosive release of steam from the *Governor Graham's* high-pressure engines greeted Tar River residents for less than two weeks. In

<sup>48</sup> *Tarborough Press*, 19 February 1848

<sup>49</sup> *Newbernian*, 22 February 1848; *Tarborough Press*, 26 February 1848.

March, the *Governor Graham* moved to the Neuse River to take over the *Wayne's* obligations after it caught fire and burned to the waterline.<sup>50</sup> Returning from Smithfield to New Bern with a cargo containing turpentine casks, the steamer burst a cask against another vessel while docking. Turpentine ran across the deck and into the water, where it caught fire when one of the hands threw the boiler fire overboard, a customary practice.<sup>51</sup> Flames followed the stream of turpentine across the water, up the *Wayne's* side, engulfing the steamer. The captain brought the *Wayne* up to the wharf and its passengers and crew leapt to safety. Dibble and Brothers had not renewed the *Wayne's* recently expired insurance policy.<sup>52</sup> The greater economic activity and ease of navigation made the *Governor Graham's* shift to the Neuse River an easy choice for Dibble and Brothers.

Unhappy with the loss of steamboat service, a group of Edgecombe County residents formed a joint stock company and purchased a steamboat. In May of 1848, the Tar River Steamboat Company sold stock shares and sent an agent north to procure a vessel.<sup>53</sup> The agent, Gilbert Hale, quickly found a vessel in Baltimore that he believed fit both passenger and freight needs on the Tarboro-Washington line. Named *Oregon*, the Tarboro *Southerner* suggested renaming the vessel after Colonel Wilson, a local war hero who had died recently in the Mexican War.<sup>54</sup>

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<sup>50</sup> *Tarborough Press*, 1 April 1848.

<sup>51</sup> *New Bern (North Carolina) Republican*, 7 March 1848.

<sup>52</sup> *Newbernian*, 7 March 1848.

<sup>53</sup> *Tarborough Press*, 13 May 1848.

<sup>54</sup> *Tarborough Press*, 3 June 1848.

### Conclusion

The early nineteenth century's technologically primitive steamboats transited North Carolina's inland waters, forging links between towns on the water's margins. Tar/Pamlico River steam navigation developed at a slower pace than North Carolina's other rivers. Factors including the river's geographic position and its lack of a connection with transportation systems outside North Carolina explain the river's slow development. Furthermore, the region's economy was not sufficiently prosperous to warrant large capital expenditures needed to facilitate transportation improvements until the demand for naval stores, such as turpentine, increased. Tannahill and Lavender's pioneering steps with the *Edmund D. McNair* succeeded for a time before national economic conditions interfered. Again, the region's marginal economy was not strong enough to prevent the steamer's sale off the river.

Nearly a decade later, steam navigation interests from the Neuse River brought steamers back to the Tar/Pamlico River. While the Dibble Brothers abandoned their expansion into the Tar/Pamlico region, merchant interests were sufficiently rekindled to form the Tar River Steamboat Company and purchase the *Oregon* in Baltimore.

## CHAPTER 2: THE *OREGON* IN BALTIMORE

### Introduction

Before its arrival in North Carolina, the *Oregon* operated as an excursion steamer out of Baltimore. Its construction in 1845-46 included several design characteristics that reflected the slightly unusual plans of its builder and owner George Jury. In 1846, most Baltimore steamers ran on a regular schedule connecting the Chesapeake region's cities and occasionally taking passengers on excursions. Rather than join in the Chesapeake's transportation network, George Jury built the *Oregon* specifically to provide excursions for Baltimore's residents. In contrast to most steamers operating in Baltimore in the 1840s, the *Oregon* was small in size and shallow in draft. Both attributes allowed it freedom of movement for excursions on the Patapsco River's shoal waters.

The *Oregon's* steam engine also differed from the engines that propelled most Baltimore steamboats. George Jury chose a single, high-pressure, horizontal steam engine to turn the steamer's side-paddlewheels. Maritime historians generally ascribe the use of high-pressure horizontal engines to western river steamboats, but George Jury's design requirements, similar to the requirements of steamboat builders on the western rivers, made the high-pressure engine a logical choice. The *Oregon's* engine builder, Charles Reeder, was a significant figure in the development of Chesapeake Bay steam navigation and was best known for his large walking-beam steam engines. Reeder's connection with the *Oregon* tied the steamer into the development and tradition of Chesapeake Bay steam navigation. Previous scholarly research on Chesapeake steamers omitted vessels with the *Oregon's* characteristics. The following description of the

*Oregon's* construction and use provides evidence of a previously undocumented variety of Chesapeake Bay steamer.

#### Charles Reeder and Chesapeake Bay Steam Navigation

Steamboat construction in Baltimore began with the *Chesapeake* in 1813.

Baltimore shipwrights built the hull but the city lacked a millwright capable of building the engine. Philadelphia millwright Daniel Large, a student of Boulton and Watt's English engine firm, built the engine and shipped it to Baltimore where his assistant, Charles Reeder supervised its installation. While assembling the engine, Charles Reeder realized the tremendous opportunity Baltimore afforded a steam engine manufacturer. Baltimore's only other machinists were a millwright and a cannon founder, neither of whom were familiar with steam engine construction.

The British advance up the Chesapeake halted Reeder's plans to open his own foundry. In preparation for the imminent attack, Baltimore's male citizens joined the militia in defense of the city. Charles Reeder chose Captain Benjamin C. Howard's Company of the Fifth Regiment. He and his fellow volunteers faced the British attack at North Point on Baltimore's eastern side on 12 September 1814. Before attacking, British commanders Rear Admiral George Cockburn and Major General Robert Ross, personally scouted the American lines in the area of Reeder's regiment. While viewing the defenses at North Point, an American marksman killed General Ross effectively defeating the

British land advance against Baltimore. The bombardment of Fort McHenry also failed, preventing the Royal Navy's further advance.<sup>1</sup>

Charles Reeder quickly capitalized on the conflict's resolution and had a foundry and engine plant operating by 1815. Reeder started from scratch, fabricating the machinery to build steam engines, and located his enterprise under Federal Hill on Honey Alley. His training under Daniel Large served him well; he built the manufacturing machinery, the engine that ran the machinery, and completed the engines and boilers for two steamboats in 1816. Within five years, he completed the engines for the *Norfolk*, the *United States*, and the *Constitution*. Altogether, Reeder made engines for five of the first eight steamboats built in Baltimore.<sup>2</sup>

Reeder had only a year's head start before another marine engine building firm moved to Baltimore. Welshmen John Watchman and John Bratt brought their British training to Federal Hill and established a foundry and machine shop with direct access to the water. The firm of Watchman and Bratt expanded quickly, building engines for the steamers *Virginia* in 1817 and *Maryland* in 1819. Watchman and Bratt exceeded Reeder's workshop in size by 1822.<sup>3</sup>

Nevertheless, Reeder and his two sons produced a significantly greater number of the Chesapeake's steamboat engines. At first, Charles Reeder built crosshead steam

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<sup>1</sup> David C. Holly, *Chesapeake Steamboats: Vanished Fleet* (Centreville, Maryland: Tidewater Publishers, 1994), 50; Donald R. Hickey, *The War of 1812: A Short History* (Chicago, Illinois: University of Illinois Press, 1995), 63, 64.

<sup>2</sup> William J. Kelly, "Shipbuilding at Federal Hill" (Maryland Historical Society, Baltimore, Maryland, 1964), Reeder, 4.

<sup>3</sup> Holly, *Chesapeake Steamboats*, 52.



engines, but as the engine's limitations became apparent, he switched to the walking-beam engine. The engine cylinder on a crosshead engine rested on top of the paddle shaft, limiting the cylinder's size and therefore the engine's power.

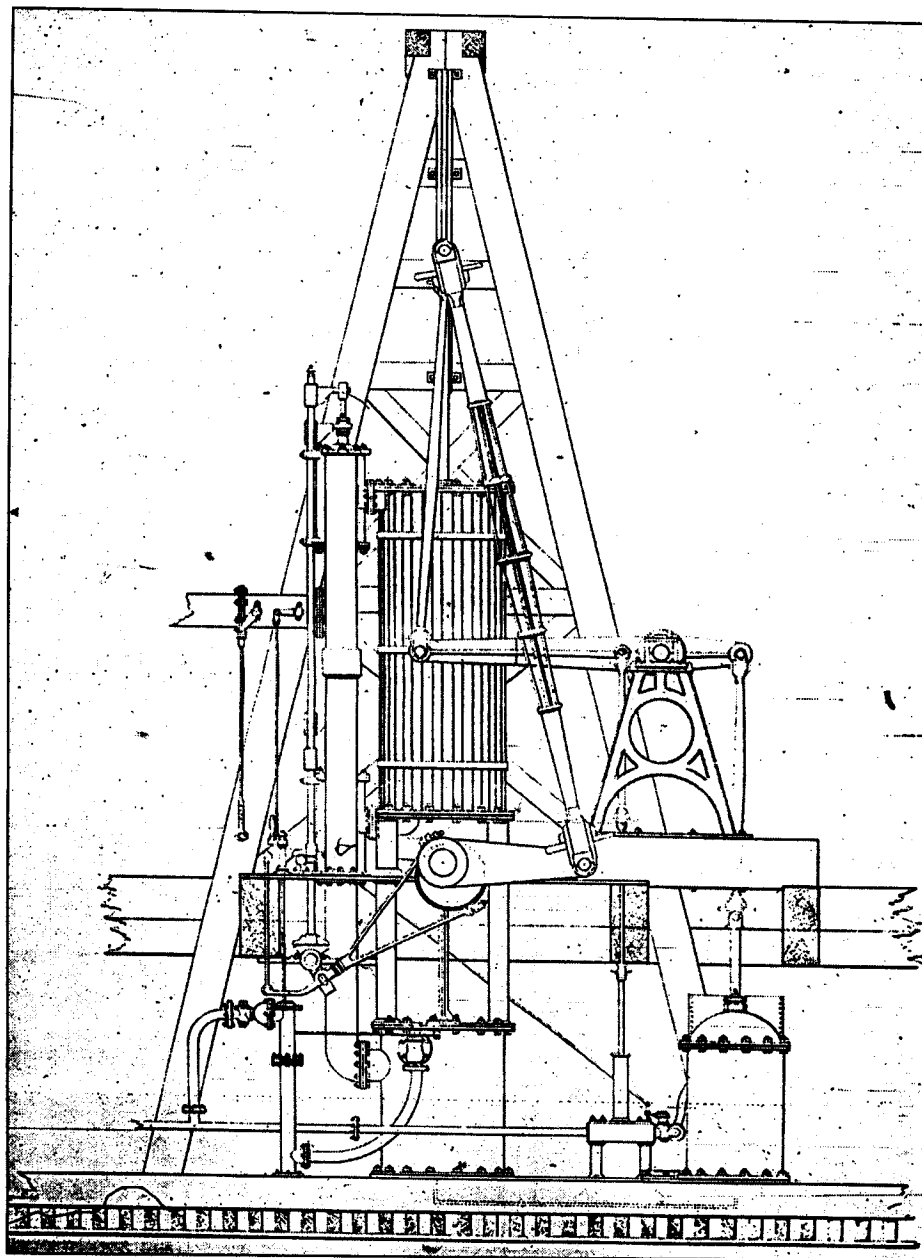


Figure 2.1 Side elevation of a crosshead marine steam engine (Paul Hodge, *The Steam Engine* (New York: D. Appleton and Co., 1840), plate XXII).

As steamboats grew, so did their power requirements. The walking-beam engine design successfully moved the engine cylinder off the paddle-wheel shaft to a position below the waterline. The move improved vessel stability and power. Charles Reeder also built oceanic steamship engines, stationary engines, locomotive engines and high-pressure engines used on western river steamboats and the *Oregon*. Reeder retired in 1842, but his sons, Amos and Charles Jr., continued to produce engines until 1899. Charles Reeder and Sons built a total of fifty-seven steamboat engines; forty-one served on the Chesapeake Bay.<sup>4</sup>



Figure 2.2 Charles Reeder Jr. (J. Leander Bishop, *A History of American Manufactures from 1608 to 1860*, vol. 3 (1868; reprint, New York: Augustus M. Kelley, 1966), 123).

During the first two decades after Charles Reeder's arrival, steam navigation on the Chesapeake Bay consisted of single-proprietorships operating steamboats to the cities

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<sup>4</sup> Holly, *Chesapeake Steamboats*, 57, 60-61.

joined by the bay's waterways. As steamboats proliferated, steam packets replaced sailing packets in the passenger and mail trade. Still, the individual nature of the steamboat companies made travel North or South through the Chesapeake region difficult. Steamboat operators did not plan their departure and arrival times to coincide with other vessel operators leaving passengers waiting days to make the next segment of their journey.

The Maryland and Virginia Steam Boat Company's (MVSBC) formation in 1828 streamlined the movement of travelers by absorbing several competing Baltimore-Norfolk lines. With a subscribed capital of \$150,000, the MVSBC coordinated a system of travel spanning Chesapeake Bay. Frenchtown to Baltimore steam packets, carrying Philadelphia passengers from the north end of Chesapeake Bay, turned their passengers over to the MVSBC at the Patapsco River's mouth where southbound passengers boarded either the *Virginia* or the *Norfolk*. A trip down the bay took roughly a day, at Portsmouth passengers boarded a coast steamship for Charleston or traveled up the James River to Richmond. The MVSBC's steamboats, the *Virginia* and the *Norfolk*, were aging when the line started; within the first year, the company contracted for two new vessels, the *Columbus* and the *Pocahontas*. Powered by crosshead steam engines, both vessels measured 137-feet long by 30-feet wide with an 11-foot depth of hold.<sup>5</sup> In 1832, construction of the Portsmouth and Roanoke railroad offered passengers another travel option. After disembarking in Portsmouth, travelers could journey by rail from

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<sup>5</sup> Robert H. Burgess and H. Graham Wood, *Steamboats Out of Baltimore* (Cambridge, Maryland: Tidewater Publishers, 1968), 1; Alexander C. Brown, *Steam Packets on the Chesapeake: A History of the Old Bay Line Since 1840* (Cambridge, Maryland: Cornell Maritime Press, 1961), 14-16; Holly, *Chesapeake Steamboats*, 90.

Portsmouth to Weldon, North Carolina, and then board the Wilmington and Weldon railroad for points south.<sup>6</sup>

Several entrepreneurs challenged the MVSBC's monopoly over Baltimore-Norfolk traffic by introducing new vessels. In response, the well-capitalized MVSBC bought out the competing vessels, especially those that offered a faster trip down the Chesapeake Bay. The railroad proved to be the MVSBC's greatest competitor. By the mid-1830's, rails linked Baltimore with Washington, DC and Weldon, North Carolina, connected to Fredericksburg, Virginia. To complete the "Great Northern and Southern Line" a steamer ran from Washington, DC, to Potomac Creek where passengers boarded a stage to Fredericksburg. Each route claimed to move passengers safer and faster.<sup>7</sup>

Two new steamers, the *Jewess* and the *Alabama*, joined the MVSBC's fleet in 1838. Unfortunately, the new vessels' construction and the Panic of 1837 proved a financial disaster; the company closed its doors. In December 1839, the Baltimore Steam Packet Company (BSPC) incorporated to take the MVSBC's place. The new company purchased the *Jewess* and the *Pocahontas* at the MVSBC's foreclosure auction and the steamers *South Carolina* and *Georgia* from the Atlantic Line that ran coastal steamers.<sup>8</sup>

Firmly established on the Bay, the BSPC offered thrice-weekly trips between Baltimore and Norfolk in the winter and daily trips in the summer. When not transiting the Bay, the BSPC offered excursion trips during nice weather. Excursions were a cost-

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<sup>6</sup> Brown, *Steam Packets on the Chesapeake*, 20.

<sup>7</sup> *Tarboro' (North Carolina) Press*, 26 November 1836; Brown, *Steam Packets on the Chesapeake*, 19-20.

<sup>8</sup> *Ibid.*, 24-26.

effective way for the steamboats to make money between trips. For example, the steamer *Georgia*, while between trips at Norfolk, Virginia, in July 1841, offered an excursion to Cape Henry where passengers could swim or fish. A military and cotillion band accompanied the outing.<sup>9</sup>

Increased North/South traffic satisfied the demands of both the Chesapeake's railroads and steamboats during the start of the 1840s. In order to update the BSPC fleet and compete with the railroad, the company contracted for a new steamer. The shipbuilding firm of John S. Brown and Robert H. Culley (also referred to as Brown and Collyer) built the hull of the *Medora* and John Watchman (John Bratt retired in 1841) built its walking-beam engine and boiler. On the steamer's trial run 14 April 1842, it suffered a catastrophic boiler explosion as it pulled away from the dock. Twenty-six people died and another thirty-eight suffered wounds from boiler shrapnel and splintered wood. Andrew Henderson and John Moale, the President and General Agent respectively, of the BSPC lost their lives in the explosion. Devastated as the company was, steamer service continued uninterrupted. Raised in May 1842, the *Medora* received a new boiler from Watchman's competitor Charles Reeder and a new name. The *Herald*, ex-*Medora*, served on the Chesapeake Bay until the Civil War.<sup>10</sup> Many Brown and Culley shipwrights attended the *Medora*'s trial run and subsequent explosion. George Jury might have been a spectator and would have undoubtedly formed a poor opinion of Watchman's work.

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<sup>9</sup> *Ibid.*, 27, 30.

<sup>10</sup> Kelly, "Shipbuilding at Federal Hill", John S. Brown, 5; Holly, *Chesapeake Steamboats*, 63-65.

The previous short synopsis of steamboat activities on the Baltimore-Norfolk route covered only a small portion of steamboat activity on the Chesapeake Bay, but it illustrated the focus of previous historiography. Baltimore was the hub for Chesapeake Bay steam navigation as the region's largest and most industrialized city. As the city's population rapidly expanded during the 1840s, a service industry developed to provide Baltimoreans with steamboat excursions as a form of entertainment and a way to escape the city's oppressive summertime heat.

#### The Oregon's Construction

Charles Reeder's, along Watchman and Bratt's, engine shop made the Federal Hill shipyards on the south side of Baltimore's inner harbor ideally located for steamship construction. Entrepreneurial steamship builders also benefited from Federal Hill's cheap and available land; moreover, Baltimore's oldest shipyards at Fell's Point were overcrowded. Deeper draft vessel construction centered at Fell's Point, which offered deepwater access.<sup>11</sup> Federal Hill shipyards were limited to shoal draft vessels until the successful dredging of Baltimore's harbor in 1827.<sup>12</sup>

George Jury built the *Oregon* in the industrial Federal Hill neighborhood, where he worked as a ship carpenter. He also resided in Federal Hill on Montgomery Street, west of Williams Street. His father, George Sr., who immigrated to America around 1800, lived down Montgomery Street towards the water. George Sr. worked as a glass blower in the Federal Hill glass manufactory. George Jr. had several brothers who

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<sup>11</sup> Paul Travers, *The Patapsco: Baltimore's River of History* (Centreville, Maryland: Tidewater Publishers, 1990), 35.

<sup>12</sup> Kelly, "Shipbuilding at Federal Hill", 3; Holly, *Chesapeake Steamboats*, 62.



Figure 2.3 Panoramic illustration of Baltimore circa 1840s. View from Federal Hill depicts Charles Reeder's shop on the left and Watchman and Bratt on the right in the foreground (Suzanne Chapelle et al., *Maryland, a History of its People* (Baltimore: Johns Hopkins University Press, 1986), 116).

followed their father to the glass manufactory or were sailors or tavern keepers.<sup>13</sup>

Jury never intended to go into the shipbuilding business. Instead, he saw an opportunity to start a sightseeing and pleasure cruise business out of Baltimore. Rather than purchase a vessel, Jury chose to construct a steamboat to his own specifications relying upon his experience as a ship carpenter. He used space at the Federal Hill shipyard of John S. Brown and Robert H. Culley, located at the foot of Battery Avenue and Hughes Street.<sup>14</sup> When *Oregon's* keel was laid in November 1845, the *Baltimore Sun* took notice of the steamer. The newspaper described the *Oregon* as 105 feet on deck, 30 feet in beam, with a hold of 5½ feet; Charles Reeder's engine shop would supply the engine. The correspondent added: "She is to be fitted up as a pleasure boat, to accommodate pic nic [sic] and fishing parties, and c. Her draft will not be more than three feet, enabling her to run almost on any shore of our [Patapsco] river."<sup>15</sup>

Construction proceeded smoothly on the *Oregon*. On 11 May 1846, George Jury filled out the enrollment paperwork at Baltimore's customs house. He brought with him the Master Carpenter's Certificate, witnessed that day by John S. Brown. The certificate described the *Oregon* as a steamboat 100 feet long on deck, 14 feet in beam, with a 5-foot depth of hold. The difference in beam measurements between the newspaper article and the enrollment is due to the paper's measuring the width of the vessel including its paddle boxes. The steamer had no masts, one deck, a cabin on deck, and 64 80/95 tons

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<sup>13</sup> Kelly, "Shipbuilding at Federal Hill", George Jury, 1.

<sup>14</sup> Ibid.

<sup>15</sup> *Baltimore Sun*, 22 Nov. 1845.



carpenter's admeasurement.<sup>16</sup> At the customs house, Jury filled out the enrollment certificate and swore enrollment oaths as both the *Oregon's* owner and master. The enrollment certificate further characterized the *Oregon* as having no figurehead and measuring 100 feet in length, 14 feet 3 inches in breadth, and 5 feet in depth. The *Oregon* was then rated at 68 60/95 tons using the time period's standard tonnage equation: (length minus 3/5 breadth) breadth times depth of hold all divided by 95.<sup>17</sup> Ninety-five equaled the number of cubic feet of space occupied by one ton of cargo. It is unclear why the carpenter's admeasurement and customs house admeasurement did not match. Using the same equation, minus the three inches of breadth difference between the measurements yielded a tonnage rating smaller by only a ton. Either the carpenter's admeasurement used a different equation or the difference was a result of miscalculation.

Other contemporary sources provided information about the *Oregon's* engine. The 1851 book, *Tredgold on the Steam Engine*, contained a listing of American steamships and their attributes. The *Oregon* is listed with one boiler and one horizontal engine having a diameter of 16.5 inches and stroke of 48 inches.<sup>18</sup> Horizontal engines operated on high-pressure steam, without a condenser and were generally considered a western river engine by nineteenth-century engineers and twentieth-century historians.

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<sup>16</sup> Records of the Bureau of Marine Inspection and Navigation, Baltimore, Maryland Master Carpenter's Certificate, RG 41, National Archives, Washington, D.C.

<sup>17</sup> Records of the Bureau of Marine Inspection and Navigation, Baltimore, Maryland Enrollment Certificate, RG 41, National Archives, Washington, D. C.

<sup>18</sup> Thomas Tredgold, *Tredgold on the Steam Engine: Marine Engines and Boilers Exemplified in Numerous Examples of British and American Steam Vessels with Descriptive Text by Eminent Engineers* (London: James S. Virtue, 1851), vol. I, division 2, 23.

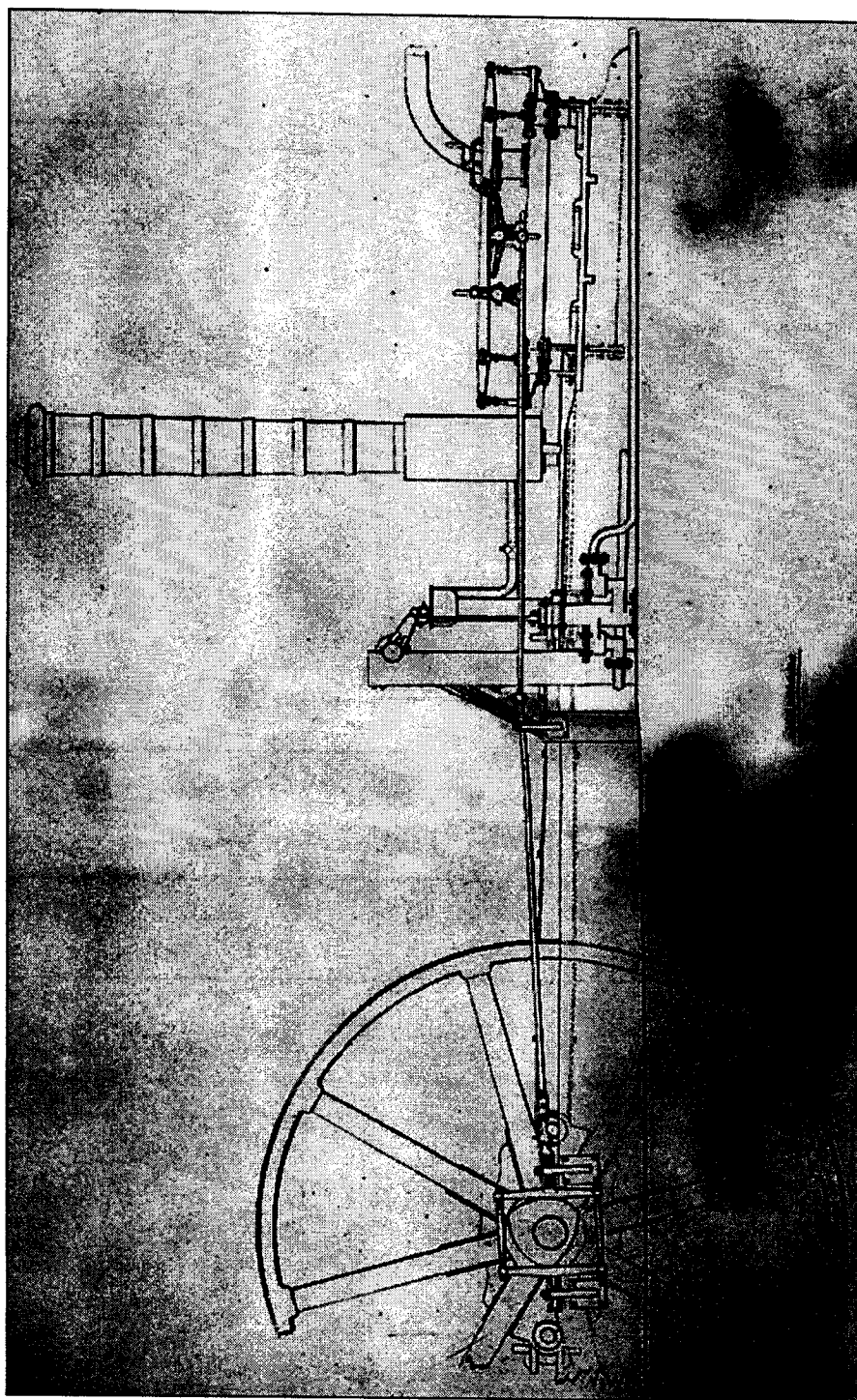


Figure 2.4 Side elevation of a early western river steamboat horizontal steam engine. Courtesy of the Mariner's Museum (Paul Hodge, *The Steam Engine*, plate XXX).

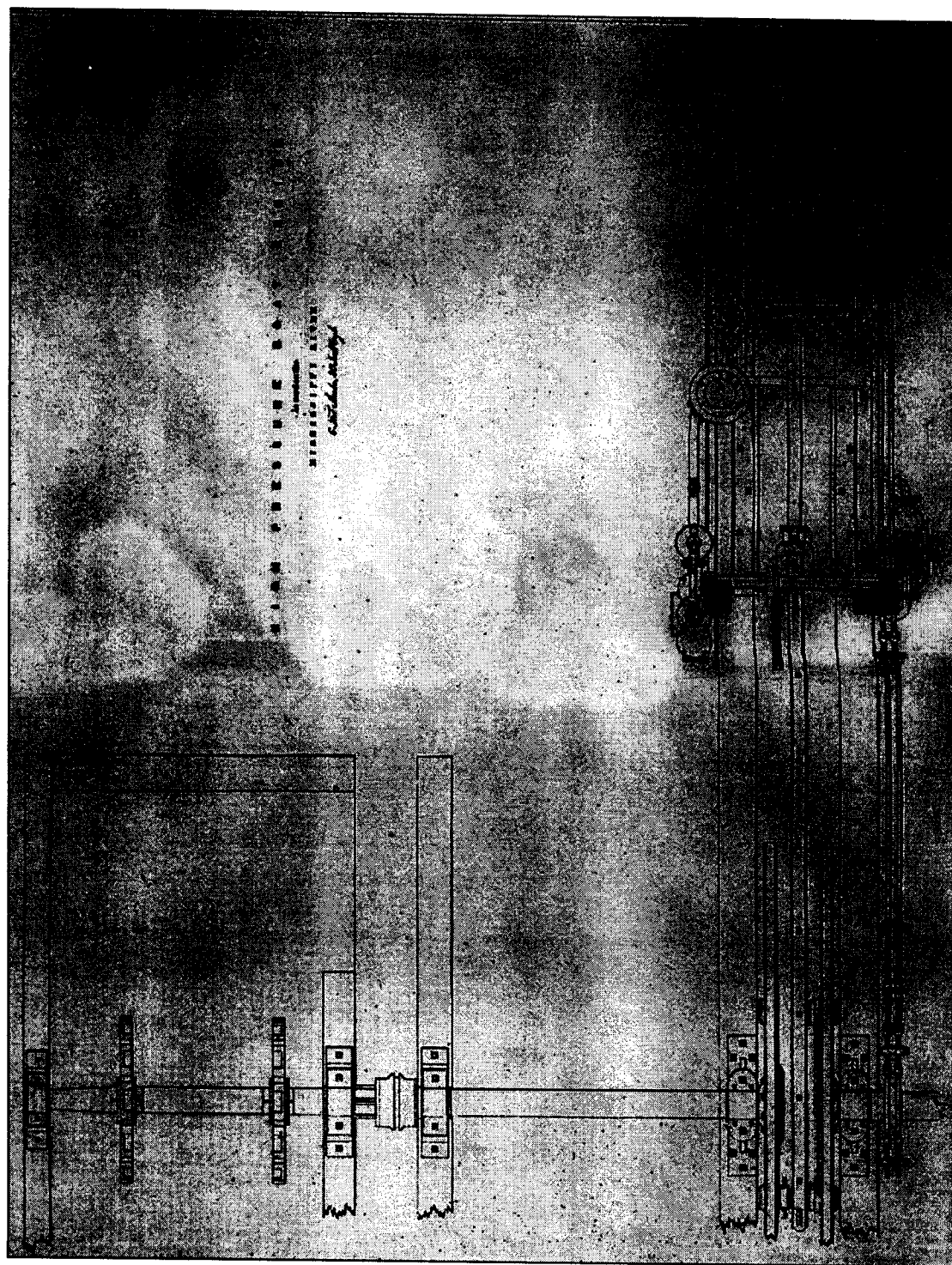


Figure 2.5 Plan view of a early western river steamboat horizontal steam engine. Courtesy of the Mariner's Museum (Paul Hodge, *The Steam Engine*, plate XXXI).

A high-pressure horizontal engine had several attributes that made it ideally suited to the vessel George Jury designed. Given the *Oregon's* small size, a large low-pressure condensing engine of the walking beam type would have completely negated Jury's plans for a small, shallow draft steamer. The machinery's sheer weight and high position would have necessitated a considerably deeper draft and wider beam to avoid capsizing. Cost also favored the horizontal engine. Simplicity of design and small size made the horizontal engine cheaper to produce, a very important factor for Jury who was solely responsible for the construction costs.

Charles Reeder manufactured an engine of similar design, its boiler and all associated parts in 1831, for \$2,500.00. Although the engine was smaller, with a 12-inch cylinder diameter and 30-inch stroke, its low cost and short production time of two months certainly recommended the horizontal engine to Jury's enterprise.<sup>19</sup> In comparison, the low-pressure engine for the *Mary Washington*, built in 1845 by Watchman, cost \$12,600. The *Mary Washington* was a considerably larger vessel (165 feet long by 26 feet wide with a 10-foot 4 inch depth of hold), but representative of most steamboats built during the 1840s.<sup>20</sup>

### The *Oregon's* Excursions

Two days after enrolling the *Oregon*, George Jury placed his first advertisement in the *Baltimore Sun* offering passage to the Canton Races. The horse races' spring

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<sup>19</sup> Contract between C. Reeder and R. Howland, 7 October 1831, (Baltimore: Maryland Historical Society Papers).

<sup>20</sup> David C. Holly, *Tidewater by Steamboat: A Saga of the Chesapeake* (Baltimore: Johns Hopkins University Press, 1991), 250, 216.

meeting was a festive five-day event with large purses for the winners. Passage to the Canton Races from downtown Baltimore left each day at ten o'clock A. M. and noon. The distance from the *Oregon's* dock at the corner of Light and Pratt Streets to Canton was, at most, three miles by water or land. Four-horse omnibus service also ran to the races from the Fell's Point Market.<sup>21</sup> Undoubtedly, traveling by water across the Patapsco River's North Branch was more comfortable than traveling by coach and the *Oregon* was perfectly suited for such short trips.

When the races were over, Jury offered service to the Fish House on the Patapsco River's Middle Branch. Locals referred to the river's Middle Branch as Spring Garden.<sup>22</sup> Opened shortly before the *Oregon* began service, the proprietor offered individuals and groups a "Fish Breakfast, Dinner, or Supper." The *Oregon* made two trips to the Fish House each Sunday in May from the corner of Light and Pratt Streets.<sup>23</sup>

Jury continued running the *Oregon* to the Fish House on Sunday afternoons in June, adding stops at the County Wharf, a hotel named the Lower Canton House, and Bailey's wharf, on the north side of the Patapsco River's Middle Branch. On Monday nights he offered passengers a moonlight cruise down the Patapsco River to the White Rocks, which departed at eight o'clock and returned by half past ten. The trip cost twenty-five cents and the steamer stopped at the County Wharf both going and coming.<sup>24</sup>

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<sup>21</sup> *Baltimore Sun*, 12 and 13 May 1846.

<sup>22</sup> Travers, *The Patapsco: Baltimore's River of History*, 32.

<sup>23</sup> *Baltimore Sun*, 11, 16 May 1846.

<sup>24</sup> *Baltimore Sun*, 6 June 1846.

The White Rocks were a limestone formation on the Patapsco River's south side at the river's junction with the Chesapeake Bay. The word "Patapsco" may originate from the Algonquin words for rocky point.<sup>25</sup> On 20 June, George Jury advertised a new focus for his business; he hoped to charter the steamer for private excursions and fishing parties. Interested individuals could charter the steamer any day of the week except Sundays by contacting the Captain on board or Jury's agent, Wilson Proctor, at 130 Pratt Street.<sup>26</sup>

The Fourth of July weekend presented Baltimoreans with the opportunity to spend a portion of the holiday on the water. People desiring a short trip could take the *Oregon* to the Fish House on Saturday or Sunday, where the menu now included crabs as well as fish.<sup>27</sup> Baltimoreans interested in a more extensive excursion, could board any one of eight different steamers offering excursion trips around Chesapeake Bay. People desiring a longer cruise could take the steamer *Maryland* to Annapolis, Cambridge, Easton or Denton. Passengers could stay over Saturday night and then return the following day for free. Individuals interested in a day cruise could take the *Pocahontas* to Annapolis where they would have time to visit the State House, Fort Severn, and the Naval Academy before returning by sundown.

Several groups chartered steamers for special activities. The Methodist Protestant Church chartered the *Mary Washington* for an excursion to Corsica Landing, where the ladies prepared dinner while the men built a parsonage. Teachers at the High Street

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<sup>25</sup> Travers, *The Patapsco: Baltimore's River of History*, 4.

<sup>26</sup> *Baltimore Sun*, 20 June 1846.

<sup>27</sup> *Baltimore Sun*, 3 July 1846.

School chartered the *George Washington* for a trip to Kennard's Landing where they intended to have religious exercises (singing and prayer), oration, and a reading of the Declaration of Independence.

After the Independence Day festivities, George Jury offered several new outings. Bathers could take the *Oregon* from the Light Street Wharf to the Sandy Marsh Flats on Sunday mornings. Charter fishing parties aboard the *Oregon* had tremendous luck. On one excursion to the White Rocks, six men caught "eighty-five dozen" perch and rockfish.<sup>28</sup> Beginning on 14 July, George Jury advertised a rate of twenty dollars for a full day charter. He also advertised that ship captains could hire the *Oregon* for towing to the Point or outside Fort McHenry for a reasonable price.<sup>29</sup>

Jury had his first full charter before the end of July. William Waite chartered the steamer for an excursion to the Patapsco Gardens on 27 July. The party at the Patapsco Garden was to last two hours during which the participants could eat a fish and crab supper followed by ice cream and other refreshments. The Independent Grey's Band would provide dance music at the Ball Room constructed on shore for "Those who wanted to join in the giddy maze of the dance."<sup>30</sup> Tickets for the event were only twenty-five cents.

George Jury hosted another charter group onboard the *Oregon*, on August fourth. The charter's organizers advertised the engagement as a fishing excursion and cotillion

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<sup>28</sup> *Baltimore Sun*, 11 July 1846.

<sup>29</sup> *Baltimore Sun*, 14 July 1846.

<sup>30</sup> *Baltimore Sun*, 24 July 1846.

party. Rice's Military and Cotillion bands were engaged to provide music at Houck's Pavillion where partygoers could obtain an inexpensive meal of crab and fish. The organizers took pains to reassure patrons that the seafood meal, ice cream, and confectionaries would be for sale at the same prices found in Baltimore. Tickets, available at area hotels and the *Baltimore Sun*'s office, cost fifty cents, half-price for children, and were limited in number to prevent overcrowding.<sup>31</sup> The excursion to Houck's Pavilion departed at eight o'clock A. M. and, while it cost twice as much, it afforded participants a much longer excursion than the trip organized by Waite the previous week.

The highly competitive excursion business offered passengers a variety of destinations during the summer of 1846. While the destination might be different, every steamer advertised that a band accompanied the trip and that ice cream, confectionaries, or some other refreshment was for sale on board. During July, steamers left almost daily to various points on Chesapeake Bay. In particular, the *Pocahontas* frequently offered excursion trips. Its trips ranged from moonlight cruises down the bay with fireworks to day-trips for children with the standard treats and music, but a closed bar. Charter organizers also invented new excursions to appeal to Baltimore's different social classes. The steamer *Relief* hosted a charter for Baltimore's black population. As usual, the afternoon trip down the bay included snacks, refreshments, and a band. One-dollar tickets admitted a couple; individual tickets were half price.<sup>32</sup>

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<sup>31</sup> *Baltimore Sun*, 27 August 1846.

<sup>32</sup> *Baltimore Sun*, 24 July and 4 August 1846.



While the *Pocahontas* and the *Relief* advertised trips for the general public, social or professional groups chartered most excursions. For example, the teachers of the Pitt Street Sabbath School chartered the *Planter* for a trip to St. Michaels. The proceeds from the excursion were to benefit the school.<sup>33</sup> During August, several steamers offered weekend charters to various religious camp meetings along the Chesapeake Bay's Eastern Shore. One such group chartered the *Planter* to take them to their meeting at Cherry Point on the Choptank River. The overnight trip cost one dollar and the passengers were assured that the steamer would drop them off within fifty yards of the encampment.<sup>34</sup>

Jury returned to organizing his own excursions at the end of August. He advertised departures to Patapsco Gardens on Thursdays, Fridays, and Saturdays. Upon arriving at the Patapsco Gardens, passengers could partake in a chicken or seafood repast offered by the Garden's proprietor, Jacob Harman. Round trip passage was twenty-five cents. Jury also organized a White Rocks fishing excursion for 1 September. The fishing excursion cost fifty cents and all participants were directed to, "find their own grub." Jury suspended Sunday trips to the Fish House at the end of August for the season.<sup>35</sup>

An unusual charter party boarded the steamer the first week of September. Seventy members of Baltimore's Independent Blues rifle company chartered the steamer for a trip to Mr. Harman's Patapsco Gardens where they held a marksmanship

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<sup>33</sup> *Baltimore Sun*, 24 July 1846.

<sup>34</sup> *Baltimore Sun*, 5 August 1846.

<sup>35</sup> *Baltimore Sun*, 21, 31 August and 24 September 1846.



Figure 2.6 Patapsco River, Maryland Chart. Soundings are in feet. Note the White Rocks north of Rock Point; a popular fishing destination for the *Oregon*. Courtesy of the Rumsey Collection (Lucas Fielding Jr., *A Chart of the Chesapeake and Delaware Bays* (Baltimore: Lucas Fielding Jr., 1840)).

competition. A private won the competition and received a gold and silver cross. The expedition returned to Baltimore at a late hour, very satisfied with their excursion.<sup>36</sup> A sailing regatta around the White Rocks on 8 September provided another moneymaking

<sup>36</sup> *Baltimore Sun*, 31 August, 5 September 1846.

opportunity for Baltimore's excursion steamers. The captains of the *Oregon* and the *Relief* advertised that they would carry spectators to the racecourse and follow the boats as they raced from the Lower House in Canton around the White Rocks and back. A spectator aboard the *Relief* could enjoy the sounds of a band for fifty cents, while a spectator on the *Oregon* could enjoy the *Relief's* band and only pay twenty-five cents. The race's winner was the Mechanical Fire Company's boat, *Fairy*.<sup>37</sup>

Baltimore's Independent Blues enjoyed their first excursion so much that they chartered the *Oregon* again on September twelfth to return to the Patapsco Gardens. The Independent Blues Band accompanied the excursion this time and the general public was also invited along at the usual rate of twenty-five cents. The excursion was undoubtedly not as much fun this time for several individuals. Two members of the Independent Blues sitting on a swing in the gardens caught their hands in the swing and each lost a piece of flesh from their palms. Another young man had his thumb blown off when a pistol he and his friends were shooting, exploded. A doctor at the festivities gave him prompt medical attention. Fortunately for George Jury, none of these accidents reflected poorly on his excursion business.<sup>38</sup>

The weekend's weather was pleasant in Baltimore; further south along North Carolina's Outer Banks a hurricane churned the waters. The storm caused the death of Commanding Lieutenant George M. Bache and ten other officers and seamen onboard the U. S. Coast Survey brig *Washington*. Caught in the storm while measuring the Gulf

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<sup>37</sup> *Baltimore Sun*, 7-9 September 1846.

<sup>38</sup> *Baltimore Sun*, 11, 12, 14, 15 September 1846.

Stream's temperature and current, a large wave swamped the *Washington* carrying off Lieutenant Bache, the seamen, and the poop cabin. Bache's father was the Superintendent of the U. S. Coast Survey responsible for reporting the brig's near loss to the Secretary of the Treasury. The September hurricane and another in October figured prominently in the *Oregon's* future.<sup>39</sup>

The *Oregon* participated in another unusual excursion on September seventeenth. After much solicitation by Baltimore's citizens, the San Pedro Company offered an exhibition of their diving bell before its departure for the Spanish Main. The *Oregon* was scheduled to tow the schooner *Cecil*, containing the diving bell apparatus, into the Chesapeake Bay off Bodkin and Sandy Point where the bell was to be lowered in 10 fathoms of water. Spectators were brought out to the demonstration on board the steamer *Columbia*, which would also carry a cotillion band for entertainment. Tickets were one dollar for gentlemen and fifty cents for ladies, who would not be admitted without a man and were promised that "order and decorum" would be preserved so as not to frighten them. The exhibition's outcome went unpublished, but the schooner *Cecil* returned to Baltimore in July 1847 with \$20,000 worth of treasure from the Spanish frigate *San Pedro*.<sup>40</sup>

Meanwhile, another running of the Canton Horse Races on 13 October offered employment for the *Oregon* at the end of the 1846 excursion season, but the weather may

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<sup>39</sup> *Baltimore Sun*, 11 September 1846; Senate, *Report of the Superintendent of the Coast Survey, Showing the Progress of the Work for the Year Ending November 1846*, 29<sup>th</sup> Cong., 2<sup>nd</sup> sess., S. Doc. 3, 53-68.

<sup>40</sup> *Baltimore Sun*, 17 September 1846, 21 July 1847.

have prevented Jury from running the *Oregon* all but the first day of the races. The October hurricane affected a much larger portion of the eastern seaboard than the previously mentioned September hurricane as it moved north from Florida. After lashing eastern North Carolina, the hurricane swept into the Chesapeake. Waves battered the wharves in Baltimore's inner harbor and swept onto Pratt Street. Several vessels broke their moorings and damaged others tied nearby before being captured or capsizing. Four men drowned when the steamer-towed barge they were in broke loose and sank quickly because of its scrap iron cargo. The *Baltimore Sun* considered the storm quite ferocious: "We experienced nothing of the late storm [in September], but now we have had it in all its strength. Altogether this has been the severest gale experienced in Baltimore for a long time."<sup>41</sup> George Jury did not advertise the steamer's services for the rest of the year.

The *Oregon's* 1847 summer excursion season began in late June. Excursion weather certainly arrived earlier, but the *Oregon's* late start was the result of its employment on the James and Appomattox Rivers. In 1845, the Portsmouth and Roanoke Railroad ceased operating to Weldon. The Baltimore Steam Packet Company scrambled to route steamers up the James and Appomattox Rivers to Petersburg, Virginia, to join the Richmond, Fredericksburg, and Potomac Railroad. While the *Oregon* was not listed as steaming for the BSPC, it may have carried passengers to the railroad connection during the excursion off-season.<sup>42</sup>

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<sup>41</sup> *Baltimore Sun*, 13-15 October 1846.

<sup>42</sup> Brown, *Steam Packets on the Chesapeake*, 32-33.

Upon the steamer's return to Baltimore, George Jury promised a marked improvement in its performance as the result of an overhaul in Petersburg. He advertised that the overhaul doubled the steamer's speed and made the passenger accommodations more comfortable. Thrice daily trips to the Fish House on Sundays indicated that the steamer was faster, but the *Oregon* now faced competition for service to the Fish House. In April, a horse ferry started operating across the Patapsco River's Middle Branch carrying passengers to the Fish House every weekday.<sup>43</sup>

Once again, the Fourth of July weekend offered Baltimore's residents a wealth of excursion opportunities, including a train ride at reduced rates. Similar to the previous years Independence Day celebrations, the *Oregon* offered service from downtown Baltimore to the Fish House and Patapsco Gardens while Baltimore's other steamers carried excursionists to St. Michaels, Annapolis, and Cambridge. The *Relief* offered a particularly patriotic excursion to the War of 1812 North Point battleground.<sup>44</sup> By popular demand, all excursions actually occurred on July fifth, because the fourth was a Sunday.

After the Independence Day festivities, George Jury advertised that his steamer was available for charter. Customers could hire the steamer for fishing and pleasure parties or family excursions giving three days notice. George Jury's advertisement stated that the *Oregon* could carry groups of seventy-five to one hundred passengers and he stressed that the *Oregon's* shallow draft allowed the steamer to safely approach the shore

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<sup>43</sup> *Baltimore Sun*, 25 June, 10, 24 April 1847.

<sup>44</sup> *Baltimore Sun*, 3 July 1847.

so that picnickers and partiers could disembark for their festivities. Sundays remained dedicated to the Fish House and Patapsco Gardens.<sup>45</sup>

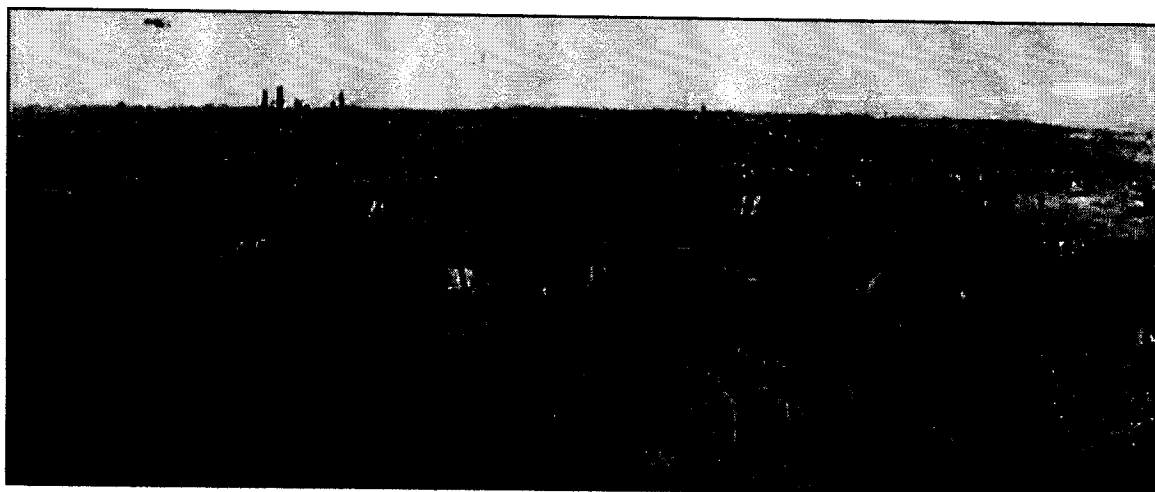


Figure 2.7 View of Baltimore's Inner Harbor looking north from Federal Hill. The *Oregon* docked along Light Street on the west side of the harbor (*View of Baltimore City from Federal Hill*, Saches & Co., 1859).

During one Sunday trip, catastrophe struck. After picking up passengers at the Fish House, the *Oregon* continued on to the Patapsco Gardens where more passengers boarded for the return trip to the city. Upon leaving the Patapsco Gardens wharf at 4 o'clock P. M. on 25 July 1847, the stern end of the *Oregon*'s boiler blew out injuring seven passengers. In particular, Mr. William Parsons, a millwright, inhaled steam and Mr. Claridge, a painter, and his two daughters were severely scalded. The older daughter received the worst burns of anyone on the steamer. The explosion knocked several passengers into the water while others, surprised by the explosion, jumped overboard. Fortunately the water was shallow and no one drowned. A newspaper reporter covering

<sup>45</sup> *Baltimore Sun*, 26 July 1847.

the incident stated that steam pressure built up while the steamer waited at the wharf causing the explosion. The reporter expressed the opinion that the *Oregon's* boiler was worn out and unsafe for an excursion with so many passengers.<sup>46</sup>

Boiler failures occurred frequently on nineteenth-century steamboats, particularly on the western rivers. Naval engineers were very familiar with the problems of boiler failure by the 1840s and there were several schools of thought about the problem. Many engineers believed that high-pressure engines and boilers were intrinsically flawed and should be outlawed, but several disastrous explosions on low-pressure steamships, the *Medora* for example, discredited this theory. Other engineers believed that explosive gases, built up within the boiler, ignited causing an explosion. People could not believe that expanding steam was so destructive.<sup>47</sup> Two more reputable theories gained ascendance. The first theory held that the pressure in the boiler built up to such a level that it caused the explosion. The second theory attributed the explosions to an insufficient water level in the boiler. Both of the latter theories undoubtedly combined to cause many boiler explosions, but they do not take into account other contributing factors such as corrosion or imperfect iron plates.<sup>48</sup> Using accounts of the accident and what is known about the *Oregon's* engine, it is possible to speculate on why the steamer's boiler exploded.

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<sup>46</sup> *Baltimore Sun*, 27 July 1847; *Baltimore American and Commercial Advertiser*, 27 July 1847.

<sup>47</sup> Louis C. Hunter, *Steamboats on the Western Rivers: An Economic and Technological History* (1949; reprint with an introduction by John H. White, New York: Dover Publications, 1993), 291.

<sup>48</sup> Hunter, *Steamboats on the Western Rivers*, 293-294; J. H. Ward, *Steam for the Million: A Popular Treatise on Steam and its Application to the Useful Arts, Especially to Navigation* (New York: D. Van Nostrand, 1860), 23.



The *Baltimore American and Commercial Advertiser's* account of the accident stated that steam pressure built up in the *Oregon's* boiler while it waited for passengers to board. Increasing steam pressure probably indicated that the engine was not operating, therefore, the boiler feed pump was not supplying the boiler with fresh water. As a result the boiler's water level dropped causing the boilerplate to become too hot. Upon leaving the Patapsco Gardens wharf, steam pressure was increased further and the boiler supply pump started; the superheated iron burst either as a result of the introduction of cold water or increased pressure. Corrosion also predisposed the *Oregon's* boiler to explosion. The steamer's high-pressure engine exhausted the used steam rather than recondensing it for greater efficiency, therefore, all of the *Oregon's* boiler water came directly out of the brackish Chesapeake Bay. Salt build-up in the boiler increased the boilerplate's corrosion and further weakened it. Many boiler explosions on western rivers occurred as the steamboat was just starting out. In their haste, engineers often neglected to practice good boiler management, such as checking the furnace, keeping the supply pump running, and maintaining steam escape valves.<sup>49</sup> Such might have been the situation when the *Oregon's* boiler burst slightly more than a year after its first trip. The explosion reflected poorly upon Jury as an excursion captain who depended upon having a good safety record to attract passengers; his subsequent decision to sell was not surprising.

Less than a month after the accident, George Jury sold the *Oregon* to four businessmen, Benjamin Maitland, Cyrus B. Parry, James L. Bryan, and John S. Bryan.

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<sup>49</sup> Hunter, *Steamboats on the Western Rivers*, 296.

The first three mentioned were Baltimore residents, while John S. Bryan was from New York. Cyrus B. Parry was listed as master on the steamer's enrollment. The businessmen, except John Bryan who died shortly after the purchase, did not advertise the *Oregon's* availability for charter.

In March 1848, the Baltimore City Council explored the possibility of acquiring the *Oregon* for use as the Baltimore city towboat. Towing in Baltimore's harbor was under contract to the Baltimore and Chesapeake Steam Towing Company (BCSTC), owners of the *Patapsco* and *Relief*. The *Patapsco* caught fire and sank at the wharf in December 1847. The BCSTC had not paid off its mortgage on either steamboat, therefore, Baltimore's City Council wanted to foreclose and find a new towboat. City commissioners examined the *Oregon* and found it unsuitable; a less than surprising conclusion considering the two previous vessels had been icebreakers.<sup>50</sup>

John Bryan and Company publicly offered the *Oregon* for sale the first week of April 1848. The advertisement added several pieces of information to the steamer's overall picture: it was sheathed with heavy copper, drew 26 inches of water, and required 2 cords of wood to run at 10 to 12 miles per hour for 12 hours. The advertisement confirmed the engine's diameter and number of boilers but its stroke was advertised at 36 inches rather than 48 inches as listed in *Tredgold on the Steam Engine*.<sup>51</sup>

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<sup>50</sup> *Baltimore American and Commercial Advertiser*, 24, 25, 28 March 1848; *Baltimore Sun*, 8 Dec 1847; Robert H. Burgess and H. Graham Wood, *Steamboats Out of Baltimore* (Cambridge, Maryland: Tidewater Publishers, 1968), 210.

<sup>51</sup> *Baltimore American and Commercial Advertiser*, 3 April 1848.

During spring 1848, two new steamers ran from Baltimore to the Fish House. Cyrus Parry ran the steamer *Proprietor* to the Fish House on Sundays in April. Wesley Culley, brother to Robert H. Culley the owner of the shipyard where Jury built the *Oregon*, ran the iron steamer *Mount Vernon* in May. The *Oregon's* primary route was usurped.<sup>52</sup>

John Bryan and Company enrolled the *Oregon* on 31 May 1848 with the Tar River Steamboat Company representative, Gilbert Hale, listed as master. Gilbert Hale operated the steamer for one farewell trip on 4 June to the Fish House before steaming south. The steamer arrived at Norfolk on 12 June 1848 and crossed into Pamlico Sound through the new, hurricane-opened Inlet of 1846 the next day.<sup>53</sup>

### Conclusion

Steam navigation on Chesapeake Bay depended upon the foundry of Charles Reeder and his sons to supply the steam engines for many of the vessels that plied its water. Not only did Reeder produce the large walking beam engines emblematic of a Chesapeake steamer, but he also produced smaller engines similar to those utilized on the western rivers and in factories.

George Jury installed one of these western style engines into the *Oregon* to fit his slightly unusual plan to operate a steamer on excursions exclusively. His unorthodox vision resulted in a steamer design that blurred the lines between western and eastern

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<sup>52</sup> *Baltimore Sun*, 15, 19 April, 20 May 1848.

<sup>53</sup> Records of the Bureau of Marine Inspection and Navigation, Baltimore, Maryland Enrollment Certificate, RG 41, National Archives, Washington, D. C.; *Baltimore Sun*, 3 June 1848; *American Beacon and Norfolk and Portsmouth (Virginia) Daily Advertiser*, 13 June 1848; *Tarborough (North Carolina) Press*, 8 July 1848.

river steamboats. The detailed account of the *Oregon's* activities on the Patapsco River illustrated George Jury's diverse attempts to make money with the vessel as well as the circumstances that forced the steamer's sale to a new market. While the *Oregon* did not enrich him, it did not bankrupt him either. George Jury returned to the excursion business in 1849 with the *Sun*. Once again he built the vessel himself, but it was larger and used a condensing engine.<sup>54</sup> His experience with the *Oregon* undoubtedly influenced the new design.

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<sup>54</sup> *Baltimore Sun*, 12 May 1849.

## CHAPTER 3: EXPANSION OF STEAM NAVIGATION ON THE TAR/PAMLICO RIVER

### Introduction

Beginning with the steamboat *Oregon's* arrival in 1848, Tar/Pamlico River steam navigation experienced its greatest growth of the antebellum period. Steam navigation developed along two distinct and largely independent paths specializing in either ascending the Tar River from Washington or descending the Pamlico River from Washington. The steamboats that operators built or purchased reflected the different environmental conditions encountered on the Pamlico or Tar Rivers.

Expansion of Tar/Pamlico River steam navigation faced two primary impediments: physical and economic. Tar River steamboat operators faced a shallow, snag-filled river that physically impeded steam navigation. Despite these problems, John Myers and Son became the driving force behind Tar River steam navigation. Beginning in 1849, John Myers and Son operated a steamer upriver from Washington until Federal occupation of that town in 1862. Myers and Son maintained a firm grip on upriver commerce by improving service and actively eliminating competition.

On the Pamlico River, limited freight and passenger opportunities restricted the expansion of steam navigation. No one firm dominated downstream steam navigation, instead competition kept passenger and freight rates low between Washington, the towns of Hyde County, New Bern and Beaufort. The long distances between settlements and seasonal travel fluctuations further hampered steam navigation's expansion.

The *Oregon*, unlike almost all other Tar/Pamlico River steamers, transitioned

from the Tar River routes to the Pamlico River routes. After an ill-fated attempt to navigate on the Tar River, the steamer's owners sold out to a Washington commission merchant, who successfully employed the *Oregon* on the Pamlico River.

#### The *Oregon's* arrival in North Carolina

In 1846, two hurricanes modified the geography of North Carolina's Outer Banks. On September eighth, a localized hurricane battered the sand dunes comprising the Outer Banks, opening two new inlets. Hatteras Inlet opened slightly south of Cape Hatteras and what was initially called the Inlet of 1846 opened south of Roanoke Island. On land, a member of the U. S. Coast Survey recorded the opening of the Inlet of 1846. As the eye of the storm moved north of the Outer Banks, the wind shifted from the southeast to the southwest. The windblown water, originally pushed into the rivers and sounds by the southeast wind, suddenly changed direction under the southwest wind's prodding creating a three-foot storm surge that swept across the Pamlico Sound and over the Outer Banks' low sand dunes scouring a narrow gap. On October twelfth, a larger and more powerful hurricane moved up the Atlantic Seaboard, striking eastern North Carolina and dramatically widening the new inlet from 20 feet to 300 feet.<sup>1</sup> The Inlet of 1846 remained unnavigated until the *Oregon* arrived in North Carolina.

After leaving Norfolk, Virginia, on 13 June 1848, the *Oregon* encountered a storm off North Carolina's treacherous Outer Banks. Apprehensive about the small steamer's seaworthiness, Gilbert Hale attempted entry into Pamlico Sound through the

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<sup>1</sup> David M. Ludlum, *Early American Hurricanes: 1492-1870* (Boston: American Meteorological Society, 1963), 131-132, 151-154.

untested Inlet of 1846.<sup>2</sup> Even though the October hurricane widened the inlet, it was still very shallow. The bar on the seaward side was at a depth of 6 feet, but a "bulkhead" (a ridge of sand created by the confluence of incoming and outgoing currents) on the sound side had only 3 to 3 1/2 feet of water over it.<sup>3</sup> The steamer's shallow draft allowed it to slip into the sound's sheltered waters. The new inlet decreased time the *Oregon* spent on the open ocean and it may have prevented the small steamer's destruction. Hatteras Inlet, the next open inlet, was roughly sixty miles further south. After the steamer's passage, the Inlet of 1846 became locally known as Oregon Inlet and Samuel A. Mitchell labeled it as such on his 1850 map of North Carolina. Most other maps were slow to show the new inlet, but the Outer Banks' strategic importance during the Civil War ultimately led to Oregon Inlet's accurate depiction.<sup>4</sup>

Upon arriving in Washington, Gilbert Hale enrolled the *Oregon* at Washington's Customs House on 19 July 1848. He listed himself as Master and part owner along with James Weddell and Joab P. Pitt. All three were Edgecombe County residents.<sup>5</sup> The 1850 Federal Census provided a brief picture of James Weddell and Joab Pitt (the later coincidentally administered the farm schedule for the Edgecombe County census). Pitt was

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<sup>2</sup> *Raleigh News and Observer*, 8 February 1898; Samuel A. Ashe, *History of North Carolina* (Raleigh, North Carolina: Edwards & Broughton, 1925), vol. 2, 455.

<sup>3</sup> Senate, *Report of the Superintendent of the Coast Survey, Showing the Progress of the Work for the Year Ending November 13, 1848*, 30<sup>th</sup> Cong., 2<sup>nd</sup> sess., S. Ex.Doc. 1.

<sup>4</sup> Samuel A. Mitchell, "A New Map of North Carolina" in *Mitchell's Universal Atlas* (Philadelphia: Thomas, Cowperthwait, and Co., 1850); Gregory Williams and Allen Johnson, *Tar Heel Maps: Colony and State 1590-1995* (Rocky Mount, North Carolina: North Carolina Wesleyan College Press, 1996), 69-74.

<sup>5</sup> Bureau of Marine Inspection and Navigation, Washington, North Carolina Enrollment Certificate, RG 41, National Archives, Washington, D. C.

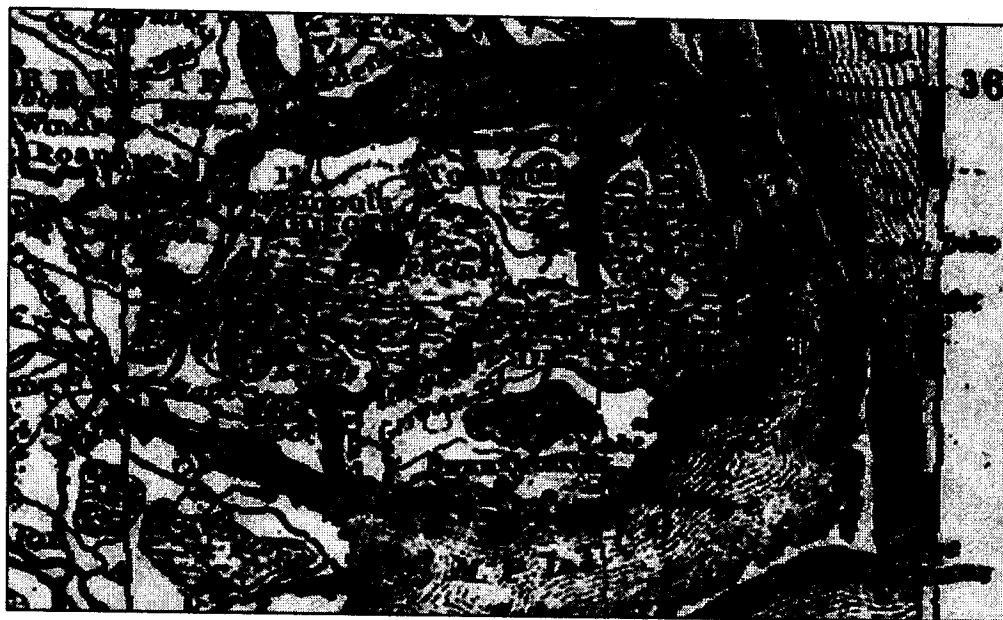


Figure 3.1 Mitchell's *New Map of North Carolina* depicting Oregon Inlet (Samuel A. Mitchell, "A New Map of North Carolina" in *Mitchell's Universal Atlas* (Philadelphia: Thomas, Cowperthwait, and Co., 1850).

30 years old when he purchased the *Oregon* and, by 1850, a farmer of some means. His real estate holdings were valued at \$16,000 including a 2200-acre farm with considerable agricultural production. He was married to a woman six years his senior and had four children.<sup>6</sup> Pitt also operated a turpentine distillery in Tarboro until its destruction by fire in May 1848.<sup>7</sup> Unlike Pitt, James Weddell was not a native North Carolinian. He was born in Scotland in 1807 and the 1850 census listed him as a merchant with \$4,500 in real estate holdings. He was married and had three boys.<sup>8</sup>

The *Oregon* made at least one trip on the Pamlico River as part of the Tar River

<sup>6</sup> Stephen E. Bradley, comp., *The 1850 Federal Census, Edgecombe County, North Carolina* (Keysville, Virginia: Stephen E. Bradley, 1990), 58, 130.

<sup>7</sup> *Tarborough (North Carolina) Press*, 13 May 1848.

<sup>8</sup> Stephen E. Bradley, comp. *The 1850 Federal Census, Edgecombe County, North Carolina*, 2.



Steamboat Company. Gilbert Hale brought a cargo of merchandise to Washington "from below" on 30 May 1849.<sup>9</sup> Neither Washington nor Tarboro newspapers mentioned any Tar River Steamboat Companies activities other than the one instance in May. The *Oregon* likely drew too much water to regularly negotiate the shallow, snag-strewn river above Greenville and failed to meet the Tar River Steamboat Company's expectations, which lasted little more than a year and five months before it offered the *Oregon* up for auction in September 1849.<sup>10</sup> The auction advertisement apprised potential buyers that the steamer had been running on the Roanoke and Tar Rivers for the past year and it set forth payment terms accepted by the owners. The auction's winner would pay \$750 in cash and the balance plus interest within twelve months of the sale.<sup>11</sup> Even though the Tar River Steamboat Company advertised the *Oregon*'s sale as far away as Wilmington, the steamer remained on the Tar/Pamlico River. Its new owner was Washington commission merchant, William H. Willard.

#### Expansion of Tar River Steam Navigation

Undaunted by the Tar River Steamboat Company's problems, the Washington mercantile firm of John Myers and Son introduced the steamer *Amidas* to the Tar River in August 1849. Myers and Son contracted Douglass and Burbank of Windsor Lock, Connecticut, to build a wooden-hulled passenger and freight steamer. The *Amidas*

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<sup>9</sup> *Washington (North Carolina) North State Whig*, 30 May 1849.

<sup>10</sup> *Washington North State Whig*, 21 September 1853; *Wilmington (North Carolina) Journal*, 21 September 1849.

<sup>11</sup> *Wilmington (North Carolina) Journal*, 21 September 1849.

measured 77 feet 6 inches in length by 16 feet 6 inches in breadth with a 3-foot depth of hold and 35 and 21/95 tons burden. A single flue boiler, roughly 10 feet by 4 feet, provided steam for an inclined direct-acting engine with an 11-inch bore and a 38-inch stroke. The engine turned an 11-foot wide by 11-foot diameter stern paddlewheel. A furnished passenger cabin and promenade deck completed the steamer's appointments.<sup>12</sup>

Steamers new to the Tar River invariably offered a free excursion to the locals upon arrival. The arrival of the *Amidas* was no different; Washington residents enjoyed an excursion to Bath the weekend before the *Amidas* tried to ascend the Tar River. Those who went offered the opinion that the steamer was far more luxurious than the stages they were used to taking. Unfortunately for Myers and Son, when the *Amidas* headed upriver on Monday morning, it struck several snags four miles above Greenville. The steamer returned to Washington for repairs without reaching Tarboro.<sup>13</sup>

Myers and Son faced a heavily obstructed river that had already closed the Tar River Steamboat Company's doors. Successful navigation to Tarboro required removal of the obstructions upriver from Greenville. Myers and Son began clearing the river, but the work stressed their financial capabilities. Fearing that Myers and Son would give up, Washington merchants and Pitt County farmers immediately contributed money to spread out the financial burden. Money from Edgecombe County residents was slower in coming. Private fundraising was a stopgap measure until government monies were

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<sup>12</sup> *Tarborough Press*, 25 August 1849, 1 September 1849, 13 October 1849; Bureau of Marine Inspection and Navigation, Washington, North Carolina, Enrollment Certificate, RG 41, National Archives, Washington, D. C.; Henry Bridgers Collection, Vessel Information Sheets; Franklin Smallman Collection, Vessel Descriptions.

<sup>13</sup> *Tarborough Press*, 1 September 1849.

found. County court funded navigation improvements were the next step, but acquiring funds through the court was a slow process. Courts held the power to appoint overseers and labor to manage the river; their power originated from a statute concerned with maintaining public roads.<sup>14</sup> However, there is no evidence that the County Court assisted with the navigation improvements.

Late in 1849, Myers and Son and their contributors finally succeeded in clearing a passage to Tarboro. The *Amidas* arrived on 27 October, towing four flat boats laden with goods and merchandise for Tarboro's merchants.<sup>15</sup> The trip was the first of many, but it did not signal the start of regular steamer service between Washington and Tarboro. The *Amidas*, however, was the first vessel to successfully navigate the Tar River for an extended length of time.

A few months after the *Amidas* reached Tarboro, the steamer took part in a strange incident involving the bridge over the Tar River at Sparta. Purportedly, the *Amidas*'s crew rammed the steamer into the drawbridge, which had cost Edgecombe County citizens \$2000. The bridge was a major travel artery and the direct mail route from Tarboro to Washington. Concerned citizens gathered for a meeting, where they condemned the act as "a violation of law and order and unbecoming the age in which we live." Residents resolved to jail the *Amidas*'s crew until the next Edgecombe County Superior Court convened and investigated the incident. No one was jailed, but John Myers replied to the charges in the *Tarborough Press*' next edition. He intended to take

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<sup>14</sup> *Tarborough Press*, 13 October 1849.

<sup>15</sup> *Tarborough Press*, 3 November 1849.

no notice of the meeting's resolutions and asked the general public to suspend its judgment until the official investigation concluded.<sup>16</sup> The investigation's outcome went unrecorded in the *Tarborough Press*, but Myers and Son seemingly did not suffer any serious repercussions.

Bridge incidents aside, navigation on the Tar River only became more difficult over the next two years. During the 1849 session of North Carolina's General Assembly, representatives appropriated \$40,000 for navigational improvements on the Neuse River and \$25,000 for the Tar River. Improvement money came from the incorporation and subsequent stock sales of the North Carolina Rail Road Company. The Public Law enacted by the General Assembly specified that the money be used for clearing out and improving the Tar from its head of navigation to Washington. Hope for the river's improvement diminished as each year passed without the money's distribution.<sup>17</sup> Tar River residents blamed Governor David S. Reid for the money's slow dispersal. Reid appointed a commission to the Tar River in February 1852, but his commissioners had not acted to improve the river by August 1852 and the residents felt neglected. The *North State Whig's* editor, ever critical of the Democrat Reid, believed the best chance of improving the Tar River resided with John Kerr, Reid's challenger in the gubernatorial race.<sup>18</sup>

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<sup>16</sup> *Tarborough Press*, 2 and 9 February 1850.

<sup>17</sup> General Assembly, *Public Laws of the State of North Carolina Passed by the General Assembly 1848-1849* (Raleigh, North Carolina, 1849), 159.

<sup>18</sup> *Washington North State Whig*, 7 February and 31 July 1852; Alan D. Watson, "North Carolina and Internal Improvements, 1783-1861: The Case of Inland Navigation," *North Carolina Historical Review* 74 no. 1 (1997), 70.

The Tar River desperately needed navigational improvement. During 1852, the Tarboro *Southerner* closely watched the river, noting traffic and the effect it had on the local market. All told, the *Amidas* reached Tarboro roughly nine weeks that year, or around eighteen times given the steamer's Tuesday, Thursday schedule. The greatest activity in the markets accompanied the *Amidas*'s anticipated arrival. Not only did perishable product prices increase before the steamer's arrival, but so did turpentine prices, stocks of which frequently built up at the landing. Partially loaded flats took some produce downriver, but the small quantities carried rarely influenced Tarboro's market. Overall, Tarboro producers had a difficult time selling their products because of the difficulty in getting them to market.

Goods from downriver arrived almost exclusively by steamer. The effort and labor involved in moving a partially loaded flat upriver cut into the return from the merchandise's sale and frequently not even flats managed the tangle between Tarboro and Greenville. Given the difficulty of navigating to Tarboro, it is not surprising that John Myers and Son discontinued the *Amidas*'s regular schedule in December 1852 and focused on the Greenville market.<sup>19</sup>

Shortly after John Myers and Son ended service to Tarboro, local businessmen and farmers started looking for an alternate route for outgoing freight. Instead of continuing attempts to improve the river, Tarboro's business interests looked at building a plank road to Hamilton on the Roanoke River. Fearing the loss of shipping revenues from the Tarboro market, Washington's merchants quickly interjected their own

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<sup>19</sup> "Markets," *Tarboro (North Carolina) Southerner*, 1852.

suggestion into the debate. Rather than build the plank road to Hamilton, Washington's business elite suggested building the road to Washington.

A host of rationalizations followed, including the fact that it was far cheaper to ship from New York to Washington versus New York to Hamilton. The *Washington North State Whig's* editor offered several examples. Freight on a dry barrel, such as flour, cost fifty-five cents from New York to Hamilton, while the same barrel shipped from New York to Washington cost only twenty cents. Iron by the ton cost \$6.25 to ship to Hamilton and only \$1.60 to Washington. Shipment of goods to the Roanoke River cost more as a result of the tolls levied by the Dismal Swamp Canal. Albemarle Sound did not have an outlet to the Atlantic Ocean in the 1850s; therefore, the quickest, viable route into Albemarle Sound was through Hatteras Inlet. Washington was far closer to Hatteras Inlet than any Albemarle Sound port. Washington's merchants acted quickly to quash plans for the Hamilton plank road. Within several weeks of Tarboro's plank road announcement, subscription books opened in Tarboro and Washington for the Washington and Tarboro' Plank Road Company. Company's commissioners included John Myers, B. F. Hanks, William H. Willard, Howard Wiswall, and, B. F. Havens.<sup>20</sup> These men were commission merchants involved with steam navigation on the Tar/Pamlico River who would suffer economic loss if Tarboro's produce left by the Roanoke River.

Beginning in April 1853, surveyors for the Washington and Tarboro' Plank Road Company, under the direction of Reading L. Myers, began surveying the proposed route for the plank road. The forty-five mile route ran equidistant from the Tar and

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<sup>20</sup> *Washington North State Whig*, 12 Jan 1853.

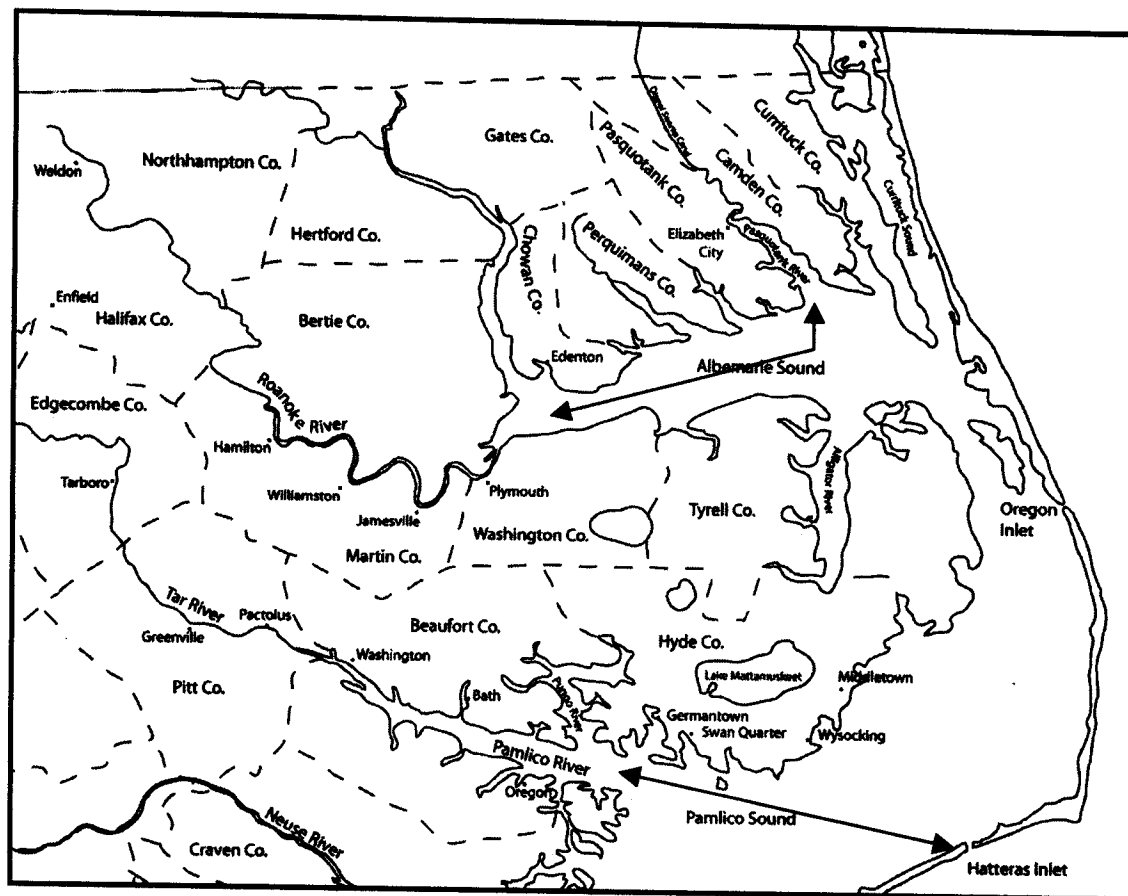


Figure 3.2 Eastern North Carolina's waterborne import and export routes in the 1850s.

Roanoke Rivers. While neither Tarboro plank road scheme materialized, the plans were a testament to the difficulty Tarboro faced getting its produce to market. Washington merchants were also frustrated with the difficulty in getting goods to and from Tarboro and would have prospered greatly from efficient transportation linking the two towns. Ultimately, Tarboro looked toward the Wilmington and Weldon Railroad for relief from the Tar River's vagaries.<sup>21</sup>

<sup>21</sup> *Washington North State Whig*, 6 April 1853.

Contrary to the wishes and expectations of the *Washington North State Whig* editor, North Carolinians re-elected Governor Reid who finally appointed a new Tar River improvement commission consisting of W. Norfleet, W. J. Blow, and Reading L. Myers.<sup>22</sup> The initiation of a survey 1 June 1853 marked the first progress toward alleviating the Tar River's navigation problems. Civil Engineer, W. Beverhout Thompson, began four miles below Greenville at Hardy's Creek and headed up the river towards Tarboro, completing the survey in one month. The Tar River improvement commission sent a copy of the engineer's report to Governor Reid; the *Raleigh Standard* and *Tarboro Southerner* printed a copy shortly thereafter.

The report drew an interesting picture of the river and the proposed improvements. Thompson started his survey at the Tar River's first obstruction, 400 feet below the mouth of Hardy's Creek, a distance of  $36 \frac{6}{10}$  miles from Tarboro. Between Tarboro and Hardy's Creek, the river dropped  $12 \frac{8}{10}$  feet at an average of  $\frac{3}{10}$  feet per mile. The slight grade led Thompson to propose damming the river in four places and installing locks. Each proposed dam would rise between four and six feet above the low water level creating four large pools. The estimated cost for all four dams, locks, and associated dredging was \$74,396.

Thompson rationalized the undertaking's expense by including a list of quantities brought downriver to Washington from 1 July 1852 to 30 June 1853. An unidentified Washington gentleman reported to him that 81,211 barrels of raw turpentine, 22,639

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<sup>22</sup> Powell, *North Carolina Through Four Centuries*, 303; General Assembly, *Public Laws of the State of North Carolina Passed by the General Assembly 1854-55* (Raleigh, North Carolina, 1855), 187.



barrels of tar, 2,888 barrels of turpentine spirits, 5,222 barrels of rosin, 7,122 bales of cotton, and 111,524 bushels of corn came down the river along with an uncounted amount of bacon, green pork, lard, peas, and beans. Thompson proposed levying taxes on each of these commodities to pay for the navigation improvements. The report further emphasized the difference in navigation difficulties between Washington and Greenville and Washington and Tarboro. Only one obstruction separated Washington and Greenville, but three more waited above Greenville to stymie attempts to reach Tarboro.<sup>23</sup> Thompson's obstructions consisted of large sandbars; he did not count the innumerable snags in the river.

During the 1854-1855 session, the General Assembly appropriated a further \$15,000 for improving Tar River navigation, making a total of \$40,000 that went to Myers and Son. The plan outlined by Thompson was not realized; only the first dam and lock were begun below Greenville. Clearly the money was not well spent. Tarboro's residents considered the effects of its use negligible.<sup>24</sup>

Aware of the difficulty in clearing a passage to Tarboro, John Myers and Son dedicated the *Amidas* to run between Washington and Greenville. The firm standardized their departure schedule to correspond with a new revenue source: a contract to carry the U.S. mail. First printed in December 1852, a newspaper notice outlined the schedule for travelers. Daily steamer service departed Washington at six o'clock A. M. and arrived in

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<sup>23</sup> *Tarboro Southerner*, 19 and 26 November 1853.

<sup>24</sup> General Assembly, *Laws of North Carolina 1854-55*, 65, 151, 186-7; James M. Cox, "The Pamlico-Tar River and Its Role in the Development of Eastern North Carolina" (master's thesis, East Carolina University, 1989), 53; *Tarboro Southerner*, 14 and 21 October 1854.

Greenville around half past ten A. M. allowing passengers to catch the stage to Wilson or Rocky Mount (via Tarboro).<sup>25</sup> Travelers could depart on the evening train from either city. A stage ran on the plank road from Greenville to Wilson on Monday, Wednesday and Friday. On Tuesday, Thursday, and Saturday another stage ran from Greenville to Rocky Mount. Travelers going to Greenville or Washington disembarked the morning train at either Wilson or Rocky Mount on alternating days to meet the stage. For example, the stage waited at Wilson on Tuesday mornings but at Rocky Mount Wednesday mornings. The *Amidas* departed Greenville for Washington around noon after the stage's arrival. Travelers wishing to leave on Sunday were not accommodated; neither the stage nor steamboat operated on the Sabbath.<sup>26</sup> The multi-component transportation system ran smoothly as testified to by a newspaper correspondent from New Bern. He traveled from Washington, moving from steamer to stage to train as Myers and Son's advertisement promised.<sup>27</sup> Steady income from carrying the mail allowed the *Amidas* to participate in the system. The *Amidas* failed as a financial venture until the mail contract; it "had not paid simple interest on her cost" up to that point.<sup>28</sup>

Increased revenues from the mail contract led Myers and Son to purchase a new steamer. The *Governor Morehead* arrived in Washington 17 September 1853. Reaney, Neafie, and Company of Philadelphia built the 55-ton steamer specifically for John

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<sup>25</sup> *Washington North State Whig*, 18 May and 20 April 1853.

<sup>26</sup> *Washington North State Whig*, 18 May 1853.

<sup>27</sup> *Washington North State Whig*, 20 April 1853.

<sup>28</sup> *Washington North State Whig*, 21 September 1853.

Myers and Son. Twin 30 horsepower engines turned a stern paddlewheel that propelled the steamer's 100-foot long by 23-foot wide iron hull. It drew only sixteen inches of water and floated over most Tar River sandbars. A handsomely furnished passenger salon completed the picture of a steamboat designed for quick passenger and cargo delivery. Myers and Son placed the *Governor Morehead* on the Washington-Greenville mail run and moved the *Amidas* to the Tarboro run.<sup>29</sup> Trips to Tarboro did not follow a schedule. Hazards still plagued the river above Greenville after navigation improvement appropriations were spent. Tarboro residents needed Myers and Son to open up an efficient export route for the county's cotton farmers, who wagoned their goods to the Wilmington and Weldon Railroad depot at Rocky Mount or sent occasional flats downriver. Marketing the produce outside the county cut Tarboro out of the rapidly growing cotton economy. Daunted by the difficulty of ascending the river to Tarboro, Myers and Son focused their efforts on Greenville and, in 1854, sold the *Amidas* to John Blackwell of New Bern.<sup>30</sup>

One traveler, in particular, was very satisfied by his treatment on the *Governor Morehead*. David Strother, better known as Porte Crayon, visited Washington and took the *Governor Morehead* to Greenville to catch the train at Wilson. Strother traveled the Virginia and North Carolina Tidewater, writing and illustrating *Harper's Monthly* articles published between 1853 and 1858. During his visit to Washington in the spring 1856, he

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<sup>29</sup> *Washington North State Whig*, 21 September 1853; Forrest Holdcamper, ed., *Merchant Steam Vessels of the United States, 1807-1868*, compiled by William M. Lytle (Mystic, Connecticut: The Steamship Historical Society of America, 1952), 289; Smallman Collection, Vessel Descriptions.

<sup>30</sup> Bureau of Marine Inspection and Navigation, New Bern, North Carolina, Enrollment Certificate, RG 41, National Archives, Washington D. C.

characterized the town as a prospering trade center with a considerable industry involved in reducing trees into lumber and turpentine. An interesting juxtaposition compared his other impression of Washington as a town covered in trees, "In fact, its modest white wooden houses are completely buried in trees."<sup>31</sup> On his trip to Greenville, Strother received breakfast aboard the *Governor Morehead* from Captain Quinn. David Strother's breakfast impressed him more than the *Governor Morehead*, which he called "a small boat, of rather queer build." The scenery did not impress him either; during his travels on the North Carolina and Virginia Tidewater, he had seen many similar rivers. He noted that the steamer passed several flatboats carrying lumber and cotton, but overall, there was little evidence of habitation along the river. At Greenville, he disembarked the *Governor Morehead* and joined the plank road heading west. Along the way he saw boxed and cut pine trees with barrels at the ready and smoking tar kilns, all evidence of naval stores production.<sup>32</sup>

After Strother's visit, several tragic accidents occurred aboard the *Governor Morehead*. Mention of the accidents in the local newspapers recorded brief glimpses of the individuals and crew who rode and operated the steamer. During the first week of April 1856, Thomas Braswell of Wilson drowned in the Tar River near Taft's Landing. He was riding the *Governor Morehead* from Washington when he saw several wild ducks floating on the water. An avid sportsman, Braswell rushed to the engineer's room for a

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<sup>31</sup> David H. Strother, *The Old South Illustrated*, ed. Cecil D. Eby Jr. (Chapel Hill, North Carolina: University of North Carolina Press, 1959), 195.

<sup>32</sup> *Ibid.*, 196.

gun. Returning on deck, he slipped and as there was no railing fell overboard with the gun in hand. Rescue efforts were fruitless.<sup>33</sup>

Almost a year later, the *Governor Morehead's* fireman drowned after falling overboard while the steamer was docked in Washington. He was a slave owned by John Myers. Compounding the tragedy, was the drowning death later that day of another slave owned by Myers. He drowned within a few yards of the fireman when the flat he was manning unexpectedly sank near the Washington wharf.<sup>34</sup>

Newspaper accounts of Tar River steamer activities frequently mentioned the captain's name, but little was written about the crew. Only the tragic death of a crewman appeared in the newspaper. Myers's reliance on slave labor indicated a general pattern on all vessels that plied the Tar River. A notice in the *Tarboro' Press* underscored the subservient position of vessel crews. Addressed to "Flat Captains and others having the charge of Flats, and other boats, arriving at and lading or unlading at or near this town," the notice announced that "the hands in your employ are liable to be arrested and imprisoned, if seen in town after night fall – and there detained till expenses paid."<sup>35</sup>

Despite the two accidents, the *Governor Morehead* successfully navigated from Washington to Greenville everyday, except Sunday, for almost three years before requiring an overhaul in August 1856.<sup>36</sup> Shortly after the *Governor Morehead* returned

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<sup>33</sup> *Tarboro Southerner*, 5 April 1856.

<sup>34</sup> *Tarboro Southerner*, 7 March 1857.

<sup>35</sup> *Tarboro' Press*, 19 May 1849.

<sup>36</sup> *Washington North Carolina Times*, 8 October 1856.

from its overhaul, the newly constructed steamer *Wilson* went into service between Washington and Greenville for the firm Havens, Wiswall, and Havens. Begun in January 1856, the wooden stern-wheel steamer threatened the Myers and Son monopoly.<sup>37</sup> Built locally in Washington, the steamer measured 106 feet 11 inches long by 18 feet 4 inches wide and 64 74/95 tons burden. Its hold was 3 feet 6 inches deep and two direct-acting inclined engines powered its 12-foot diameter by 12-foot wide stern-wheel.<sup>38</sup>

Competition between the *Governor Morehead* and *Wilson* did not lower river fares enough for one Beaufort resident, who remarked that a passenger could travel from Beaufort to Washington for free, but a traveler had to pay one dollar to ascend the Tar River to Greenville.<sup>39</sup> Even competing against Havens, Wiswall, and Havens, Myers and Son prospered; eventually they bought the *Wilson* and sold it off the river. After leaving the Tar River, the *Wilson* operated between the railroad terminus at Morehead City and Beaufort.<sup>40</sup>

In response to the *Wilson*'s removal, a group of Greenville citizens formed a joint stock company in July 1860. The entrepreneurs planned to run a steamboat between Washington and Greenville, departing Washington at an early hour to beat the day's heat.<sup>41</sup> The *Governor Morehead*'s speed allowed it to depart later to meet the noon

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<sup>37</sup> *Tarboro Southerner*, 23 February 1856, 13 September 1856.

<sup>38</sup> Bridgers Collection, Vessel Information Sheets; Smallman Collection, Vessel Descriptions.

<sup>39</sup> *Beaufort (North Carolina) Journal*, 22 July 1857.

<sup>40</sup> *Plymouth (North Carolina) Roanoke Cresset*, 9 February 1861.

<sup>41</sup> *Tarboro Southerner*, 14 July 1860.

stages at Greenville. The Greenville consortium bought the *Cotton Plant* (or *Greenville*), an iron-hulled, stern-wheel steamer, from the shipyard of Neafie and Levy in Philadelphia, Pennsylvania. The shipyard began constructing the steamer at the end of July 1860. The *Cotton Plant*'s design closely matched the *Governor Morehead*. Its dimensions were 107 feet long, 19 feet wide, with a 4-foot depth of hold. A locomotive style boiler, 16 feet long by 7 feet 6 inches in diameter with 2 furnaces, supplied the steam for 2 horizontal high-pressure engines, each with a 14-inch bore and a 36-inch stroke.<sup>42</sup>

Yet another Pitt County resident did not wait for the *Cotton Plant*'s delivery, he started building a steam flat boat to reach the Tarboro market.<sup>43</sup> Unfortunately, the *Cotton Plant*'s owners did not have much opportunity to use the steamer before North Carolina seceded from the Union. The steamer became part of the North Carolina Navy and remained in service until 1864; details of its wartime career follow in the next chapter. Myers and Son ultimately purchased the *Cotton Plant* from the United States Quartermaster Department and returned it to the Tar River after the Civil War. In 1866-1867, its return marked the resumption of steam navigation on the Tar River. The *Cotton Plant* operated until 11 December 1880, when it burned at the Tarboro dock.<sup>44</sup>

#### Expansion of Pamlico River Steam Navigation

A market for steamboat service on the Pamlico River and Sound developed during the 1850s as a result of growth along the Pamlico River and on the Outer Banks. Interest

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<sup>42</sup> Neafie and Levy construction certificate, Smallman Collection.

<sup>43</sup> *Tarboro Southerner*, 22 September 1860.

<sup>44</sup> *Wilmington* (North Carolina) *Journal*, 26 July 1867; *Tarboro Southerner*, 16 December 1880.

in a water connection between New Bern, Beaufort and Washington also opened up possibilities for new steamboat routes. Steamers that traveled Pamlico River and Sound were unlike those going upriver from Washington. Greater distances and less protected waters necessitated a larger and deeper draft. Vessel characteristics reflected the different environments of each route. Pamlico River steamers did not venture upriver in competition with the Myers operation. Conversely, Myers only occasionally used the *Governor Morehead* as an excursion steamer on the Pamlico River. However separate the environmental spheres were, each route did not operate in a vacuum. Instead, both spheres were economically interdependent and functioned as a greater transportation network.

Only the *Oregon* transitioned from the Tar to the Pamlico River in the antebellum period. It changed spheres when the Tar River Steamboat Company's failure provided Washington merchant, William H. Willard an opportunity to purchase the *Oregon*. On 19 December 1849, Willard enrolled the *Oregon* at Washington, acting as the agent for New York Jesse Oakley. Doggett's *New York City Directory* listed Jesse Oakley as a merchant whose business and residence were in that city. H. P. Allen was listed as the steamer's master.<sup>45</sup>

William H. Willard was born in Harvard, Massachusetts, in 1819. He was related to the poet Ralph Waldo Emerson through his mother's family. After moving to Washington, Willard set up a successful business as a commission merchant selling

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<sup>45</sup> John Doggett Jr., *Doggett's New York City Directory 1850-1851* (New York: John Doggett Jr., 1850), 379; Bureau of Marine Inspection and Navigation, Washington, North Carolina, Enrollment Certificate, National Archives, RG 41, Washington, D. C.



merchandise and produce, and exporting eastern North Carolina's agricultural produce and naval stores to New York, Baltimore and Boston. In January 1849, he married Elizabeth Potts Bamford of Manchester, England, who gave birth to their first daughter, Hannah Emerson Willard.<sup>46</sup> Willard must have considered himself a lucky man that year. Not only did he have a growing business and family, he now had a vessel to expand his business opportunities.

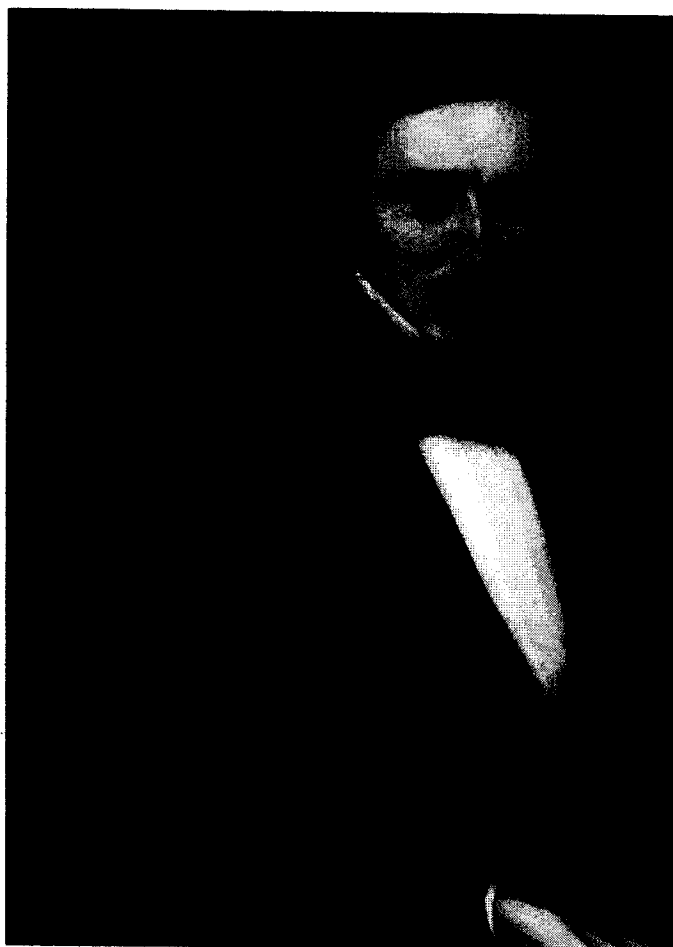


Figure 3.3 William H. Willard in the 1850s (Courtesy of George Bason).

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<sup>46</sup> *Tarboro Southerner*, 5 April 1856; William H. Willard's bible, in possession of relative George Bason.

In July 1850, Willard hired Gilbert Hale as the *Oregon's* master, returning the command to the man who piloted the steamer from Baltimore to Washington.<sup>47</sup> Several months later, Willard offered the public the *Oregon's* services for the Swan Quarter court sessions in November 1850. The *Oregon* was scheduled to steam down the Pamlico River Sunday morning, remain at Swan Quarter until court adjourned, and then return to Washington. Round trip passage cost five dollars, a considerable sum for a relatively short trip.<sup>48</sup> Willard must have felt that demand for the trip by Washington's richest citizens was intense.

William H. Willard did not actively advertise the *Oregon's* services in the local papers; the next excursion onboard the steamer left in October 1853 for a funeral. A committee of three Washington men, including James A. Willard, William's brother, posted a notice in the *Washington North State Whig* announcing a funeral charter for members of the O. R. R. Masonic Lodge. Passage aboard the *Oregon* to the plantation of B. M. Selby on the Pungo River for the funeral of H. S. Latham was free for all Masons. All others were charged fifty cents for the trip.

The Masonic funeral charter was the last specific mention of the *Oregon* in surviving 1850s newspapers. However, development of William H. Willard's business holdings suggested possible uses. Willard continued his commission merchant business in Washington and expanded his real estate holdings down the Pamlico River. He purchased one thousand acres of swampland on the Pamlico River's south side at South

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<sup>47</sup> Bureau of Marine Inspection and Navigation, Washington, North Carolina, Enrollment Certificate, National Archives, RG 41, Washington, D. C.

<sup>48</sup> *Washington North State Whig*, 27 November 1850.

Creek and offered parcels for sale.<sup>49</sup> The community that developed on South Creek was called Oregon Mills or simply Oregon.<sup>50</sup> Willard likely used the *Oregon* to develop the community as suggested by its name. Another reputable source hints at the *Oregon's* activities during the 1850s. Samuel A'court Ashe, son-in-law to William H Willard, mentioned the *Oregon* in his *History of North Carolina*. He wrote, "On the Tar, and up the Roanoke, there was at least one steamboat – the *Oregon*, employed by an enterprising merchant, W. H. Willard, in his business, which attained great proportions – he largely supplying Charleston with corn produced in the granary of the eastern [North Carolina] counties."<sup>51</sup> It is possible that Willard used the steamer to transport grain from Albemarle and Pamlico Sound landings to Washington where it was stockpiled, then shipped in quantity to Charleston.

While the *Oregon's* activities are unknown for most of the 1850s, at least one fallacy about it can be dispelled. William Lytle and Forrest Holdcamper wrote in their book, *Merchant Vessels of the United States, 1790-1868*, that the *Oregon* met its demise in Savannah, Georgia, in 1854, when a storm blew the steamer onto the ferry wharf on September sixth. Further historical research into Savannah River steam navigation revealed that the wrecked vessel was another *Oregon*, rated at 98 gross tons that operated

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<sup>49</sup> *Tarboro Southerner*, 5 April 1856.

<sup>50</sup> *Washington North Carolina Times*, 8 October 1856; William S. Powell, *The North Carolina Gazetteer* (Chapel Hill, North Carolina: University of North Carolina Press, 1968).

<sup>51</sup> Samuel A. Ashe, *History of North Carolina* (Raleigh, North Carolina: Edwards & Broughton, 1925), vol. 2, 467.

on the Savannah River in 1854.<sup>52</sup> The *Oregon* owned by Willard reappears on the Pamlico River and in the historical record at the start of the Civil War suggesting that it never left the region.

Benjamin F. Hanks, another prospering Washington businessman, purchased a steamer as demand for transportation on the Pamlico River increased. Hanks owned a commission merchant business, operated three steam sawmills, one planing mill, and also built houses for Washington's residents. In July 1853, Washington's *North State Whig* announced that Hanks purchased the steamer *Astoria* in New York. The steamer, which arrived in Washington on 30 June 1853, was considerably larger than the *Oregon*. The newspaper stated that the *Astoria* was 115 feet long, 32 feet 4 inches in breadth, and had a depth of hold measuring 6 feet 10 inches. It had a large cabin with a well-finished and furnished saloon and a promenade deck covered by a full-length awning. For safety, the steamer carried a lifeboat and life preservers. Less than a week after the *Astoria's* arrival, roughly three hundred people went aboard for an excursion to Bath. Such a large party surely indicated Washington residents' interest in the new steamer. Unfortunately for the passengers, the steamer ran aground near the mouth of Broad Creek during a rainsquall and all three hundred people spent an uncomfortable night onboard.<sup>53</sup>

Rather than continue in the local excursion business, Benjamin Hanks chose to run the *Astoria* to Beaufort. Captain Longman, piloting the steamer, planned to leave

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<sup>52</sup> Holdcamper, *Merchant Vessels*, 164, 287; *Shipping and Commercial List and New-York Price Current*, 16 September 1854; Ruby A. Rahn, *River Highway for Trade, the Savannah: Canoes, Indian Flatboats, Steamers, Packets, and Barges* (Savannah, Georgia: U. S. Army Corps of Engineers, 1968).

<sup>53</sup> *North State Whig*, 6 July 1853.

Washington for Beaufort on 29 September 1853, returning four days later. Passengers visiting in Beaufort were assured of passage back to Washington. The fare to Beaufort was four dollars while the round-trip ticket cost six dollars; meals were extra.<sup>54</sup> After the trip to Beaufort, Benjamin Hanks advertised no further trips for the *Astoria*.

Several possibilities exist as to what became of the *Astoria*. *Merchant Steam Vessels of the United States* contained a listing for a ferry named *Astoria* first enrolled in New York in 1840 and abandoned in 1865.<sup>55</sup> This 102-ton vessel, built by William Brown in New York, measured 70 feet 6 inches in length, 18 feet 8 inches in breadth, and had an 8-foot depth of hold. It is unlikely that this *Astoria* ever steamed in North Carolina, as its enrollments show neither Benjamin Hanks nor Captain Longman as owner or master. A more likely scenario was that the *Astoria* was actually the steamer *Post Boy*. The *Post Boy*'s owner, Benjamin Hanks, enrolled the vessel at Washington's customs house on 1 July 1853; one day after the *North State Whig* announced the *Astoria*'s arrival. Daniel Longman was listed as the *Post Boy*'s master.<sup>56</sup>

Shipbuilder Murray L. Baldwin built the *Post Boy* in 1847 at Jersey City, New Jersey. The 133 26/95 ton wooden side-wheel steamer measured 108 feet 2 inches in length, 19 feet 2 inches in breadth, with a 6-foot 10-inch depth of hold.<sup>57</sup> Henry R.

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<sup>54</sup> *North State Whig*, 21 September 1853.

<sup>55</sup> Forrest Holdcamper, William M. Lytle, and C. Bradford Mitchell, eds. *Merchant Steam Vessels of the United States, 1790-1868* (Staten Island, New York: Steamship Historical Society of America, 1975), 14.

<sup>56</sup> Bridgers Collection, Vessel Information Sheets.

<sup>57</sup> Bureau of Marine Inspection and Navigation, Washington, North Carolina, Enrollment Certificate, National Archives, RG 41, Washington, D. C.; Bridgers Collection, Vessel Information Sheets.

Durham and Company built the steamer's return flue boiler and vertical beam engine at New York's Archimedes Iron Works. The 20-foot long, 8-foot wide, and 6-foot 6-inch boiler had two furnaces and supplied the engine with steam at 20 pounds per square inch. The walking-beam engine had a bore of 26 inches and a stroke of 78 inches; it turned paddlewheels 14 feet 8 inches in diameter and 6 feet wide.<sup>58</sup> Not only did the *Post Boy's* enrollment date and its ownership by Benjamin Hanks suggest that the *Astoria* was the *Post Boy*, but the *Post Boy's* enrollment measurements matched very closely to the measurements reported by the *North State Whig*. Even the steamer's breadth matched closely if the paddlewheel widths were added to the steamer's enrollment breadth. The *Post Boy's* enrolled width of 19 feet 2 inches plus 12 feet for the paddle wheels is 31 feet 2 inches, very near the *Astoria's* reported 32-foot breadth.

Apparently, the *Post Boy/Astoria* did not generate revenues Benjamin Hanks desired. His failure to forge a regular connection with the downriver towns tempered plans to establish service on the Pamlico River until the *Pamlico* arrived in Washington in 1856. The *Pamlico*, occasionally spelled *Pamplico*, was built specifically for the Pamlico Sound. The steamer's construction cost was spread between several men, including three members of the Demill family, two residing in New York and W. E. Demill in Washington, who collectively held half ownership. Another Washington resident, Howard Wiswall held quarter ownership. Richard H. Ruddick of Suffolk, Virginia, held the remaining quarter share.<sup>59</sup> Members of the Demill Family in New

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<sup>58</sup> Smallman Collection, Vessel Descriptions

<sup>59</sup> Bridgers Collection, Vessel Information Sheets.

York likely supervised the *Pamlico's* construction at the New York shipyard of John Englis. The steamer was 124 feet 8 inches long, 24 feet wide on deck (41 feet wide including the paddleboxes), and had a hold 7 feet 10 inches deep. Its stern had a round tuck and the steamer measured 218 and 20/95 tons. Power for its side paddlewheels came from a 28-inch bore by 8-foot stroke low-pressure engine. Guion, Boanenan, and Company built the engine at the New York's Neptune Iron Works. While steaming at 15 miles per hour, the *Pamlico* burned oak at a rate of one third of a cord per hour. The *Pamlico* carried a lifeboat accommodating twenty men and a fire hose capable of spraying water anywhere on the steamer.<sup>60</sup>

W. E. Demill announced the *Pamlico's* winter schedule in October 1856. The steamer departed Washington on Monday and Thursday at 6:30 A. M. stopping at Tripp's Landing, Bath, Oregon Mills, Germantown and Swan Quarter. The return trip to Washington followed the landing order in reverse. Fares increased in direct relation to each landing's distance from Washington. It cost fifty cents to go to Tripp's landing or Bath, Oregon Mills was one dollar and twenty-five cents, and Germantown and Swan Quarter were two dollars and fifty cents. Meals were extra. W. E. Demill established very specific rules for carrying freight. Each parcel had to be plainly marked with its destination and nothing would be lightered ashore or landed without a wharf for unloading. People receiving goods had to do so from the boat side or the freight would not be left. Above all, freight fees had to be paid in advance. The cargo handling rules signified a change in the sound steamer's use. Up to this point, passengers were the main

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<sup>60</sup> Bridgers Collection, Vessel Information Sheets; *New Bern Union*, 12 June 1857.

focus. Creation of a distinct cargo handling system sped up the unloading process in anticipation of a greater demand for freight. W. E. Demill also specified that all unaccompanied slaves needed a written permit.<sup>61</sup>

The *Pamlico's* success demonstrated the renewed possibility of running a steamer on the Pamlico. In June 1857, the *Post Boy* returned to service when the Hyde County Steamboat Joint Stock Company bought the steamer and started competing against the *Pamlico*. The Hyde County Steamboat Joint Stock Company consisted of Thomas H. Smith and his Hyde County business partners; Captain M. M. Gray was in charge of the *Post Boy*. The *Post Boy's* owners hoped to profit from the summer travel season by connecting Washington, Beaufort, and Portsmouth as well as making trips between Washington and Hyde County.<sup>62</sup>

Both the *Pamlico* and the *Post Boy* went to Beaufort on the same day and directly competed for passengers. The *Beaufort Journal* listed eleven passengers on the *Post Boy* arriving in Beaufort on 11 July 1857, while the *Pamlico* carried only two. Returning to Washington two days later, *Post Boy* carried thirteen passengers and *Pamlico* only one. A lower fare likely accounted for the overwhelming preference for the *Post Boy*. It was possible that the one less person *Pamlico* brought back to Washington was a passenger on *Post Boy*.<sup>63</sup> Beaufort's tourist business benefited from the competing steamers. Each subsequent arrival brought "crowds of passengers," particularly of the "fair sex." One

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<sup>61</sup> *Washington North Carolina Times*, 8 October 1856.

<sup>62</sup> *Tarboro Southerner*, 4 July 1857.

<sup>63</sup> *Beaufort Journal*, 15 July 1857.



young boy playing at the county wharf did not benefit from the *Pamlico's* arrival. He received a severe foot wound and was nearly killed when a pole fell from the steamer as it arrived in Beaufort.<sup>64</sup>

As a promotional gimmick, the *Beaufort Journal's* editor received a free round trip ticket on the *Post Boy*. His trip from Beaufort to Washington provided a vignette of passage on a Pamlico River steamer. The summer route included a stop at Portsmouth to load and unload vacationers on the Outer Banks. It was the editor's opinion that vacationers generally preferred Beaufort to Portsmouth. From Portsmouth to Washington, the passengers experienced a choppy Pamlico Sound; many ladies were seasick and could not enjoy lunch when it was called at two o'clock. At half past six, the *Post Boy* arrived at Washington where the editor checked into the Lafayette Hotel. The following morning he visited the editors of the two Washington papers. Conversation centered on the competing sound steamers. The Washington editors were irritated that the Beaufort editor received passage across the sound for free, while it cost them one dollar to take the steamer upriver to Greenville.<sup>65</sup>

Competition between the steamers grew fierce as the summer progressed. By August, the steamers carried passengers between Beaufort and Washington for free, charging only for the meal, and raced between destinations. During one trip, the *Pamlico* grounded in Beaufort's harbor for an hour allowing the *Post Boy* to reach Portsmouth first. Capitalizing on its advantage, the *Post Boy* left Portsmouth first, gaining a several

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<sup>64</sup> *Beaufort Journal*, 22 July 1857.

<sup>65</sup> *Beaufort Journal*, 22 July 1857.

mile advantage, but the newer *Pamlico* handily beat the *Post Boy* to Washington by ten miles. October marked the end of the season for service to Portsmouth and Beaufort on the *Post Boy*; it continued making trips to Hyde County during the winter.<sup>66</sup>

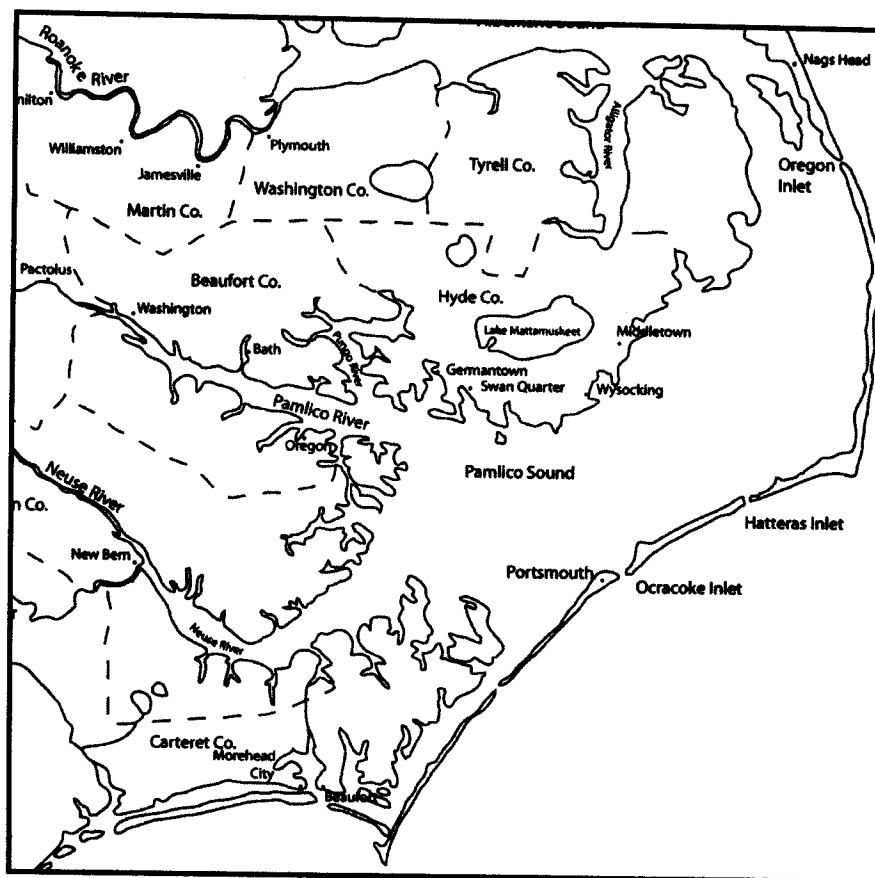


Figure 3.4 Theater of operations for the Pamlico River steamers.

Competition between the *Pamlico* and *Post Boy* continued unabated. In response, the *Pamlico*'s owners developed a new excursion trip to break away from the competition. W. E. Demill offered a trip from Beaufort to Nags Head costing five dollars for the roundtrip. The excursion left Beaufort on Monday at six o'clock A. M. and

<sup>66</sup> *Washington Dispatch*, 23 December 1857.

arrived at Nags Head at sundown. Benjamin F. Hanks commanded the steamer. The trip back on Thursday was expected to take longer; the steamer departed Nags Head at five o'clock A. M. During the 1858-1859 session of North Carolina's General Assembly, the *Pamlico's* owners officially incorporated themselves as the Beaufort and Hyde Steamboat Company. At the same time, the *Post Boy*, now captained by John Osgood, expanded its route to carry merchandise from New Bern to Hyde County for New Bern merchant, M. W. Jarvis.<sup>67</sup>

The Beaufort and Hyde Steamboat Company anticipated a greater demand for trips to New Bern during the winter months. The *Pamlico* took passengers from Washington to New Bern on Wednesdays starting in February 1859.<sup>68</sup> The route gave Washington's residents a way to reach the train without taking the plank road from Greenville. Eastern North Carolina's tourist season began in July and heralded the *Pamlico's* return to Beaufort and Portsmouth. The steamer made twice-weekly trips from Washington, touching at Portsmouth and then Beaufort, making the return voyage in reverse order the next day. Passage to Portsmouth was \$2.50, while Beaufort cost \$4.00.<sup>69</sup>

Ultimately, the competition proved too stiff for the *Post Boy's* owners and on 18 January 1860, the steamer went on the auction block in New Bern. The Washington-New Bern via Hyde County route did not generate enough revenue to keep the steamer

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<sup>67</sup> General Assembly, *Laws of North Carolina 1858-1859*, 168; *New Bern (North Carolina) New Era and Commercial Advertiser*, 16 August 1858.

<sup>68</sup> *Washington (North Carolina) Dispatch*, 16 February 1859.

<sup>69</sup> *Washington Dispatch*, 12 July 1859.

running. *New Bern's Weekly Progress* lamented the loss of communication and pointed out that Hyde County would suffer the most. The newspaper suggested that a group of enterprising people could restore the route by making more trips per week and securing the mail contract.<sup>70</sup> Out of the Hyde County Steam Boat Joint Stock Company's ashes rose the Hyde County Steamboat Navigation Company in February 1860.<sup>71</sup> Its president from Washington, Reading L. Myers, and its board of directors from Hyde County and New Bern set about refitting the *Post Boy* for service. The steamer arrived in Washington 25 April in need of a new boiler and minor repairs. Upon the steamer's arrival, Captain Myers and the steamer's crew created a weekend-long disturbance. Undoubtedly, heavy drinking accompanied the disruptive carousing.<sup>72</sup> Reading L. Myers readied the steamer for service by ordering a new boiler from Baltimore and placing the steamer's new captain, Captain Osgood, in charge of the carpenters repairing the steamer.

Repairing the steamer took much longer than expected. Difficulties arose with the boiler's shipment from Baltimore. The boiler's size and unwieldiness necessitated its shipment as deck cargo. Most captains refused deck cargo if there was a chance of wind or storm. Ultimately, the boiler arrived in September after a month's delay at the Baltimore docks.<sup>73</sup> It took another three weeks to install and on 26 September the *Post Boy* arrived in New Bern on its first trip with the new company.

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<sup>70</sup> *New Bern (North Carolina) Weekly Progress*, 6 December 1859, 17 January 1860.

<sup>71</sup> *New Bern Weekly Progress*, 30 February 1860.

<sup>72</sup> *New Bern Weekly Progress*, 8 May 1860.

<sup>73</sup> *New Bern Weekly Progress*, 25 September 1860.

Further difficulties arose from several Hyde County stockholders who refused to pay on time. Dissension arose among the company's subscribers concerning the location and number of stops the ship should make in Hyde County. Most shareholders wanted a single stop at Swan Quarter; dissenting individuals wanted a second stop at Wysocking to minimize their travel time. Captain Osgood told New Bern residents that the vessel would make twice-weekly trips. The *New Bern Weekly Progress* asked Hyde County residents to renew their subscriptions as the *Post Boy* could now deliver the Monday paper to them on Thursday.<sup>74</sup>

Beginning in October 1860, steamers regularly transported Washington and the Tar River's produce to Norfolk. Two vessels, the *Loper* and the *Empire*, advertised for the shipment of cargo to Norfolk to connect with the New York and Virginia Steamship Company's steamers *Yorktown*, *Jamestown* and *Roanoke*. Both steamers catered to the increased cotton production in Pitt and Edgecombe Counties. The *Edgecombe Farm-Journal* estimated that Tar River region cotton would produce forty thousand bales in 1860. Edgecombe County cotton accounted for half production, which increased from 1,500 bales in 1840 to 20,000 bales in 1860. A bale of cotton ready for shipment weighed four hundred pounds.<sup>75</sup> The *Loper* advertised that it carried 800 bales of cotton at a rate of \$1.20 per bale to Norfolk. People shipping cotton could insure their product to Norfolk and or for slightly more to New York whether it was on deck or in the hold. The *Empire* carried cotton in a different manner; it towed barges. At least one of the

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<sup>74</sup> *New Bern Weekly Progress*, 20 November 1860.

<sup>75</sup> *Tarboro (North Carolina) Edgecombe Farm-Journal*, September 1860.

*Empire's* barges remained at Washington continuously. Consigners loaded their cotton before the steamer arrived, assuring its pristine condition.<sup>76</sup>

Aside from increased cotton production in the Tar River watershed, completion of the Albemarle and Chesapeake Canal in 1859 provided further impetus for steamer

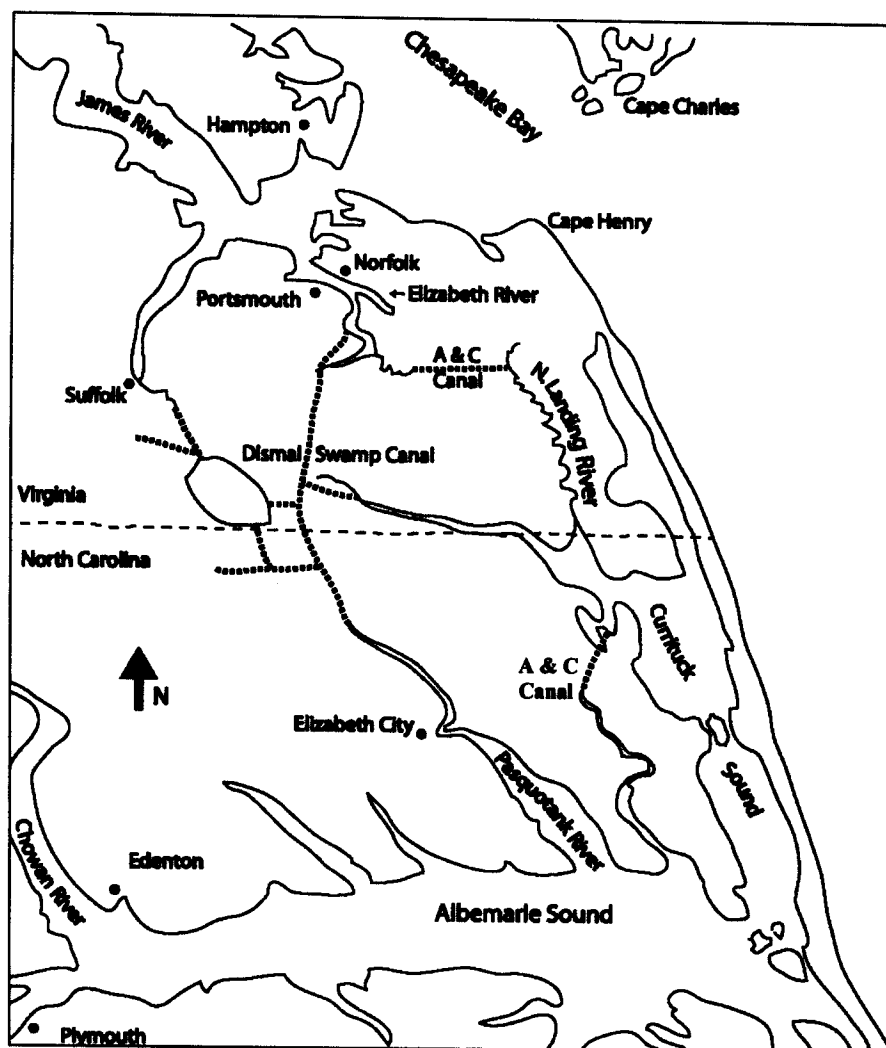


Figure 3.5 Norfolk's connection to the Albemarle Sound through the Dismal Swamp Canal or the Albemarle and Chesapeake Canal (A & C Canal) (Redrawn from Brown, *The Dismal Swamp Canal*, 110).

<sup>76</sup> *Tarboro Southerner*, 15 December 1860.

service between Washington and Norfolk. While the Dismal Swamp Canal provided an initial water connection between the Albemarle Sound and the Chesapeake Bay, its series of locks restricted vessels size and speed. The sea level Albemarle and Chesapeake Canal sped shipment of goods from Currituck Sound to the Elizabeth River. Vessel breadth increased with the absence of locks, but shallow draft remained necessary to navigate the canal.

The iron-hulled *Loper* first traveled the Dismal Swamp Canal in 1845 carrying the Albemarle region's produce north. As suggested by its name, a four-bladed Loper Wheel, or "Philadelphia Wheel" propeller, with a diameter of six feet nine inches drove the steamer when it was built in 1844.<sup>77</sup> Merrick and Towne built its engine and hull at the Southwark Foundry in Philadelphia. An inclined direct acting engine with an 18 inch cylinder and 22 inch stroke provided the power to move the *Loper's* 91 feet six inch long by 17 feet 4 inch wide hull. Philadelphia's *Public Ledger* described the engine as a new variety called a "vibrating cylinder." The *Loper* had a second steam engine on deck that shelled and screened corn as it was loaded into the steamer's cargo hold and then unloaded the cargo. Another feature of the *Loper* was its loud steam horn used to alert Dismal Swamp Canal lock operators of its approach.<sup>78</sup> During the 1850s, the *Loper*

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<sup>77</sup> Alexander C. Brown, *Juniper Waterway, a History of the Albemarle and Chesapeake Canal* (Charlottesville, Virginia: University Press of Virginia, 1981), 30; *Philadelphia Public Ledger*, 24 February 1845; Alexander C. Brown, *The Dismal Swamp Canal* (Chesapeake, Virginia: Norfolk County Historical Society, 1970), 208; Smallman, Vessel Information Sheets; Still, et al., "Steam Navigation and the United States", 71.

<sup>78</sup> Bridgers Collection, Vessel Information Sheets; Smallman Collection, Vessel Descriptions; *Philadelphia Public Ledger*, 26 February 1845; *Norfolk (Virginia) American Beacon*, 24 August 1849; *Philadelphia Public Ledger*, 27 February 1845; John C. Emmerson, *Early Experimental Steam Vessels Cited in Newspaper Accounts from the Norfolk American Beacon, Southern Argus, and Other Journals 1841-1848* (Portsmouth, Virginia: John C. Emmerson, 1950), 1 March - 15 May 1845.

usually carried freight from the Roanoke River to Norfolk and occasionally visited Washington to load cargo. After the Albemarle and Chesapeake Canal opened, the *Loper* expanded its service to include Washington on a regular schedule.<sup>79</sup>

The *Empire* also started service in North Carolina after the A. & C. Canal opened. Built in Philadelphia in 1850, the 120-ton wooden-hulled tugboat was too large to fit through the Dismal Swamp Canal's locks, a fact that led to its demise during the Civil War.<sup>80</sup> Together, the *Loper* and *Empire* provided the first consistent all steam freight transportation from Washington to Norfolk. Decreased freight costs and increased production made the movement of cotton by steamer an economically sound option. An increasingly rapid and secure shipment route that avoided the insurance risks of North Carolina's hazardous coast meant better market prices in Washington for the regions farmers.

### Conclusion

Development of Tar/Pamlico River steam navigation brought increased prosperity to the communities along the river. The increasingly efficient transportation of agricultural and forestry commodities allowed local production to be economically exchanged for imported manufactured goods and luxury items. As the center of this transportation network, Washington received the greatest benefit. Naval stores, agricultural production, and people flowed into Washington on steamers from Wysocking and Swan Quarter on the Pamlico River and from Greenville on the Tar River. Tarboro,

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<sup>79</sup> *Plymouth (North Carolina) Banner*, 31 August 1856; *Elizabeth City (North Carolina) Old North State*, 7 August 1852.

<sup>80</sup> Holdcamper, Lytle, and Mitchell, *Merchant Steam Vessels of the United States, 1790-1868*, 64; Brown, *The Dismal Swamp Canal*, 98.



the supposed head of navigation did not share greatly in the prosperity brought by the river steamers. Greenville effectively became the head of steam navigation on the Tar River as 1850s passed. The firms involved in steam navigation ultimately abandoned navigating the Tar River between from Greenville and Tarboro. Shifting sandbanks and ever-present snags prevented economical navigation except in periods of high water.

The Tar River Steamboat Company's failure and the *Oregon's* subsequent sale to William H. Willard exemplified the difficulties of Tar River navigation. Unable to ascend the river to Tarboro, the steamer found employment on the Pamlico River's more easily navigated waters. While the *Oregon* did not take part in the larger Tar/Pamlico River transportation network, it certainly contributed to the region's economic growth through Willard's commission merchant business as well as the development of swampland on the Pamlico River's south shore. Strangely, its longest lasting contribution, the naming of Oregon Inlet, was accomplished within the first day of arriving in North Carolina.

Ultimately, the Tar/Pamlico River's economic expansion was harmed the greatest by the Civil War, which closed off the region's markets. As Federal forces occupied the region, environmental factors that previously influenced steam navigation impacted the military occupation. In particular, the Tar River's inaccessibility upstream from Greenville played a role in the activities of both Confederate and Federal forces. The Tar/Pamlico River steamers also played an active part in the Confederate cause.

## CHAPTER 4: TAR/PAMLICO RIVER STEAM NAVIGATION DURING THE CIVIL WAR

### Introduction

The start of the Civil War sharply curtailed the Tar/ Pamlico region's burgeoning agricultural growth. Blockading Union warships prevented eastern North Carolina's coasting vessels from trading with northern ports or the West Indies. Although Washington, North Carolina, was a protected inland port, it did not have the ease of egress and railroad infrastructure necessary to serve as a blockade running port.

Without coastal trading schooners leaving Washington, farmers along the Tar/Pamlico River stopped sending their produce to market on the river's steamers. Conversely, without schooners returning to Washington, the town's commission merchants ceased shipping manufactured goods and luxury items on the Tar/Pamlico steamers. Since trade stagnated and there was little available money, the region's residents took fewer steamer trips between Greenville, Washington, and New Bern. Each of these factors diminished steamer patronage.

Tar/Pamlico River steamboats, unemployed by the state's economic isolation, found new uses. The fledgling Confederate States Government outfitted two steamers as gunboats. North Carolina's State Government utilized the remaining vessels, including the *Oregon* (renamed *Colonel Hill*), for transporting troops and supplies. The Tar/Pamlico River steamers also formed a portion of North Carolina's Mosquito Fleet.<sup>1</sup>

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<sup>1</sup> Previous historical writing on the *Colonel Hill* did not link the vessel to its existence as the *Oregon*. The author did not uncover clear, contemporary evidence for the name change, but an article published 26 April 1926 in the *Tarboro Daily Southerner* described the vessel's career including its name change from *Oregon* to *Colonel Hill*.

After the Federal occupation of eastern North Carolina's river towns, Union forces had either captured or destroyed most Tar/Pamlico River steamers. The surviving vessels, the *Colonel Hill* (ex. *Oregon*) and the *Governor Morehead*, retreated to Tarboro outside the immediate grasp of Federal forces. Both vessels continued to move troops and supplies and supported Confederate attacks against Washington. The *Colonel Hill* even carried 1,500 captured Federal troops downriver for repatriation at Washington.

Union army and navy steamers operated on the Tar/Pamlico River from 1862 until the Civil War's end, they played an important role in the Union's military domination. The vessels gave Federal troops mobility and allowed re-supply of widely separated Union garrisons. On two occasions, U. S. Navy vessels prevented the Union garrison's defeat at Washington. Union gunboats also prevented Confederate steamers from attacking Washington. Yet the threat posed by the Confederate vessels upriver greatly influenced the garrison's army and navy commanders. Union cavalry destroyed the *Colonel Hill*, the *Governor Morehead*, and the Confederate ironclad ram being built at Tarboro in July 1863, thus securing Washington's garrison from the possibility of a Confederate naval attack.

#### The Mosquito Fleet

North Carolina's road to secession began hesitantly in the first months of 1861. When a group of secession-minded citizens seized two Federal forts on the Cape Fear River, North Carolina's Governor, John W. Ellis, ordered the men to return the forts. Others were not so hesitant, as the states of the Deep South left the Union in January and February and adopted a Confederate constitution, North Carolina felt even greater

pressure to leave the Union. As Southern states left the Union, Control of the U. S. Senate fell to the Republicans, allowing President Lincoln and his associates the power to force the Confederate States back into the Union. Shortly after the Confederate seizure of Fort Sumter on 12 April 1861, President Lincoln asked for North Carolina troops to put down the Southern rebellion. Lincoln's call for troops changed the minds of those North Carolinians still supporting the Union. Public support rallied behind Governor Ellis when he refused Lincoln's request for troops. Next, Lincoln called for a blockade of the southern coast. The blockade further infuriated North Carolinians who still considered themselves officially part of the Union; in response the state took steps toward building a naval defense by creating the Military and Naval Affairs Board. Spurned by these affronts, North Carolina's General Assembly passed an ordinance on 20 May 1861 repealing the 1789 ordinance through which North Carolina first joined the Union.<sup>2</sup>

Even prior to North Carolina's official secession act, the state took steps toward building a naval defense by creating the Military and Naval Affairs Board. The Military and Naval Affairs Board designed a naval defense plan for North Carolina that consisted of two mutually supporting parts. The first line of defense were forts built at the inlets on the Outer Banks to block Federal forces. The second line consisted of a flotilla of shallow draft schooners and steamers, armed with one or two cannon, to patrol the sounds. North Carolina's Military and Naval Affairs Board started work on forts at Oregon, Hatteras, and Ocracoke Inlets and bought the steamboats *Winslow*, *Ellis*,

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<sup>2</sup> Fred M. Mallison, *The Civil War on the Outer Banks* (Jefferson, North Carolina: McFarland and Company, 1998), 20; Powell, *North Carolina Through Four Centuries*, 343-348.

*Beaufort*, and *Raleigh*. North Carolina's navy became known as the "Mosquito Fleet" due to its diminutive size.

The Mosquito Fleet began service as commerce raiders. The steamers *Winslow*, *Beaufort*, and *Gordon* (actually a privateer) all successfully captured vessels passing Hatteras Inlet. An intercept began when a lookout in the Hatteras lighthouse signaled that a prize was passing the inlet. One of the Mosquito Fleet's naval vessels or a privateer would steam out in pursuit, capture the prize, and tow it back into Pamlico Sound. Troops at Forts Hatteras and Clark were treated to fresh tropical fruit, as were some Washington's citizens.<sup>3</sup> The steamers also captured valuable cargoes of coffee and sugar on the way to New York from Rio de Janeiro and Cuba.<sup>4</sup> To further confuse coastwise trade traveling to Northern ports and cause Union shipping losses, John Myers took the *Governor Morehead* out to Hatteras Island and removed the fresnel lens from the lighthouse. Since Northern vessels relied on the lighthouse for safe navigation, extinguishing its light to all but the closest ships drew trade within the Mosquito Fleet's grasp.<sup>5</sup>

While all Tar/Pamlico River steamers entered service for the South, the Confederacy only armed two vessels. The North Carolina state government bought the

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<sup>3</sup> Ursula Loy and Pauline Worthy, *Washington and the Pamlico* (Washington, North Carolina: Washington-Beaufort County Bicentennial Commission, 1976), 53.

<sup>4</sup> Mallison, *The Civil War on the Outer Banks*, 25.

<sup>5</sup> Report of Commander Rowan, commanding U. S. Naval Forces, Sounds of North Carolina, transmitting report of Lieutenant Murray, U. S. S. *Louisiana*, to Rear-Admiral Goldsborough, commanding North Atlantic Blockading Squadron, 27 March 1862, in *Official Records of the Union and Confederate Navies in the War of the Rebellion* (Washington, D. C.: Government Printing Office, 1894-1922) Ser. I, Vol. 7, 150. Hereafter cited as *O. R. N.*

*Raleigh* (ex. Dismal Swamp Canal steamer *Loper*) as part of the state's defense force and equipped it with one 32-pounder cannon.<sup>6</sup> Virginia's state government initially chartered and armed the *Appomattox* (ex. Albemarle and Chesapeake Canal tug *Empire*) to support Confederate naval operations around Norfolk, however the vessel operated in North Carolina waters after the Federals captured Fort Hatteras.<sup>7</sup>

The remaining unarmed Tar/Pamlico River steamers served the state carrying troops and supplies for North Carolina's mobilization. Individual army companies contracted with the steamers for transportation. Surviving documents from the *Cotton Plant* and the *Post Boy* provide a more detailed picture regarding the way North Carolina utilized Tar/Pamlico River steamers.

During the military buildup in the summer 1861, the *Cotton Plant* carried several hundred North Carolina volunteer troops. Starting in May, the *Cotton Plant* operated a soldier shuttle service to and from Greenville from several points on the Tar River. Troops boarded the *Cotton Plant* at three Tar River landings as well as Washington. The fare for each soldier varied, the trip to the landing closest to Greenville cost \$0.25, while the trip to Washington cost \$1.00. Anywhere from one to seventy soldiers made each trip resulting in 314 fares totaling \$118.75 being owed to J. J. Cherry, the *Cotton Plant's* owner. Cherry only collected \$80.00 from North Carolina. These short trips up and

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<sup>6</sup> Mallison, *The Civil War on the Outer Banks*, 23.

<sup>7</sup> Letter from the Governor of Virginia to the Virginia State Convention, Enclosing List of Vessels Employed by that state, 24 June 1861, in *O. R. N.* Ser. I, Vol. 5, 809; Order of the Commandant, Norfolk Navy Yard, to Commander Sinclair, C. S. Navy, Commanding at New Bern, N. C., to Cooperate in Dispossessing the Enemy of Hatteras Inlet, 5 September 1861, in *O. R. N.* Ser. I, Vol. 5, 723-724.

down the Tar River were likely the assembling movements of the Tar River Boys, a Pitt County volunteer company.<sup>8</sup>

On 22 May 1861, the Tar River Boys chartered the *Cotton Plant* for \$100 to take them, their baggage, and provisions from Greenville to Washington. One hundred and four men and officers took the steamer downriver.<sup>9</sup> Washington was only an intermediate stop; the men then boarded another vessel, which took them to the military encampment at Portsmouth, south of Ocracoke Inlet.<sup>10</sup>

Two Beaufort County infantry companies, the Jeff Davis Rifles and the Pamlico Rifles, and one cavalry company, the Star Boys, each chartered the *Cotton Plant*. Four officers, eighty-three men, and two servants of the Jeff Davis Rifles rode the steamer on 20 June from Washington to New Bern at a cost of \$100. Two days later, eighty-eight men of the Pamlico Rifles made the trip from South Creek, in Beaufort County, to New Bern for the same price. The Star Boys departed Washington on 29 July for New Bern. Each company boarded the railroad in New Bern to join the Confederate Army in Northern Virginia.<sup>11</sup>

Like the *Cotton Plant*, the *Post Boy* also operated for the state. The steamer transported soldiers and supplies from Washington to the Outer Banks during the summer

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<sup>8</sup> *Papers Pertaining to Vessels of or Involved with the Confederate States of America*, NARA RG 109, Microfilm ID M909; Mallison, *The Civil War on the Outer Banks*, 27.

<sup>9</sup> *Papers Pertaining to Vessels of or Involved with the Confederate States of America*, NARA RG 109, Microfilm ID M909.

<sup>10</sup> Mallison, *The Civil War on the Outer Banks*, 27.

<sup>11</sup> *Papers Pertaining to Vessels of or Involved with the Confederate States of America*, NARA RG 109, Microfilm ID M909; Loy and Worthy, *Washington and the Pamlico*, 46-49.

1861. On one trip in May 1861, the Washington Grays Artillery Company left Washington for Ocracoke Inlet and most of the town turned out for a festive departure.<sup>12</sup>

Contracted to the North Carolina Engineers Department, the *Post Boy* made fifty-two trips to Beacon Island in Ocracoke Inlet, carrying materials for constructing Fort Ocracoke.<sup>13</sup> While under contract, the State of North Carolina paid the salaries of the *Post Boy*'s captain and crew from May through August 1861. Captain John Osgood received \$75 per month, Engineer James Hanks \$50 per month, and Mate William Price \$30 per month. The steamer employed two or three deckhands, one or two firemen, and a cook, each at \$15 per month. North Carolina even paid for the *Post Boy*'s wooding labor, groceries, and laundry during the summer 1861.

Continuing in state service through September, the *Post Boy* received \$400 for eight days work carrying troops and provisions from Washington to Fort Lane, a small four-gun emplacement below New Bern on the Neuse River.<sup>14</sup> In total, North Carolina paid out at least \$1200 and \$480 to the *Post Boy* and the *Cotton Plant* respectively during the summer of 1861.

Likewise employed by the state government, the *Colonel Hill* operated on Pamlico River and Sound as part of the local signal service corps headed by William H.

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<sup>12</sup> John G. Barrett, *The Civil War in North Carolina* (Chapel Hill, North Carolina: University of North Carolina Press, 1963), 19.

<sup>13</sup> Mallison, *The Civil War on the Outer Banks*, 27; *Papers Pertaining to Vessels of or Involved with the Confederate States of America*, NARA RG 109, Microfilm ID M909.

<sup>14</sup> *Papers Pertaining to Vessels of or Involved with the Confederate States of America*, NARA RG 109, Microfilm ID M909; Mallison, *The Civil War on the Outer Banks*, 93.



Willard.<sup>15</sup> Washington's *North Carolina Times* announced in August that the steamer, captained by Benjamin Hanks, ran regularly between Washington and Portsmouth carrying soldiers to the Outer Banks. However, the steamer was not restricted to soldiers; the trips were open to the public in general.<sup>16</sup> Charters to the state government provided relatively lucrative employment for steamers otherwise idled by the lack of river trade.

While the Confederate troop buildup on the Outer Banks occupied most Tar/Pamlico River steamers, the North felt the impact of the North Carolina Navy's commerce raiding activities. Shipping losses to the Mosquito Fleet irritated Northern merchants and ship owners, who pressured Washington's politicians to eradicate the menace. The U. S. Navy, supposedly enforcing a blockade of North Carolina's ports, finally acted to quash the raiders and privateers by dispatching a fleet of warships to prevent their egress from Pamlico Sound. A fleet of seven Union vessels reached Forts Hatteras and Clark on 28 August 1861, within two days they destroyed the Confederate earthworks with accurate, long-range fire. The Mosquito Fleet stayed within the relative safety of Pamlico Sound hiding from the vastly superior enemy fleet. Intense Union shelling even stopped the *Colonel Hill's* attempt to land ammunition and troops the morning of 29 August, both forts surrendered later that day. Retreating Confederate soldiers escaped to Washington on a schooner towed by the *Governor Morehead*.<sup>17</sup>

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<sup>15</sup> *Raleigh News and Observer*, 5 September 1893.

<sup>16</sup> *Washington North Carolina Times*, 7 August 1861; Abstract log of the C. S. S. *Ellis*, *O. R. N.*, Ser. I. Vol. 6, 782

<sup>17</sup> Abstract log of the C. S. S. *Ellis*, in *O. R. N.*, Ser. I. Vol. 6, 783-784.

When Confederate forces abandoned the forts at Ocracoke and Oregon Inlets, the United States Navy moved onto the Outer Banks with little resistance. Federal steamers, carrying troops along the Outer Banks, exchanged shots with the Mosquito Fleet to little effect for either side. However, three Mosquito Fleet vessels, the *Raleigh*, *Junaluska*, and *Curlew*, scored a valuable victory when they captured the Federal steamer *Fanny* with a cargo of military supplies on 1 October.<sup>18</sup> After soldiers unloaded the valuable supplies captured from the *Fanny* at the Confederate fort on Roanoke Island, the *Cotton Plant* boarded three companies of the Third Georgia Regiment, while Eighth North Carolina Regiment soldiers boarded the *Curlew*, *Raleigh*, *Junaluska*, *Appomattox*, and the newly captured *Fanny*. The steamers then headed back to Chicamacomico to engage the Federal troops.

As the flotilla steamed toward Chicamacomico, Federal troops on the beach spied the advancing fleet. Before the Mosquito Fleet reached Chicamacomico, the Federal troops began marching back to the Hatteras Lighthouse, abandoning their gear except weapons. Behind the retreating Federals, the *Cotton Plant* landed the Third Georgia in pursuit. The Mosquito Fleet planned to land the Eighth North Carolina troops between the retreating Federal forces and the lighthouse in a pincer movement. The considerably larger Federal force retreated, not in fear of annihilation, but because their orders required a retreat if the Confederates attempted to cut off their route back to the lighthouse. Much to the Confederates' dismay, they found that the Mosquito Fleet could not get close

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<sup>18</sup> J. Thomas Scharf, *History of the Confederate States Navy from Its Organization to the Surrender of Its Last Vessel* (New York: Gramercy Books, 1996), 379; Christopher J. Olson, *An Historical and Archaeological Investigation of the Steamboat Curlew* (Greenville, North Carolina: M. A. Thesis, East Carolina University, 1997), 95.

enough to shore to land the troops. The Federals literally ran back to their encampment, losing only a few men. When the Third Georgia learned that the Eighth North Carolina was unable to land, they began a retreat to Chicamacomico. The arrival of the U. S. Navy's armed ship *Monticello* hastened the Confederate withdrawal. Reinforced Federal troops set out after the retreating Confederates from their lighthouse encampment, never quite catching them. The action became known as the Chicamacomico Races.<sup>19</sup>

After the engagement on the Hatteras Island sands, the Third Regiment of Georgia Volunteers, retained the *Cotton Plant's* services for the last weeks of October. The regiment chartered the steamer for \$16 a day and its crew for \$8.44 a day. The steamer carried troops around Roanoke Island as well as towing vessels on Albemarle Sound.<sup>20</sup> Aside from occasional long distance cannon fire between the Mosquito Fleet and the U. S. Navy, there were no serious engagements during the remainder of the year.

The Federal offensive led by Brigadier General Ambrose E. Burnside against Roanoke Island ended the Mosquito Fleet's activities. A combined naval and land force attacked the Confederate fortifications on Roanoke Island, 7 February 1862.<sup>21</sup> Federal gunboats and the Mosquito Fleet traded salvos during which the Confederate steamers scored a few hits, but the more numerous Union warships' more accurate and greater volume of fire took its toll sinking the C. S. S. *Curlew* and disabling the C. S. S. *Forrest*. However, a lack of ammunition rather than casualties forced the Mosquito Fleet's retreat

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<sup>19</sup> Barrett, *The Civil War in North Carolina*, 52-53; Mallison, *The Civil War on the Outer Banks*, 55.

<sup>20</sup> *Papers Pertaining to Vessels of or Involved with the Confederate States of America*, NARA RG 109, Microfilm ID M909, Reel 6, C27.

<sup>21</sup> Olson, *An Historical and Archaeological Investigation of the Steamboat Curlew*, 105.

to Elizabeth City at the day's end. At Elizabeth City, Commodore William F. Lynch dispatched the *Raleigh* (ex. *Loper*) up the Dismal Swamp Canal to Norfolk to facilitate rearming the gunboats. The following day, Lynch steamed down the Pasquotank River to rejoin the fight at Roanoke Island. On entering Albemarle Sound, he learned that Union forces had captured the island. Shortly thereafter, Lynch spotted the Federal fleet moving towards the river. The Mosquito Fleet retired up the Pasquotank River to defend Cobb's Point. Rather than starting with a long-range gun battle, the Federal gunboats steamed into the Mosquito Fleet's midst before opening fire with tremendous effect. Federal fire disabled the schooner *Black Warrior* after which its crew set it afire. Confederate gunboats *Ellis*, *Fanny*, *Seabird*, and *Forrest* were captured or destroyed. Two Confederate steamers attempted to escape through the Dismal Swamp Canal to Norfolk. The *Beaufort* slipped through the first lock at South Mills and up the canal. Unfortunately for the Confederate States Navy, the *Appomattox* could not follow. Prior to the outbreak of hostilities, the *Appomattox* was the Albemarle and Chesapeake Canal tug *Empire*. The vessel never used the Dismal Swamp Canal and it proved to be two inches too wide to fit through the lock at South Mills. The *Appomattox*'s crew scuttled the steamer ending the reign of North Carolina's Mosquito Fleet.<sup>22</sup> General Burnside's capture of Roanoke Island and its strategic position between Albemarle and Pamlico Sounds, along with the U. S. Navy's destruction of the Mosquito Fleet ensured that Federal forces controlled North Carolina's northern coast and sounds.

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<sup>22</sup> Report of Flag Officer Lynch to Secretary of the C. S. Navy, S. Mallory, 18 February 1862, *O. R. N. Ser I. Vol. 6*, 594-597; Olson, *An Historical and Archaeological Investigation of the Steamboat Curlew*, 113; Barrett, *The Civil War in North Carolina*, 85-87.

### Washington's Federal Garrison

New Bern, North Carolina's largest city on the sounds, was the next Union target after Roanoke Island. General Burnside's forces captured the city on 14 March 1862.<sup>23</sup> New Bern's fall meant that Federal forces, completely commanding the water, could now move north and capture the river port towns. The Union fleets unchallenged access to North Carolina's sounds gave troop transports unimpeded movement, first used to capture Fort Macon guarding Beaufort's deepwater harbor.

After capturing Fort Macon, General Burnside hoped to push inland toward Goldsboro and Raleigh, cutting off Wilmington's rail access to the Confederacy. Before taking the offensive, the general asked U. S. Secretary of War Edwin Stanton for more soldiers and supplies. Stanton replied that no more men were available for North Carolina and that Burnside should coordinate his movement inland with General McClellan, then advancing toward Richmond. While Burnside awaited McClellan's approach, he dispatched an expeditionary force to Washington.<sup>24</sup> Union troops on the transport *Admiral*, escorted by United States Navy gunboats *Louisiana*, *Delaware*, and *Commodore Perry*, left New Bern and arrived below Washington the morning of 21 March 1862.

The flotilla encountered three rows of Confederate pilings sunk into the river, forcing the vessels to blast a path through the obstructions. While the *Admiral* waited

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<sup>23</sup> Loy and Worthy, *Washington and the Pamlico*, 37.

<sup>24</sup> Barrett, *The Civil War in North Carolina*, 120-121.

below the obstructions, the *Louisiana*, *Commodore Perry*, and *Delaware* continued up the Pamlico River. Onboard the *Delaware* were two companies of the Twenty-fourth



Figure 4.1 Federal troops clearing obstructions in the Pamlico River (*Harper's Weekly*, 19 April 1862).

Massachusetts, the regimental commanders, and a band.<sup>25</sup> Washington's mayor and town dignitaries met the Union force at the wharf. The Union companies formed up, marched to the courthouse and raised the Stars and Stripes. Lieutenant Murray, the *Louisiana's* commander, claimed that he found limited secessionist feeling among Washington's residents, but prior to the U. S. Navy's arrival, locals burned Confederate materials stockpiled in town, including a gunboat under construction, to prevent Federal seizure. Lieutenant Murray assessed the Confederate defenses and tried to recover the

<sup>25</sup> Report of Lieutenant Murray, commanding U. S. S. *Louisiana*, to Commander Rowan, commanding U. S. Naval Forces, Sounds of North Carolina, 26 March 1862, in *O. R. N.*, Ser. I. Vol. 7, 151.

Fresnel lens stolen from Hatteras, only to learn that the lens was in Tarboro. The soldiers marched back to the *Delaware* without breaking rank and returned to New Bern.<sup>26</sup>

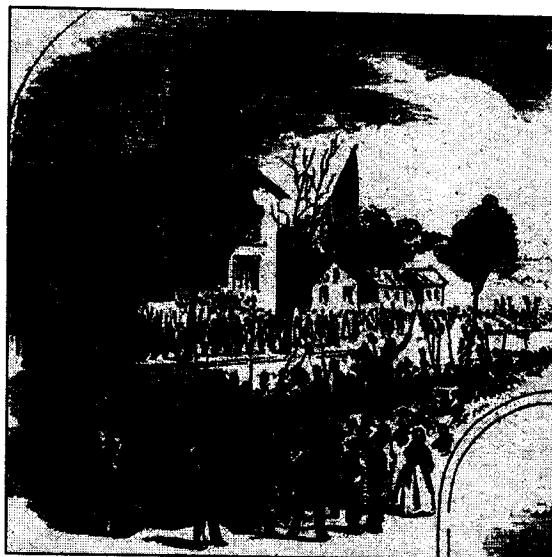


Figure 4.2 Raising the Stars and Stripes in Washington (*Harper's Weekly*, 19 April 1862).

Shortly after the establishment of Washington's Union garrison, the *Colonel Hill* steamed downriver from Tarboro and became the last Confederate vessel to approach the town. On Sunday afternoon, 25 May 1862, the *Colonel Hill* arrived at Washington carrying 417 Union prisoners from the prisoner-of-war camp at Salisbury, North Carolina.<sup>27</sup> The prisoners left Salisbury by train and on the way to Tarboro their locomotive, tender, and "express car" derailed fifteen miles from Goldsboro. The accident killed the engineer, fireman, and wood-passer, but the boxcars containing the

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<sup>26</sup> *Ibid.*, 152

<sup>27</sup> Francis. L. Bond Diary, East Carolina Manuscript Collection, Joyner Library, East Carolina University, Greenville, North Carolina.

Union prisoners miraculously stayed on the track. Once in Tarboro, the prisoners boarded the *Colonel Hill*, with two flats in tow, for the trip downriver.

Federal commanders in New Bern failed to tell Washington's garrison about the prisoner release. The garrison first learned the news on Saturday when members of the press and a transport steamer for the repatriated soldiers arrived from New Bern.

Correspondents from the *New York Times*, *New York Tribune*, and *New York Herald* covered the prisoners' joyous release. The reporter for the *Times* wrote:

Just at sunset the shriek of a steam whistle, a short distance up the river, announced the approach of the long-expected soldiers of the Union on their pilgrimage homeward. In a moment, the river front was lined with people, whose eyes soon caught a glimpse of a diminutive steamboat, above which floated, at the fore, a small white flag, and at the stern, a dingy signal of uncertain character, but which proved to be the symbol of secession.... As they neared the bridge, the American flag which flies over Col. Potter's headquarters was lifted by a timely flaw of wind, and revealed its broad stripes and bright stars gleaming above the green foliage of the trees. Instantly, as if by magic, the still depth of the Old Tar River resounded to a thunder shout of cheers from the Union soldiers.<sup>28</sup>

Captain Stedman of the Forty-fourth North Carolina Regiment, accompanied by two lieutenants and a company of infantry, released the prisoners to the garrison and then returned upriver. Confederate forces likely chose the *Colonel Hill* over the *Governor Morehead* because of the former steamer's greater age and deterioration. A reporter from the *New York Herald* described the *Colonel Hill* in unflattering terms:

The *Colonel Hill*, Captain Hawks [Hanks], was a fair specimen of a Southern river steamer, looking as if the

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<sup>28</sup> *New York Times*, 31 May 1862, 1.





Figure 4.3 The *Colonel Hill* arrives in Washington carrying Federal prisoners. The U. S. S. *Louisiana* is the on the left (*Harper's Weekly*, 14 June 1862).

least jar would shake her to pieces. She, for a wonder, was a side-wheel boat, but her engines were the most wheezy, puffy things, that could possibly be put together. She is light, of very short build, and only draws about two feet of water.<sup>29</sup>

Four hundred and ninety more prisoners arrived aboard the *Colonel Hill* on the 29 May.

The second group's trip also experienced a train wreck and even greater privation.

Leaving Tarboro late in the day forced the *Colonel Hill* to stop overnight at a landing.

The soldiers slept in a tar warehouse or under pine trees. Those who slept under the trees

woke up with sap stuck to them and nicknamed the place "Hotel de Tar."<sup>30</sup> Each group

of repatriated soldiers boarded the steamer *Pilot Boy* at Washington. The *Pilot Boy*

steamed down the Pamlico, passed the Confederate obstructions, and then transferred the

soldiers to the USS *Cossack* for the trip to New Bern.<sup>31</sup>

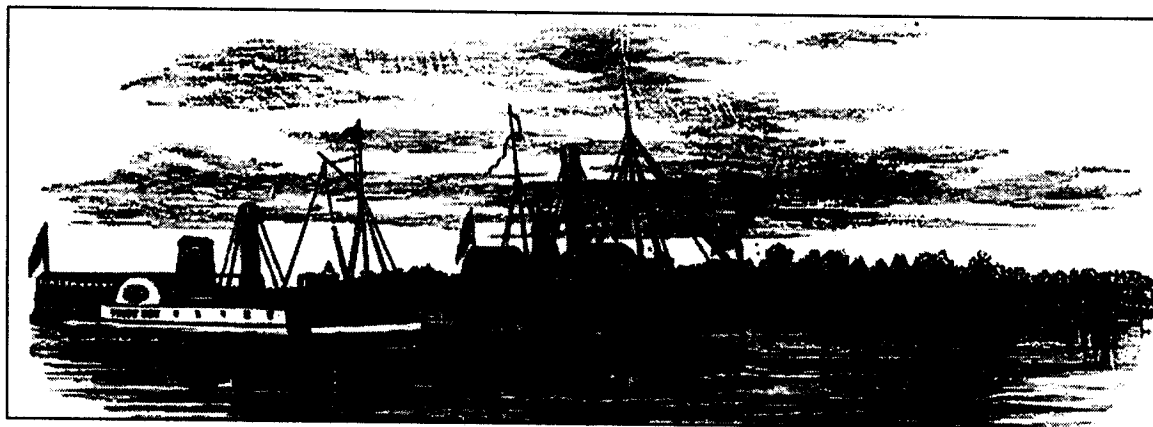


Figure 4.4 Prisoner transfer from the *Pilot Boy* to the *Cossack* (Paul F. Mottelay and T. Campbell-Copeland, eds., *The Soldier in Our Civil War: A Pictorial History of the Conflict* (New York: Stanley Bradley Publishing, 1890)).

<sup>29</sup> *New York Herald*, 31 May 1862, 8.

<sup>30</sup> *New York Herald*, 3 June 1862, 7.

<sup>31</sup> *New York Times*, 31 May 1862, 1; *New York Daily Tribune*, 3 June 1862, 2.

On 31 May and 3 June, two more groups totaling 596 Union soldiers were released at Washington. Like those released before them, the soldiers gave out a loud cheer upon seeing the Stars and Stripes.<sup>32</sup> In total, 1503 Union prisoners traveled down the Tar River aboard the *Colonel Hill*.

Union forces sortied several times from Washington to disrupt Confederate activities upriver. Lieutenant Renshaw, the *Louisiana's* captain and commander of the naval forces in Washington, organized a raid up the Tar River for 9 November 1862. Intelligence reports indicated to Renshaw that an ironclad ram was under construction above Greenville, a possibility that threatened the garrison's security. In response, he assembled a reconnaissance force consisting of fifty-four volunteers from the *Louisiana* and the garrison, the captured Confederate steamer *Old North State* armed with a howitzer, a launch armed with a howitzer, and a flatboat.<sup>33</sup>

Engineer Lay, of the *Louisiana*, commanded the expedition as it moved upstream. He plotted the sandbars and noted possible ambush areas, but did not locate any large vessels. One mile below Greenville, a sandbar blocked the *Old North State's* progress, forcing the expedition to continue in the flat and launch. Upon reaching Greenville, the expedition split in two, Lay and the soldiers in the flat proceeded into town under a flag of truce and accepted the town's surrender from the mayor. While Lay dealt with the mayor, Confederate soldiers fired on the launch's crew sent to command Greenville's Tar

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<sup>32</sup> Francis. L. Bond Diary, East Carolina Manuscript Collection, Joyner Library, East Carolina University, Greenville, North Carolina; *Washington (North Carolina) New Era*, 4 June 1862.

<sup>33</sup> Report of Second Assistant Engineer Lay to Acting Lieutenant Renshaw, commanding U. S. S. *Louisiana*, 11 November 1862, in *O. R. N.*, Ser. I, Vol. 8, 204.

River Bridge. In response, Lay and his party rushed to the bridge, firing several stands of grape shot towards the concealed Confederate position. Confederate rifle fire killed one of the launch's crew. Lay avenged the man's death by burning Greenville's Tar River Bridge and taking ten residents prisoner before returning downriver to the *Old North State*.<sup>34</sup>

The reconnaissance party encountered Confederate cavalry while steaming downriver. Union gunners fired grapeshot at the mounted troops with no effect; the distance to the retreating men was too great. While firing on the cavalry, a Union gun crewmember suffered injury when his hastily swabbed howitzer misfired and injured him with the ramrod.<sup>35</sup> The steamer returned to Washington without further incident. From the expedition, Engineer Lay concluded that an ironclad could not traverse the river's shallow water

Union cavalry troops ensured Washington's naval security during a cross-country raid in July 1863. Brigadier General Edward Potter led troops from New Bern up the Tar River, with the objective of destroying as much Confederate property as possible, especially the Wilmington and Weldon railroad bridge at Rocky Mount and an ironclad under construction in Tarboro. While riding up the Tar River road, Potter's troops ransacked Greenville and Sparta before reaching Rocky Mount on 19 July. The cavalrymen caused considerable damage to the Confederate infrastructure in Rocky Mount, including the destruction of the Wilmington and Weldon train depot, a steam

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<sup>34</sup> Ibid., 205.

<sup>35</sup> Stephen F. Blanding, *Recollections of a Sailor Boy; or the Cruise of the Gunboat Louisiana* (Providence, Rhode Island: E. A. Johnson and Company, 1886), 172-217.

engine and cars full of supplies, and the trestle over the Tar River. The following day, cavalry descended upon Tarboro, setting fire to stockpiled Confederate supplies, the town's train depot, the Confederate ironclad under construction, the *Governor Morehead*, and the *Colonel Hill*.<sup>36</sup> A Tarboro resident described the vessels destroyed in the raid:

The work on the gunboat at Tarborough was begun in September last [1862], continued one month, then stopped (in order to work on the iron-clads at Wilmington and afterward on the Roanoke), and was renewed only two weeks before General Potter destroyed it (July 20); at which time, about 20 feet of its amid-ships section had been put up in six parts of the frame of bottom, four parts making sides and angles and tops. More of the frame, in sections, was ready to be put up. General Potter destroyed this, and two unarmed river steamboats. One (of iron, stern-wheel, drawing 20 inches, fast, and in good order) called *Governor Morehead*, owned by Myers, who took the lights from the house at Hatteras Inlet when the war broke out. The other, called *General Hill* [Confederate officer Daniel H. Hill rose from the rank of colonel to general in 1861] (old, slow, and stern-wheel, drawing 6 feet), and owned by Willard. There was then a high flood in the river.<sup>37</sup>

After completing destruction of the Confederate materials at Tarboro, the raiding party returned to New Bern under continual harassment by Confederate forces. The destruction of the *Colonel Hill* (ex. *Oregon*) and the *Governor Morehead* ended the steamers career on the Tar/Pamlico River.

### Conclusion

The Union blockade of Southern ports disrupted the Tar/Pamlico region's

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<sup>36</sup> Report of Major Floyd Clarkson, Commanding 12<sup>th</sup> New York Cavalry, 24 July 1863, New Bern, North Carolina, in *O. R. A. Ser. I, Vol. 27, Part 2, 973.*

<sup>37</sup> Statement of Michael Cohen to S. Phillips Lee, Acting Rear-Admiral, 18 August 1863, New Bern, North Carolina, in *O. R. A. Ser. I, Vol. 29, Part 2, 71.*

economy. Unemployed by the cessation of coastal trade, Tar/Pamlico River steamers played a vital role in the buildup of North Carolina's troops and coastal defenses during the Civil War's opening months. Most Tar/Pamlico River steamers were unarmed and operated in non-combatant roles as supply and troop transports. The *Colonel Hill* (ex. *Oregon*), *Governor Morehead*, *Post Boy*, and *Cotton Plant*, remained in private hands; each vessel operated under North Carolina state government contract in a fashion similar to the way its owners employed it before the war.

Even after the Union invasion of North Carolina, most Tar/Pamlico River steamers did not actively engage Union naval vessels. Only two steamers, the *Raleigh* (ex. *Loper*) and the *Appomattox* (ex. *Empire*), became official Confederate States naval vessels that fought the United States Navy. The Mosquito Fleet's limited number, small size, and light armament proved ineffectual against the more numerous and heavily armed U. S. Navy vessels of the Burnside expedition.

After Union forces captured Washington, only the *Colonel Hill* and *Governor Morehead* remained in Confederate hands on the Tar/Pamlico River. The vessels operated upstream from Washington, continuing to move troops and supplies, but were effectively neutralized by U. S. Navy gunboats supporting Washington's garrison.

The North's naval superiority allowed Union forces to easily dominate eastern North Carolina using shallow draft steam gunboats. U. S. Navy steamers facilitated communication and supply of the widely separated Union garrison towns and brought considerable firepower to bear against Confederate movements against the garrisons. Confederate operations against Washington highlighted the importance of the U. S.

Navy's steam gunboats. The gunboats' mobility during the siege of Washington in April 1863 was a key factor in preventing the establishment of Confederate artillery batteries that could bombard the garrison.

Destruction of the *Colonel Hill* and *Governor Morehead*, as well as the Tarboro ironclad, ended all possibility of a Confederate naval operation against Washington. Eradication of the steamers also represented the complete destruction of the transportation system that brought communication and economic prosperity to the region.

## CHAPTER 5: ARCHAEOLOGICAL INVESTIGATION OF THE *OREGON*

### Introduction

During the summer 1985, North Carolina's Underwater Archaeology Unit (UAU) conducted fieldwork to locate a wreck depicted on an 1878 Army Corps of Engineers map of the Tar River below Tarboro. The UAU's fieldwork established that remnants of a wooden vessel still existed at a position indicated as the *Oregon*. UAU archaeologists designated the site 0004TRR, the fourth wreck found in the Tar River. Historical evidence suggested to UAU director Richard Lawrence that the wreck was a Baltimore-built steamboat that arrived in North Carolina in 1848 through a newly formed inlet in the Outer Banks. However, he was uncertain of the wreck site's true identity, as no historical evidence seemed to corroborate the 1878 map.

Following several months of historical research into Tar/Pamlico River steam navigation by the Principal Investigator, East Carolina University's Maritime Studies Program summer field school conducted a phase II survey of the 0004TRR wreck site during the first week of June 1999. The survey's goals were the relocation and documentation of the wreck site to test multiple working hypotheses generated from historical research. Upon the survey's completion, the Principal Investigator compared survey results to the multiple working hypotheses. After eliminating all but one hypothesis, the Principal Investigator identified site 0004TRR as having the best fit with the *Oregon/Colonel Hill*. The vessel's historical record was then combined with its archaeological remains, creating a detailed picture of the site formation processes that changed it from a working vessel to an archaeological site.



### Research Design

Historical research was centrally important to archaeologically investigating site 0004TRR. It generated the multiple working hypotheses tested during the archaeological investigation. Previous research into the identity of 0004TRR by the North Carolina UAU, local historians, and East Carolina University's Maritime Studies Program reached divergent conclusions. Therefore, this project's first task was compiling relevant material used in previous investigations to form a baseline for the new investigation. Analysis of the material uncovered historical gaps and inconsistencies that served to guide further research. Historical information developed a clear picture of vessels involved in Tar/Pamlico River steam navigation, and eliminated the inconsistencies.

Baseline material yielded a list of possible identities, including the names: *Oregon*, *Colonel/General Hill* (hereafter referred to as the *Colonel Hill*), *Post Boy*, *Cotton Plant*, and *Governor Morehead*. Unnamed vessels lost at Tarboro included an Albemarle Class Confederate Ram and a barge. The most suggestive evidence was the 1878 Army Corps of Engineers' survey map. The map depicted the Tar River for two miles below Tarboro. Roughly a mile downriver from Tarboro, the Army Corps of Engineers surveyors plotted a wreck and labeled it *Oregon* (Figure 5.1). No other wrecks were marked on the map. A report by Assistant Engineer W. G. Williamson accompanied the map and stated that the wreck of the *Oregon* was encountered about one mile below Tarboro. The map preceded an effort by the Army Corps of Engineers to

clear the river of snags resulting in the wreck's removal at a cost of \$500.<sup>1</sup> Further details about the Army Corps of Engineers' activities came from the *Tarboro Southerner*, which described removal of the wreck's boiler and stated that it had sunk during the Civil War.<sup>2</sup>

Another strong source of information came from *The War of the Rebellion: A Compilation of the Official Records of the Union and Confederate Armies (O. R. A.)*. Federal correspondence book indicated that three and possibly four vessels sank near Tarboro during the Civil War. The vessels were the *Colonel Hill*, the *Governor Morehead*, an unidentified barge, and an Albemarle Class Confederate Ram under construction at Tarboro. Federal cavalymen under the command of Brigadier General Edward E. Potter set fire to, or otherwise destroyed, these vessels on a raid through eastern North Carolina in July 1863.<sup>3</sup> The Tarboro cavalry raid's particulars were presented in the previous chapter.

Information in the Army Corps of Engineers report seemed to contradict the *Tarboro Southerner* article and the *O. R. A.* The Engineers' report stated that the wreck was the *Oregon*, a vessel not mentioned in the *Official Records*. Further research

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<sup>1</sup> *Annual Report of the Chief of Engineers to the Secretary of War for the Year 1879* (Washington, Government Printing Office, 1879), 702.

<sup>2</sup> *Tarboro (North Carolina) Southerner*, 2 December 1880.

<sup>3</sup> Report of Major-General John G. Foster, commanding the Department of Virginia and North Carolina, to Major-General H. W. Halleck, General-in-Chief U. S. Army, 24 July 1863 in *O. R. A.* ser. I, vol. 27, part 2, 963, 964; Report of Major Floyd Clarkson, Commanding Twelfth New York Cavalry, to Lieutenant J. Nourse, Acting Adjutant, Cavalry Expedition, New Bern, North Carolina, 24 July 1863 in *O. R. A.* Ser. I, Vol. 27, Part 2, 973.

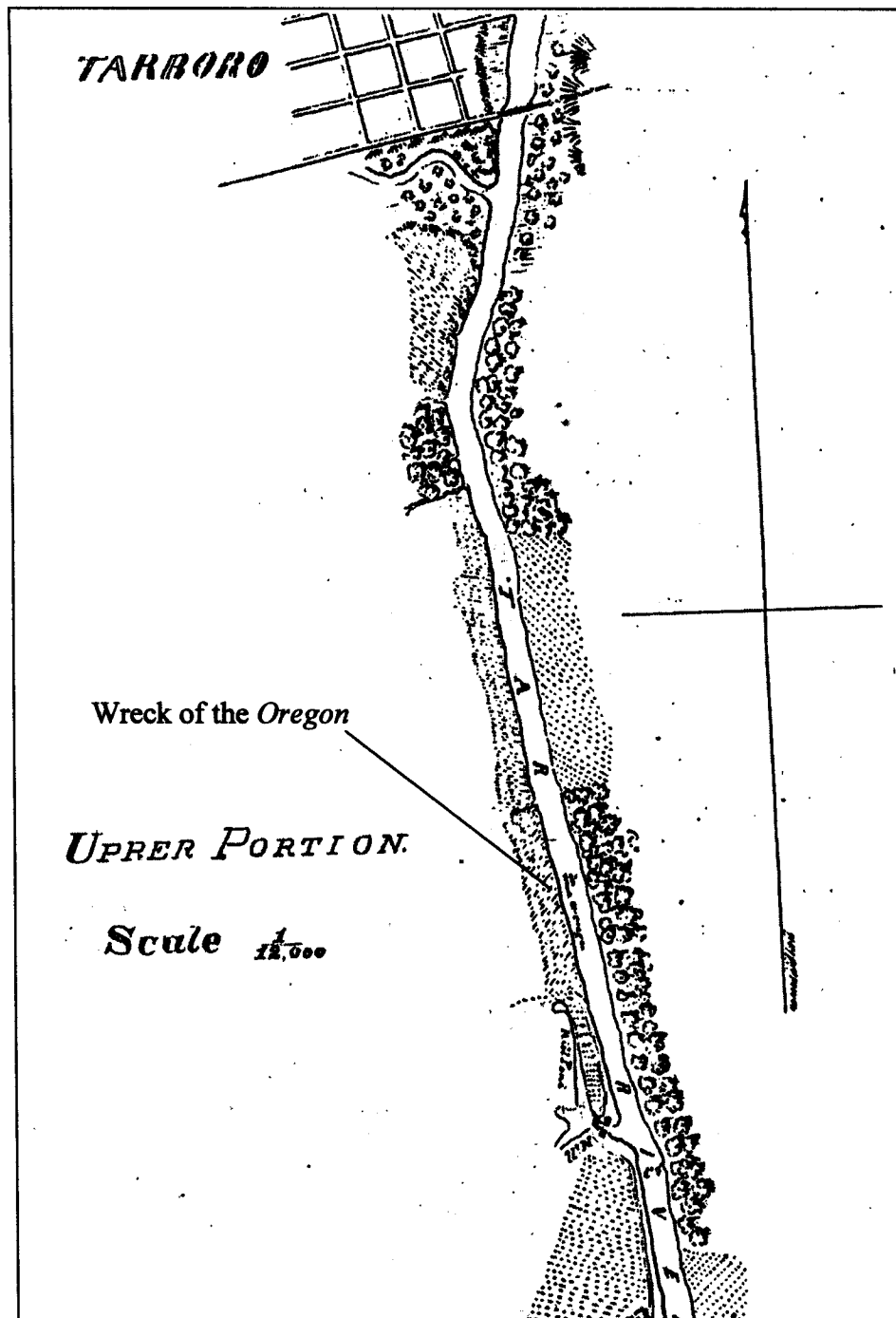


Figure 5.1 Map of the Tar River downstream from Tarboro, North Carolina (Report of Mr. W.G. Williamson, Assistant Engineer to Captain Charles B. Phillips, Captain of Engineers, *Annual Report of the Chief of Engineers to the Secretary of War for the Year 1879* (Washington: Government Printing Office, 1879), 703.

revealed that the *Colonel Hill* was named *Oregon* before the Civil War.<sup>4</sup> This revelation shrunk the number of candidates by one.

An in-depth examination of the historical record eliminated three other candidates, the *Post Boy*, the *Cotton Plant*, and the *Governor Morehead*. Local author F. Roy Johnson stated that Union soldiers under General Potter burned the *Post Boy* during the Tarboro cavalry raid.<sup>5</sup> Johnson failed to substantiate this assertion with a primary or secondary source reference. As presented in previous chapters, the *Post Boy* was one of the largest vessels operating on the Pamlico River. It never ascended the Tar River during prewar years (see chapter 3, page 90).

The second candidate eliminated was the *Cotton Plant*, which actually sank at Tarboro. However, reports in the Tarboro *Southerner* described the *Cotton Plant*'s destruction as occurring on 11 December 1880, nine days after the Army Corps of Engineers removed the older wreck's boiler and almost two years after the survey. Other newspaper articles reported that the *Cotton Plant*'s iron hull was towed downriver to Washington.<sup>6</sup> *Merchant Steam Vessels of the United States, 1790-1868* listed the vessel, now re-rigged as a barge on 17 June 1881.<sup>7</sup>

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<sup>4</sup> *Tarboro Southerner*, 26 April 1926.

<sup>5</sup> F. Roy Johnson, *Sail and Steam Navigation of Eastern North Carolina* (Murfreesboro, North Carolina: Johnson Publishing Company, 1986), 22.

<sup>6</sup> *Tarboro (North Carolina) Southerner*, 16 December 1880, 3 March 1881.

<sup>7</sup> Forrest Holdcamper, William M. Lytle, and C. Bradford Mitchell, eds. *Merchant Steam Vessels of the United States, 1790-1868* (Staten Island, New York: Steamship Historical Society of America, 1975), 47.

The third vessel, the *Governor Morehead*, seemed a possible candidate. However, Tarboro furniture maker Francis L. Bond's diary described the iron-hulled steamer's salvage in 1864. "Messers. Daggett and Coney bought the hull and engine of the Steamer *Morehead*...paid \$200.00 they raised her from where she was sunk tooke [sic] her in 7 pieces transported her over the railroad from Tawboro [sic] to Georgetown SC."<sup>8</sup> Historical evidence clearly attributed an iron hull to the steamer; another reason suggesting that wreck 0004TRR was not the *Governor Morehead*.

The historical record eliminated the *Post Boy*, *Cotton Plant*, and *Governor Morehead*, leaving three possible vessels as 0004TRR: the *Oregon/Colonel Hill*, an unidentified barge, or an Albemarle Class Confederate Ram. Each possibility had distinct characteristics. Fieldwork concentrated on determining three basic characteristics of the site: its dimensions and overall shape, its framing pattern and size of scantlings, and what propulsion system the vessel used. These three variables, size, construction, and propulsion answered the following multiple working hypotheses and disproved the Null Hypothesis.

The Null Hypothesis was: There is no vessel located at site 0004TRR. If during the fieldwork, archaeologists cannot identify certain characteristics such as frames, planking, a keel, or other clearly identifiable basic vessel construction features, then site 0004TRR is not a vessel and may be some sort of debris or dock structure or the vessel was totally removed in 1880. The structure's uniformity and its similarity with ship construction techniques employed in the nineteenth century easily eliminated the Null

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<sup>8</sup> Francis L. Bond Diary, 24 May 1864.

Hypothesis. Once the Null Hypothesis was disproved, the following three main hypotheses were tested before testing any subsidiary hypotheses.

Hypothesis 1: If the site is the remains of a steamship, then it will exhibit evidence of steam machinery, machinery mounts, or fittings associated with steam machinery. An affirmative answer to the question precludes other forms of propulsion, such as sails or poling as the vessels primary propulsion source. If evidence at the site supports Hypothesis 1, then research will test additional hypotheses to elucidate whether the site's characteristics match what is known about the *Oregon/Colonel Hill*. While historical evidence is slightly contradictory, the preponderance of primary source material attributes sidewheels to the steamer.

Hypothesis 1a asks; if the site is the remains of a sidewheel steamship, then it will exhibit a very high length-to-breadth ratio and a cigar-shaped profile that narrows markedly at both the bow and stern.

Hypothesis 1b asks; if the site is the remains of a sternwheel steamship, then it will exhibit a bluff bow and a stern that does not narrow appreciably from the vessel's maximum breadth.

Hypothesis 1c asks; if the site is the remains of a screw propeller steamship, then it will exhibit a stern arrangement including significant pieces of deadwood through which a propeller shaft tunnel was bored.

Hypothesis 2: If the site exhibits a square or rectangular shape, simple construction methods with small dimension scantlings, and absolutely no evidence of any propulsion system, then site 0004TRR was a barge or flat.



site's north end at 18 S 270,988 meters east and 3,973,497 meters north, the south end at 18 S 271,019 meters east and 3,973,481 meters north. Coordinates were taken with a handheld GPS.

Confined between banks that rise thirty feet from the riverbed on the west side and twenty feet on the east side, the Tar River ran almost directly south from Tarboro to the wreck site. Cypress trees line the steeply sloping riverbanks and a dense thicket scattered with oak trees covered the riverbank's crest. The thicket blended into a densely forested strip along the west bank that gave way to a cleared field. A thin band of trees separated the east bank from an overgrown, swampy clearing across which, North Carolina State Highway 64 was visible. Water discharged from Tarboro's municipal sewage treatment plant on the west bank flowed into the river roughly three hundred yards upstream.

The riverbanks were composed of brown clay, while loose, coarse quartzite sand covered the riverbed in a pattern of sandbanks and scours. Sandbanks were largest in the river's center where the current was least. Current-formed sand scours resulted in channels along the riverbanks on either side of the central sandbank. The central sandbank also exhibited signs of the current's influence. Sharply delineated slopes and drop-offs in the central sandbank occurred where the current cut from one riverbank to the other. The wreck site rested on the central sandbank's west side. Sand accretion around the wreck increased the sandbank's height by one foot, creating a roughly level area stretching fifty feet on the wreck's north, east and, south sides. The sandbank dropped into the left channel twenty feet beyond the wreck's northwestern end.



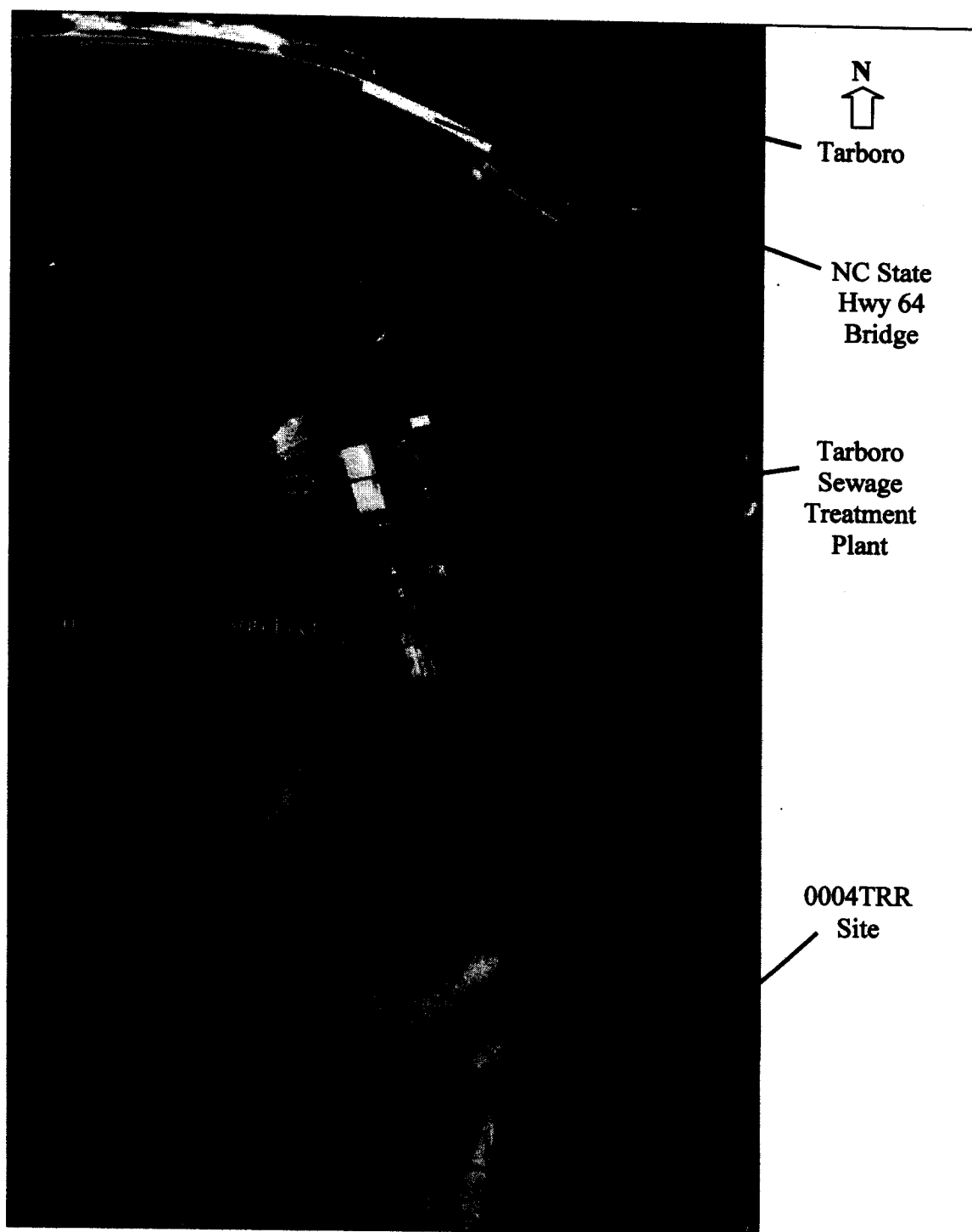


Figure 5.3 Aerial view of the Tar River south of the NC State Highway 64 Bridge showing 0004TRR's position.

The Tar River's freshwater flow appeared clear or slightly amber when held in a small volume container, however the river's color ranged from amber in the shallows to dark brown or black in deeper water as a result of dissolved tannins released by the decay of organic matter. After heavy rains, or in the wet season, the river becomes cloudy with suspended sediment as its flow increases.

River flow varies widely by season, increasing during the wet fall and winter months and decreasing during the drier spring and summer months. Water flow rates from a United States Geological Survey (USGS) monitoring station in Tarboro provide historic flow information from 1896 to the present. During the Maritime Studies Program fieldwork in June 1999, water at the site flowed at 250 cubic feet per second, or roughly 2-3 miles per hour. The average flow for June 1999 was 292 cubic feet per second. Mean water flow for June, compiled from over a century of data, was 1,327 cubic feet per second. June's highest recorded average flow was in 1979 at a rate of 4,873 cubic feet per minute.<sup>9</sup> Average river flow rates for June 1999 were considerably below the yearly average flow rate of 2,257 cubic feet per second. The river's flow rate was directly proportional to its depth. In June of 1999, water depths on the central sandbank ranged from exposed sand to two and one half feet. Channel depth was five to six feet.

During the first week of June 1999, the site was easily identified in low water. Water depths on site ranged from two feet at the site's upstream end to eight inches over

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<sup>9</sup> United States Geological Survey (USGS), Historical Streamflow Values for the Tar River at Tarboro, North Carolina, 10 February 2003 <[http://waterdata.usgs.gov/nc/nwis/nwisman/?site\\_no=02083500&agency\\_cd=USGS](http://waterdata.usgs.gov/nc/nwis/nwisman/?site_no=02083500&agency_cd=USGS)>.

the rest of the site. Water visibility exceeded the wreck's deepest parts. Dissolved tannins limited visibility to four feet in the deeper pools. The current easily moved sand and organic debris across the site. Aside from the sand, students found deposits of gray/white fine clay under the wreck's southern end. No vegetation grew on site and water temperatures ranged from 73 to 78 degrees.

The sewage treatment plant outflow created concern for the field school participants' health and for wreck site degradation. Participants were cautioned to report any infected lacerations. Students noticed a distasteful smell from the treatment plant's north end, but it was not present at the site. A small algal bloom surrounded the outflow, but did not extend downstream to the wreck. After a week on site, crewmembers did not report any adverse health effects, nor did the site exhibit large quantities of algae on the timbers.

#### Previous Archaeological Investigation

As previously mentioned, North Carolina's UAU conducted a preliminary investigation of the *Oregon* wreck site on 1 August 1985. State archaeologists Richard Lawrence and Leslie Bright used a Geometrics 806M magnetometer deployed from an outboard-equipped, fourteen-foot Mckee Craft johnboat for the survey's phase I portion. The survey began at the Tarboro boat ramp and moved downstream to locate the wreck. The archaeologists recorded magnetic anomalies associated with railroad and highway bridges, pipelines, and powerlines. Roughly 1,310 yards downstream from the State Highway 64 Bridge, the magnetometer registered a 1,100 gamma, bipolar anomaly. The survey ended roughly one mile downstream from the highway bridge where the

archaeologists turned back upstream to investigate the anomaly. Repeated magnetometer passes over the anomaly delineated its position. Lawrence and Bright then buoyed the position and anchored.

High water levels resulting from recent rains facilitated the survey's phase I portion, but hampered diver investigation. The archaeologists encountered wooden material twelve feet underwater. Zero visibility and strong current prevented an extensive site investigation; the archaeologists felt frame ends protruding from sand for a distance of sixty feet. During the investigation, the archaeologists recovered a loose twelve-inch piece of wood, believed to be part of a frame, an iron spike, two pieces of coal, and a clinker. To conclude the investigation, the archaeologists photographed the surroundings to facilitate relocating the site. The UAU archaeologists recorded the site's location as roughly one mile below Tarboro on the river's west side and photographed the site's two most prominent landmarks. The first landmark was a large, dead cypress tree on the west bank next to the site, the second landmark was the Highway 64 Bridge upstream. The wood and clinker were taken from the site and conserved at the UAU's facility in Kure Beach.

Richard Lawrence returned to the site 24 July 1986 and found the river at a much lower level. Upon reaching the site, he found water only a foot deep. The wreck appeared more buried than the previous year; only a few timbers poked through the sand. A cursory examination and several photographs concluded Lawrence's site examination. Artifactual evidence, the pieces of coal and clinker, gathered during the 1985 survey and

the site's location in relation to the *Oregon's* position on the Army Corps of Engineers' map led Richard Lawrence to tentatively identify the site as the steamer *Oregon*.<sup>10</sup>

#### Summer 1999 Investigation

Prior to beginning fieldwork, the UAU issued the project a North Carolina Department of Cultural Resources Permit for Exploration. Permit number 99TRR602 allowed the project to, "Archaeologically investigate Underwater Archaeology Unit (UAU) site number 0004TRR (*Oregon Site*) in an effort to: produce a site map illustrating the current extent and condition of the site and collect data to assist in confirming the identity of this shipwreck."<sup>11</sup> Maritime Studies Summer Field School staff and students initiated the project's first phase, relocating the site on Monday, 31 May 1999.

On 31 May, the students and staff found the water too shallow to launch the pontoon dive platform. Field school director, Dr. Bradley Rodgers, then divided the participants into two teams. The first team conducted a land reconnaissance along the western riverbank, while the second team walked downstream in the riverbed. Dr. Rodgers charged both teams with visually locating the wreck site. The site was easily identified since frames, bilge ceiling, and outer hull planking protruded from the sandbank.

A temporary datum point was established on the river's east bank. Students positioned a transit and electronic distance meter (EDM) over the datum. Two more

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<sup>10</sup> Richard Lawrence, personal communication, 7 December 2000.

<sup>11</sup> North Carolina Department of Cultural Resources Permit for Exploration, in possession of the author.

students, carrying a stadia rod and reflective prism, walked along the river's banks, stopping every 50 feet to measure angle and distance from the datum to the river's edge. Prior to charting the river's course, the transit's zero angle was established on the westernmost abutment of the eastbound Highway 64 Bridge. Contrary to archaeological protocol, a temporary datum was established, as it was likely that the river would destroy any permanent marker on the river's edge. Eventually, another datum was established on the west bank and the process repeated. These activities mapped the area around the wreck and placed it in context.

While team members set up datums and mapped the river's course, others strung a wire baseline marked in ten-foot increments along the wreck's longitudinal axis. A piece of rebar hammered into the sediment supported the baseline. The baseline was leveled and secured to its rebar supports five inches under the water surface. Perpendicular

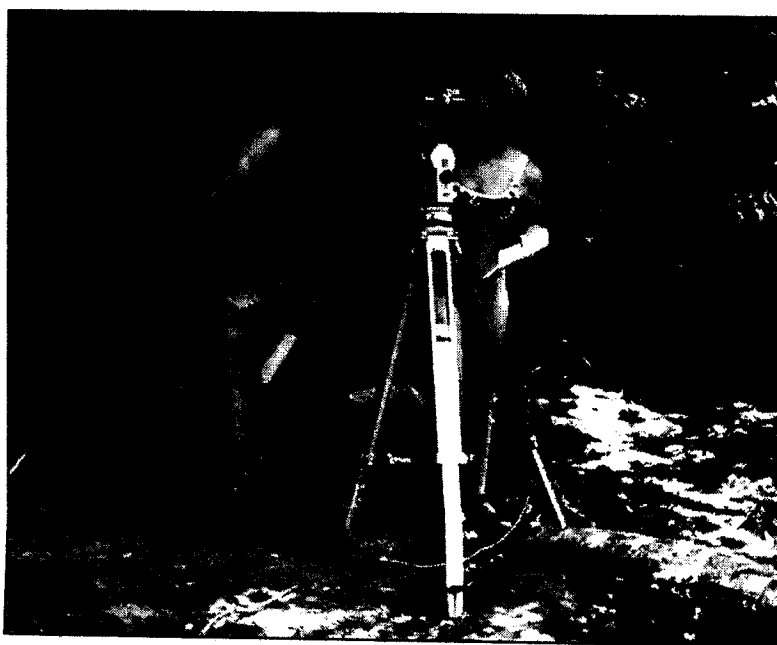


Figure 5.4 Maritime students mapping Tar River banks with transit and EDM.

crosslines attached at ten-foot intervals on both sides of the baseline divided the site into sections. Once the baseline was set, it was mapped from the datum.

Test excavations, protected by a jury-rigged current deflector determined the vessel's north end. Two trenches were excavated to reveal the site's northern and southern extents. A water induction dredge removed sand from the north end, revealing the vessel's sternpost under one foot of sediment. Further dredging revealed more hull structure and a concentration of artifactual material. Dr. Rodgers stopped the excavation upon inspecting the concreted mass of iron artifacts. Further excavation would have destroyed the stratigraphy and necessitated artifact recovery and conservation.

Excavation of the site's southern end commenced after terminating the north end excavation. Students cleared six inches of sediment from the wreck's extreme southern end to identify overall length and record the keel.

After revealing the extent of the wreck, each team member received one section as delineated by the baseline and crosslines. Utilizing trilateration and measured sketches, an accurate site map was produced. All measurements were recorded in tenths of feet so field sketches could be easily transferred to the site map. Each student drew a measured sketch and table of trilaterations on an eight and one half-inch by eleven-inch sheets of mylar film. In areas where a thin layer of sand covered the scantlings, hand-fanning exposed the timbers. Over a period of two days, students drew the site's fifteen sections. After mapping was finished, field personnel removed the baseline and current barrier, allowing the excavation units to fill with sand.



Figure 5.5 Students mapping the *Oregon's* stern. Note the current barrier at right.

Upon completion of the fieldwork, students compiled a site map by transferring their sections onto graph paper and converting their trilaterations into measured drawings. Students also created an overall site map by plotting transit and EDM measurements. The Principal Investigator then converted the wreck map and the overall site map into computer aided drafting (CAD) drawings. Both maps were combined using CAD to create a map displaying the wreck site's position within the geographic context of the Tar River (Figure 5.3).

#### Summer 1999 Site Description

Site remains covered an area extending 80 feet long by 13 feet wide and consisted of the incomplete articulated bilge of a vessel. The vessel's southern end appeared to be broken-off and some timbers were charred. Structural components, including a sternpost, outer hull planking, machinery mounts, a through-hull fitting, bilge ceiling, floors, a first futtock, bilge keelsons, a pump box, and a keel were identified. Other materials found



were bricks, coal clinkers, a piece of copper sheathing, and a variety of fastenings. A pocket of artifactual material containing screw eyes, an axe head, and other unidentified iron objects concreted together was uncovered in the stern bilge. In the following site maps, two conventions were used to facilitate site depiction. First, crosshatched areas indicate charred timbers. Second, since much of the site was covered with sand students frequently could not determine the full length of timber, therefore timbers that continued into deeper sand were depicted with dashed lines.

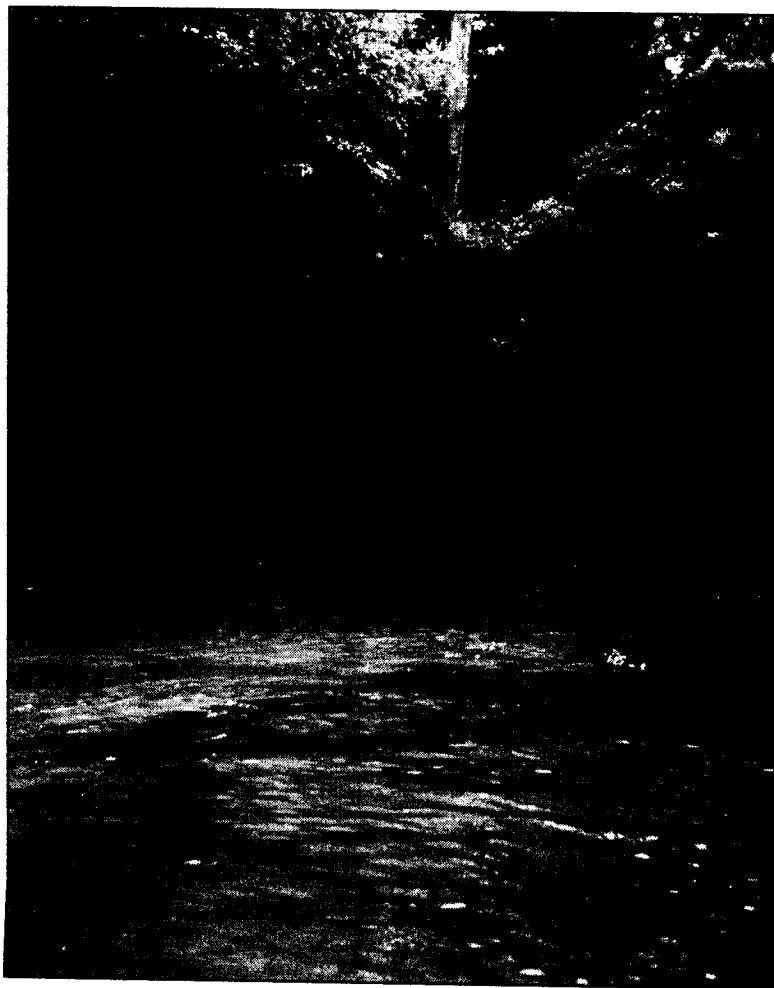


Figure 5.6 Appearance of the site prior to mapping.

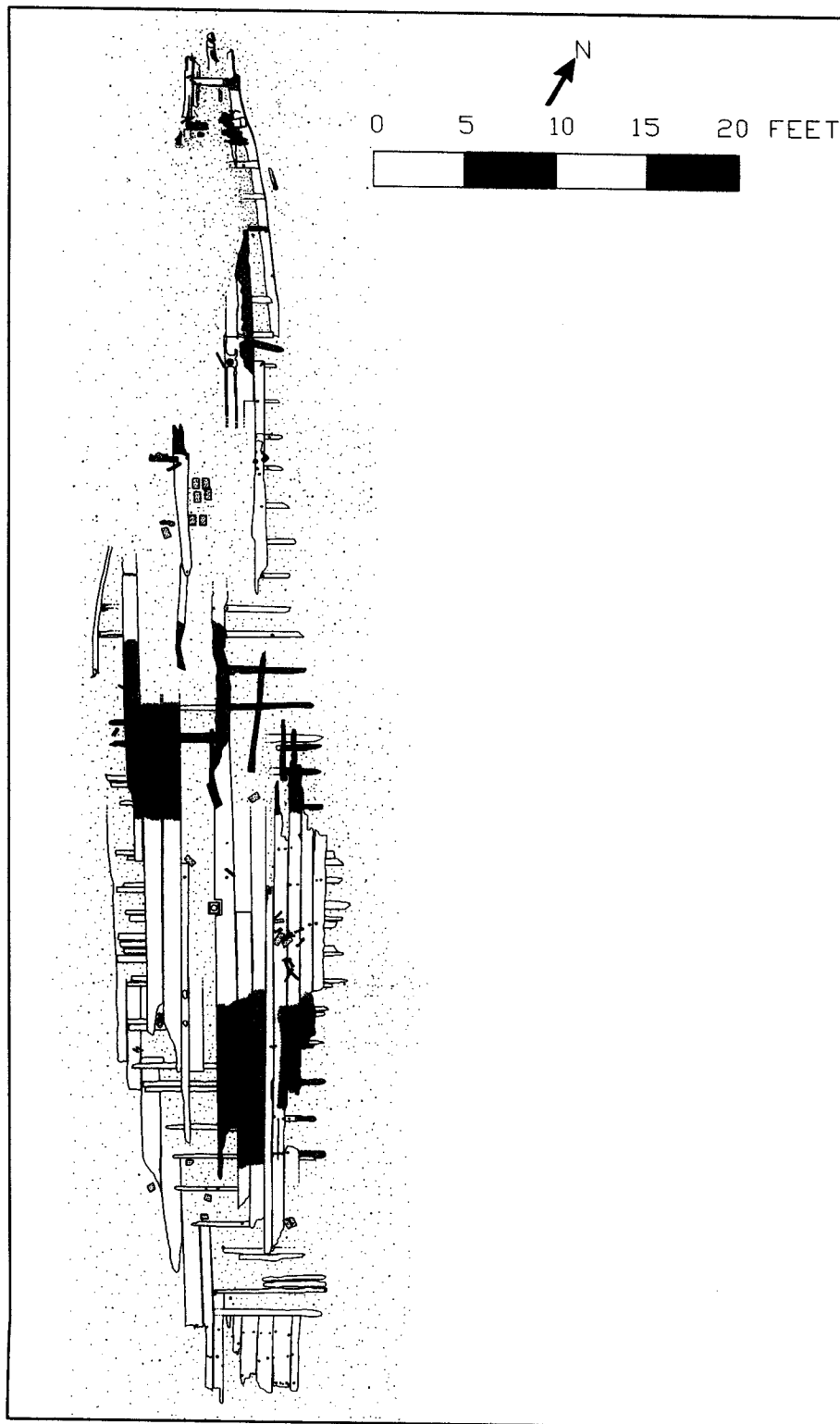


Figure 5.7 0004TRR wreck site plan view.

Sternpost. The site's northernmost portion appeared to be the vessel's sternpost. However, the timber cannot be unequivocally identified as a sternpost since rudder gudgeons were not found. Evidence for the assertion comes from the spatially close machinery mounts and through-hull fitting, located 18 feet away. These structural features would only be found in the stern of a vessel. The sternpost was made from two pieces of wood secured together with iron drift bolts. The pieces created a made rabbet into which the hood ends of the outer hull planking fit. Originally the sternpost was more vertical, however the site's deterioration caused outer hull planking to splay outwards.<sup>12</sup>

While excavating a trench to ascertain the site's northern extent, students uncovered a pile of more than ten iron screw eyes, an axe head, and other unidentified iron objects adjacent to the sternpost. Excavation stopped upon finding artifactual material in order to preserve its stratigraphy.

Outer hull planking. Outer hull planking measured 1-foot sided by 1-2 inches moulded. An average planking length was not recorded. Machine cut spikes secured the outer hull planking to the frames. Two spikes were used to join planking and frame.

Wooden machinery mount. Originally thought to be a portion of the vessel's keelson, the wooden machinery mount was made from several timbers joined with a simple scarp and spikes. The timber begins 18 feet south of the sternpost. It measured 7 inches sided by 9 inches moulded and stretched a distance of 13 feet 8 inches along the vessel's longitudinal axis. The machinery mount had rebates cut out of the underside to

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<sup>12</sup> For clarity's sake, locations on the site will be referenced in relation to the sternpost at the site's northern end and the missing bow at the southern end.

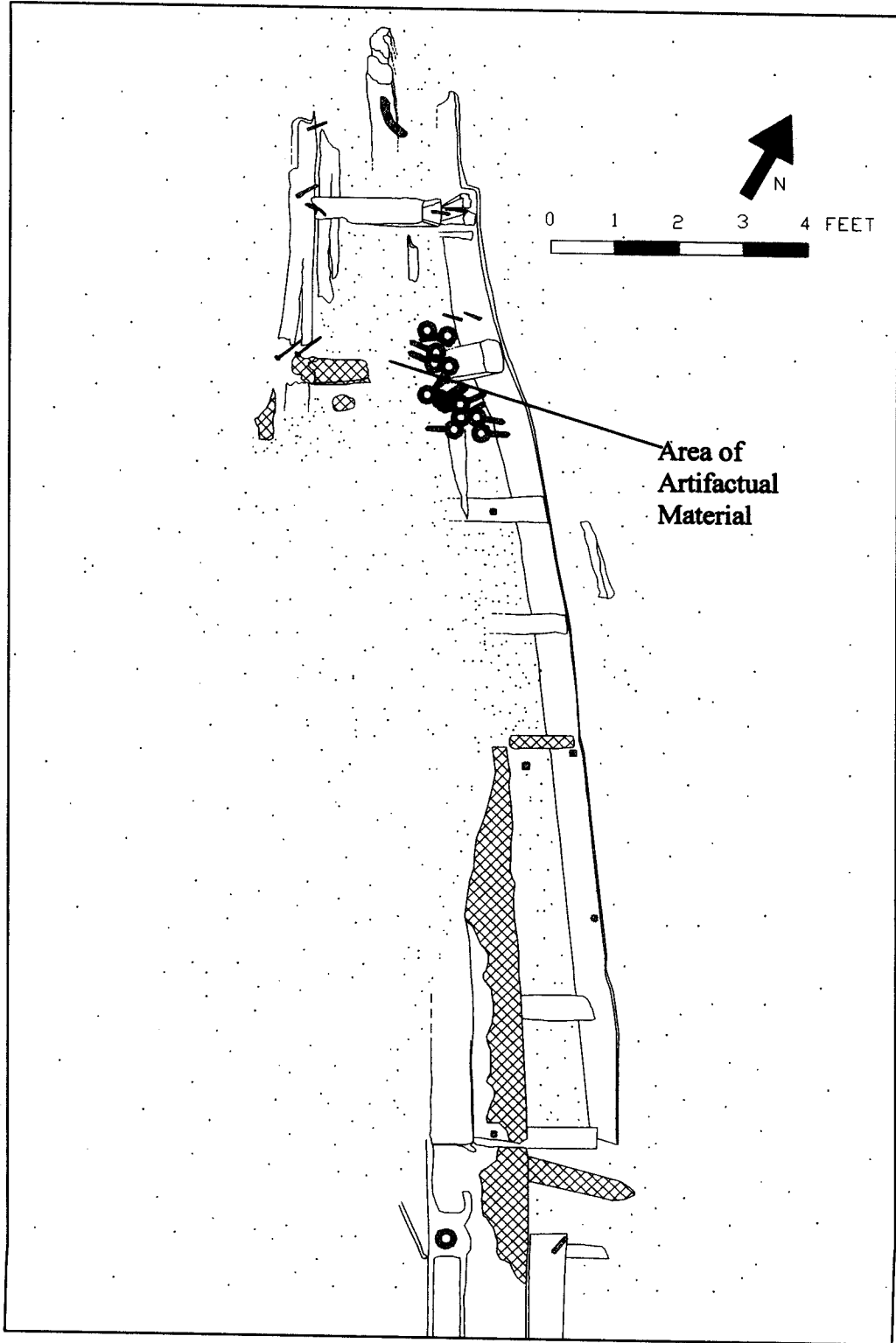


Figure 5.8 Vessel stern section.

receive the vessel's floors. At each rebate, a drift pin was driven through the frame into the machinery mount. A pair of large spikes with square retaining washers was driven into the mount at its scarf.

Iron machinery mount. Directly starboard of the square retaining washers on the wooden machinery mount was a 3-inch thick, iron bracket firmly bolted into the hull. The bilge ceiling was rebated to allow the bracket to protrude through it. The bracket was sheared off 4-inches above the bilge ceiling. While the iron bracket's exact function was not ascertained it appears to have served as a machinery mount given its position and solidity.

Through-hull fitting. One foot four inches to the starboard of the wooden machinery mount's north end, a brass through-hull fitting penetrated the hull. The fitting was let into a rectangular rebate in the bilge ceiling. The fitting measured 4 inches in diameter while the hole in its center measured 2 inches in diameter. The fitting was located 18 feet forward of the vessel's sternpost.

Commander J. H. Ward illustrated through-hull fitting positions and described their use in his treatise on steam navigation:

All marine steamers are provided with two – the bottom and side injections. If a boat runs in very shoal muddy water, or grounds, the bottom injection may choke with mud, in which case the side injection is available. Float wood, ice, &c., not unfrequently choke the side injection, in which case the bottom one is available.<sup>13</sup>

In small nineteenth century steamers, through-hull fittings were in close proximity to the engine, since the pump that fed water to the boiler operated off the engine's movement.

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<sup>13</sup> Ward, *Steam for the Million*, 56, 57.

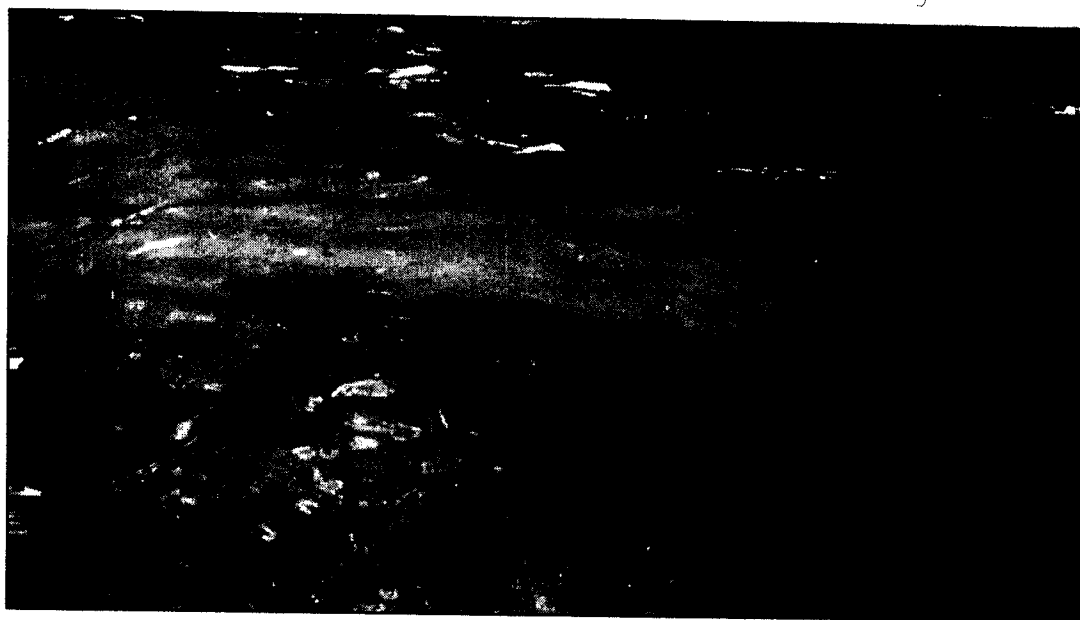


Figure 5.9 Photograph of the wooden machinery mount from the site's east side.

Bilge ceiling. Much of the vessel's bilge ceiling was extant. Planks measure 1-foot sided and 1 inch moulded. Average plank length was not recorded. The bilge ceiling's extent indicated that the vessel carried cargo or fuel in the hold.

Bilge keelsons. Two partially extant bilge keelsons or stringers extended a distance of 21 ½ feet on the port side and 16 feet 4 inches on the starboard side. Both timbers were 5 inches sided; no moulded dimensions were recorded. The bilge keelsons/stringers were equidistant from the vessel's centerline.

Framing. Thirty-six single or double frames were extant on the site. Most of the frames consisted of only the floor. Floors measured three inches sided and five inches moulded and were on two-foot centers. This framing pattern remained regular for the stern 38 feet after which floors were doubled and at one point quadrupled for the next 21

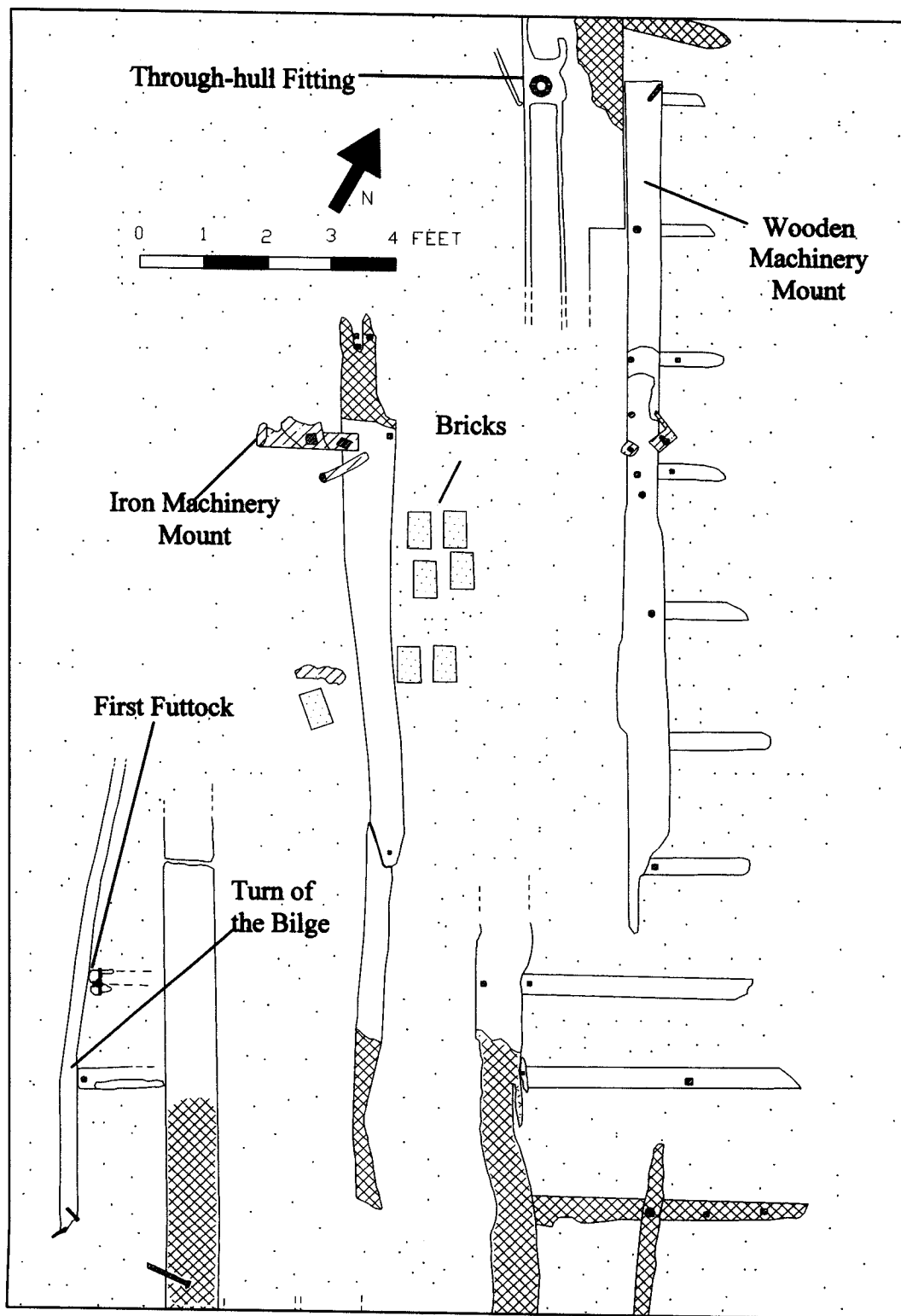


Figure 5.10 Machinery mount, through hull fitting, and turn of the bilge.

feet in the amidships area. This area of doubled and quadrupled floors suggests that it supported increased weight such as the boiler(s). The remaining 11.5 feet of hull returned to single floors on two-foot centers except for two sets of doubled floors. The only extant portion of a first futtock is on the starboard side where outer hull planking is evident. Limber holes were cut into the frames, allowing bilge water to move freely.

Pump box. The bilge pump box was located 50 feet from the vessel's sternpost. The 8-inch square piece of wood had a beveled edge around its perimeter and a 4-inch hole bored through its center, with horizontal holes to admit bilge water. The bilge ceiling was rebated to receive the pump box.

Keel. A 5-foot 3-inch portion of the vessel's keel protruded forward of the last extant floor (Figure 5.12). The timber measured 6 ½ inches sided and 5 inches molded. No evidence of a keel shoe was observed.

Bricks. Fired red bricks were found spread throughout the southern 55 feet, however they were most numerous near the machinery mount, where they were neatly arranged in rows. Over the rest of the site bricks and brick fragments were scattered singularly or in ones and twos. Whole brick dimensions were 7 inches long by 3 ½ inches wide and 2 inches tall.

Coal Clinkers. When students hand-fanned sediment in the amidships portion, they uncovered small pieces of coal clinker resting on top of the bilge ceiling. The greatest quantity of this material was found at the doubled framing. Clinkers result from incombustible impurities in coal.



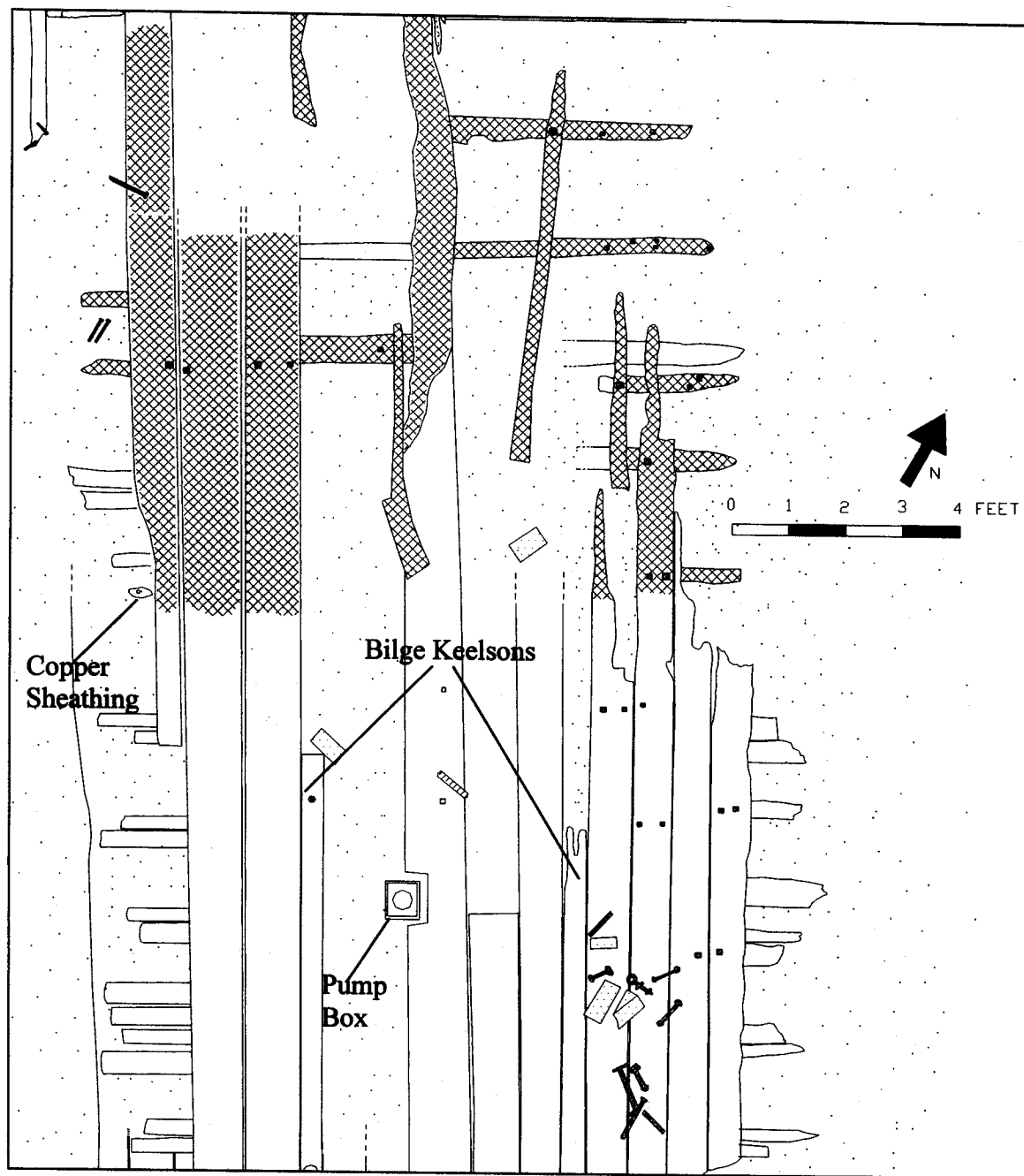


Figure 5.11 Pump box, bilge keelsons, and area of quadrupled floors.

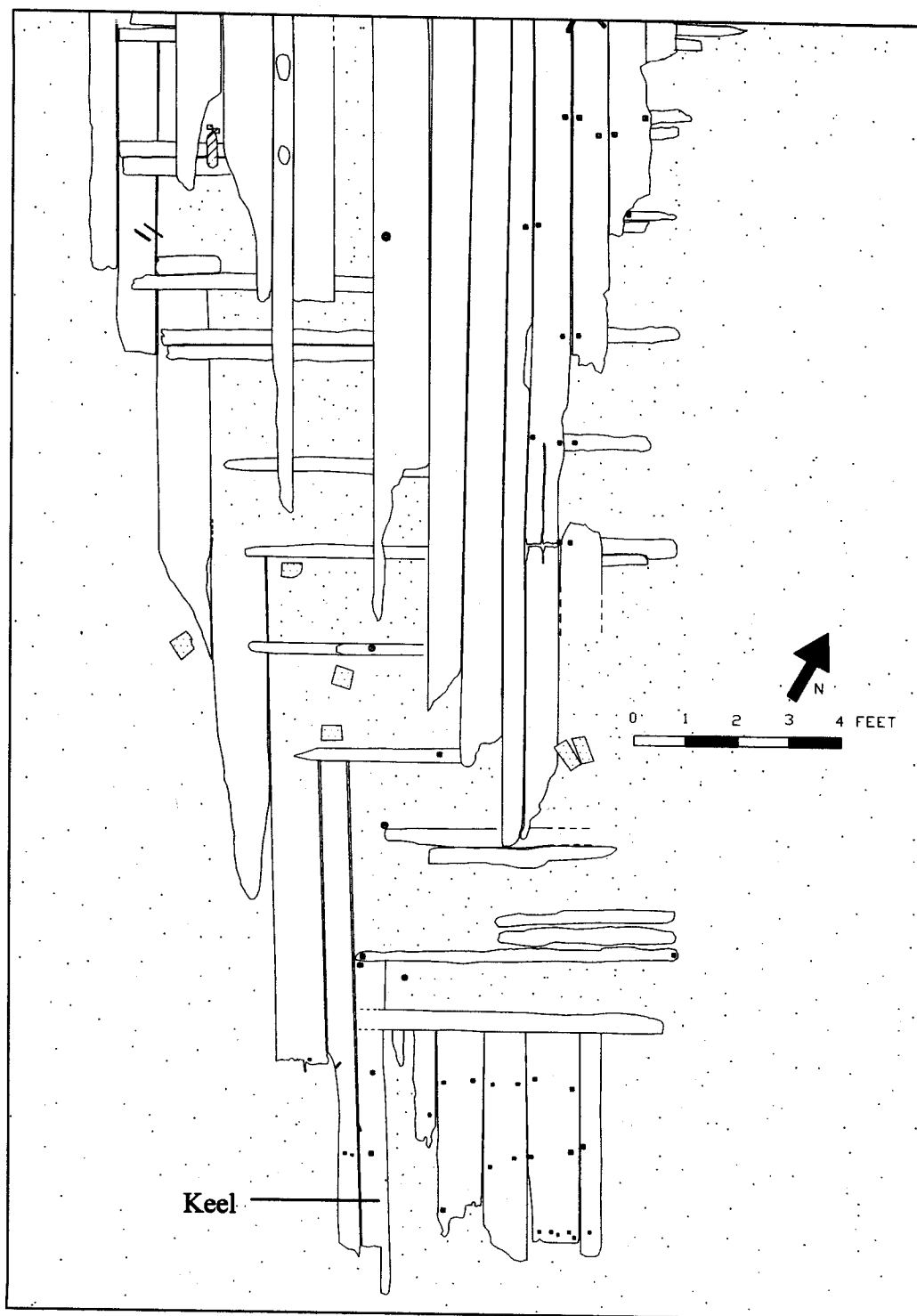


Figure 5.12 Southern end of the site exhibiting dramatic fracturing. The outer hull planking rises towards the water's surface by several inches in comparison to the keel.

Fastenings. Iron fastenings were used throughout the vessel. Drift bolts secured larger timbers, such as the machinery mount and bilge keelsons to the floors and fastened the sternpost's two timbers together. Clinch rings were not utilized to secure the bolts. Hand-wrought iron spikes and machine cut iron nails fastened smaller dimension timbers together. There was no evidence of brass or bronze fastenings. The quantity of large iron screw eyes uncovered in the stern suggested that the fastenings were not in use on the vessel before it sunk, however several more screw eyes with nuts attached were noted near the pump box. These screw eyes were found with several iron bolts and nuts as well as spikes. The collection of material likely fell from the vessel's upperworks as it burned.

Copper sheathing. A small piece of copper sheathing approximately 2 inches by 4 inches was found west of the pump box. A single small nail hole pierced the sheathing. Excavations were not made to ascertain whether more copper sheathing was fixed to the outer hull planking.

#### Summer 1999 Findings

The site plan generated during the 1999 investigation addressed each multiple working hypothesis generated from the historical research. The null hypothesis was proved untrue as evidence of a vessel's hull, including frames, outer hull planking, bilge ceiling, and outer construction features were present at the site.

Hypothesis 1, the vessel was a steamship, was proven true on the basis of the vessel's machinery mounts, through-hull fitting, and coal clinkers found at the site. These features precluded hypothesis 2, that the vessel was a barge or flat, because a barge

or flat would not have these motive features. Further evidence to dispute Hypothesis 2 came from the site's longitudinal outer-hull planking. Flats found in the Tar/Pamlico River and elsewhere in the South were usually planked athwartship rather than longitudinally.<sup>14</sup> Hypothesis 3, the vessel was an ironclad ram, was negated by scantling dimensions. These were small and did not match the heavy construction techniques employed by North Carolina's ironclad ram builders.

Three sub-hypotheses associated with Hypothesis 1 sought to identify the variety of steamship, i.e. sidewheel, sternwheel, or screw propeller, represented. Overall vessel shape and dimensions were important in determining whether the site was a sidewheel or sternwheel steamship. The site's extant remains measured 80 feet long by 13 feet wide. However, it is possible to extrapolate the vessel's original length by measuring the distance from the sternpost to the pump box, which the vessel's builder would have sited roughly equidistant from the vessel's ends. The measured distance from the pump box to the sternpost was 49 feet resulting in an approximate overall length of 98 feet.

Even though the wrecking process eliminated nearly all structure above the turn of the bilge, the fragment of a first futtock and associated outer hull planking suggest that the vessel had a hard chine resulting in a breadth not much greater than the length of its floors. The vessel's breadth at the extant futtock was 13 feet suggesting a maximum width of 13 to 15 feet. The resulting length to breadth ratio of a 98-foot long by 15-foot wide vessel was 6.5 to 1. This exaggerated length to width ratio suggests sidewheel

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<sup>14</sup> William C. Fleetwood, Jr., *Tidecraft: The Boats of South Carolina, Georgia and Northeastern Florida 1550-1950* (Tybee Island, Georgia: WBG Marine Press, 1985), 102, 312; Castle Island Archaeological Investigation 1999 and 2000, East Carolina University Maritime Studies Program.

propulsion. In general, sidewheel steamships had a far larger length to breadth ratio when compared with sternwheel and screw propeller steamships.<sup>15</sup>

The position of the machinery mounts and through-hull fitting played a key role in determining the vessel's mode of propulsion. These features, in combination with the vessel's intact stern indicated that it was a sidewheel steamship and precluded it being either a sternwheeler or a screw propeller. Vessels constructed with all three forms of propulsion can exhibit similar machinery mounts and through-hull fittings in the stern. In sternwheel and screw propeller steamships, propulsion machinery is always located at the vessel's stern, while most sidewheel machinery is generally located amidships. However, some sidewheel steamships had machinery situated further aft.<sup>16</sup> In all cases, steam propulsion machinery, excluding boilers, was not situated near the bow.

Identifying the site's intact north end as the stern allows for comparing that area to known steamship construction features. Each different steamship propulsion method requires a distinct stern configuration. Sternwheel steamships exhibit a squared-off stern not much narrower than the vessel's maximum breadth.<sup>17</sup> The construction evident at site 0004TRR negates Hypothesis 1b. Screw propeller steamships exhibit a heavily built section of deadwood and sternpost with scantlings sufficiently wide enough to have a

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<sup>15</sup> Gordon Watts, conversation with author, 25 September 2000.

<sup>16</sup> Adam I. Kane, "The Western River Steamboat: Structure and Machinery, 1811 to 1860" (Master's thesis, Texas A&M University, 2001), 96.

<sup>17</sup> Jerome E. Petsche, *The Steamboat Bertrand: History, Excavation, and Architecture* (Washington: National Park Service, 1974), 82.

propeller shaft tunnel bored through them. Site 0004TRR lacks a heavily constructed stern, negating Hypothesis 1c.

The extant evidence supports the only remaining hypothesis, Hypothesis 1a. The site's stern construction was similar to what might have been found at the bow of the vessel, a feature of sidewheel steamships. Outer hull planking was set into the sternpost's made rabbet creating a sharply pointed stern. Sternpost rake appeared to incline outwards, however the original degree of outward inclination could not be determined because of deterioration. The site's overall shape and dimensions further bolster Hypothesis 1a, as its extreme length to breadth ratio fits closest with a sidewheel steamship.<sup>18</sup> Projected dimensions also fit very closely with the *Oregon's* historic dimensions of 100 feet in length by 14 feet 3 inches in breadth.

Returning to the historical record, the only sidewheel steamship sunk at Tarboro prior to the 1880 Army Corps of Engineers survey, was the *Oregon/Colonel Hill*. Examination of the only drawing of the steamer (Figure 4.3) places the boiler very near amidships as evidenced by the smoke stack. All of the vessel's machinery is aft of the boiler. The engine that powered the *Oregon/Colonel Hill* (depicted in Figures 2.4 and 2.5) also operated the pump that supplied water to the boiler. The through-hull fitting would have been located in close proximity to the pump as any other position would necessitate running much longer pipes.

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<sup>18</sup> Allen R. Saltus, *Cultural Resources Survey of a Portion of the Northeast Cape Fear River and Report on the Test Excavation to Evaluate the Steamship Spray* (unpublished manuscript, North Carolina Underwater Archaeology Unit, Kure Beach, North Carolina, 1982), 74-78.

Ultimately, the historical record yielded one final declaration as to the site's identity. Nearly sixty-three years after Federal cavalymen set fire to the *Oregon/Colonel Hill*, the *Tarboro Southerner* published the final word on the steamer,

In 1847, the *Oregon*, owned by a Tarboro company, made several trips (up the Tar River). Proving too large, she was taken off and sold. After many years, she was purchased by the Confederate government and name changed to *Colonel Hill*; and, after years of faithful service, worn with age and decay, the old hulk rests a few miles below Tarboro, at the bottom of the river, covered with tons of sand over which roll incessantly the rushing, bubbling waters of the Tar.<sup>19</sup>

#### Site Formation Process

The *Oregon/Colonel Hill* underwent considerable change from its last operational day in June 1863 to its current position in a sandbar south of Tarboro. The processes that caused this transformation can be grouped into two periods: pre-deposition and post-deposition. Union cavalry troops initiated the deposition event when they set fire to the vessel at the Tarboro steamboat landing. The vessel's old wooden hull likely burned well, however the steamer did not sink before the flames reached the bilge ceiling. Clearly, the *Oregon's* resting place is not where it was set afire at Tarboro. Tarboro resident Michael Cohen's statement to the U. S. Navy concerning the destruction of the *Colonel Hill*, *Governor Morehead*, and incomplete Tarboro ironclad ram contained a reference to the next step of the pre-deposition process. After describing the *Colonel Hill* he stated: "There was then a high flood in the river."<sup>20</sup> This flood likely floated the

<sup>19</sup> *Tarboro (North Carolina) Southerner*, 26 April 1926.

<sup>20</sup> Statement of Michael Cohen to S. Phillips Lee, Acting Rear-Admiral, 18 August 1863, New Bern, North Carolina, in *O. R. A. Ser. I, Vol. 29, Part 2, 71.*

vessel downstream to its current position. Had it remained at the Tarboro wharf for any length of time, the locals would have completely salvaged the vessel for scrap. More likely is that locals removed the vessel's engine and other machinery parts at its new resting spot but found any further salvage uneconomical.

When steam navigation returned to the Tar River after the Civil War, the *Oregon/Colonel Hill* faced several new post-depositional site formation processes. On at least one occasion another steamer hit the wreck and ruptured its bow, undoubtedly impacting the site.<sup>21</sup> Preventing such collisions was the focus of the Army Corps of Engineers salvage and boiler removal. As well as removing its boiler, the Corps likely removed the missing 20-foot bow section that once protruded into the river's center. Evidence of the bow's violent removal is present in the fractured outer hull planking bent towards the water's surface. Such a removal could only have been affected with a snagboat. Individual artifact hunters also removed pieces of the wreck during the twentieth century since it was easily accessible during low water.<sup>22</sup>

Another considerable post-depositional factor was the Tar River's highly variable flow. While the generally slow moving tannic freshwater is a relatively good preservation environment<sup>23</sup>, the Tar River experienced several episodes of extreme flooding during the twentieth century that turned the river into a raging torrent. By far the greatest twentieth century flood occurred after Hurricane Floyd during the 1999.

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<sup>21</sup> *Tarboro (North Carolina) Southerner*, 21 June 1883.

<sup>22</sup> Richard Lawrence, personal communication, 7 December 2000.

<sup>23</sup> Bradley Rodgers, personal communication, 5 June 1999.



Maritime Studies Program volunteers returned to assess the flood's impact in October 2000.

#### Fall 2000 Investigation

The Fall 2000 investigation sought to determine how flooding from Hurricane Floyd impacted the *Oregon* and whether it still existed after two hurricanes dropped a tremendous amount of rain onto the Tar River drainage basin. Catastrophic flooding in Tarboro and Greenville inundated homes near the river and occasionally washed them from their foundations. Data from a USGS gauging station in Tarboro, one mile upriver from the site, measured the river's tremendous change.

During September 1999, two rain intensive and slow moving hurricanes with minimal winds struck eastern North Carolina. The first, Hurricane Dennis, increased the Tar River's flow from 1,500 cubic feet per second on September 5 to 20,000 cubic feet per second on 12 September. The river had subsided to 15,000 cubic feet per second when Hurricane Floyd arrived 15 September. On 19 September, the USGS gauging station recorded a daily average flow rate of 70,500 cubic feet per second, nearly fifty times the normal rate, and a depth of 41.5 feet, 22.5 feet above flood stage. Historical flow data indicated that the September 1999 flood resulted in the greatest water flow rates ever recorded. The next greatest flood occurred on 27 July 1919, when the Tar River's flow climbed to 52,800 cubic feet per second and its depth reached 34 feet, 15 feet above flood stage.<sup>24</sup>

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<sup>24</sup> United States Geological Survey (USGS), Historical Streamflow Values for the Tar River at Tarboro, North Carolina, 10 February 2003, <[http://waterdata.usgs.gov/nc/nwis/nwisman/?site\\_no=02083500&agency\\_cd=USGS](http://waterdata.usgs.gov/nc/nwis/nwisman/?site_no=02083500&agency_cd=USGS)>.

Not much hope was held for the *Oregon's* survival with so much water flowing over the site. In June 2000, the Maritime Studies Program summer field school observed the flood's effects at Washington, North Carolina. Nine sites documented by the Program in 1998 and 1999 were decimated, moved, or completely buried by floodwaters.<sup>25</sup>

Fortunately, the Maritime Studies Program's dire expectations were unrealized at the *Oregon* site. Upon returning to Tarboro in October 2000, volunteers found the *Oregon* site intact, however sediment levels had changed on the site. Figure 5.13 illustrates sand levels during the 1999 survey. In general, sand was distributed a foot deep at the north end tapering to exposed or lightly covered wood at the south end.

After the flood, a thicker layer of sand covered the site, but probes encountered buried remains along the site's recorded length. The few exposed hull pieces did not appear to have changed. In general, sediment coverage on the site doubled in thickness. Figure 5.14 illustrates the greater sediment coverage on the site after the hurricanes. Contrary to the expected outcome, the *Oregon* will likely benefit from the deeper sediment layer that now covers the site. Artifact hunters will have a more difficult time locating the site during low water and the sediment should diminish the site's exposure to oxygen-rich water, slowing biologic degradation.

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<sup>25</sup> Castle Island Archaeological Investigation 1999 and 2000, East Carolina University Maritime Studies Program

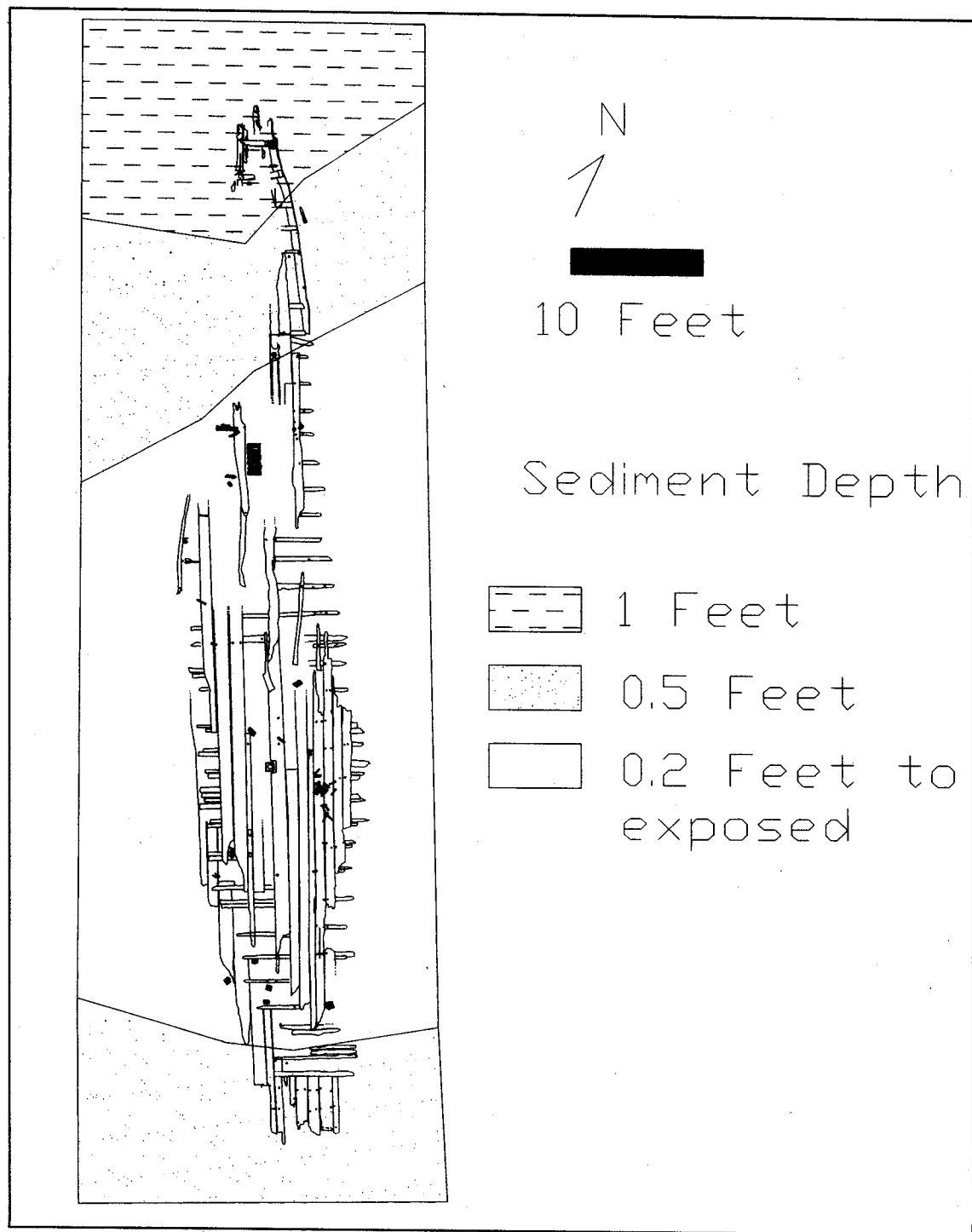


Figure 5.13 Sediment depth on the *Oregon* site in 1999.

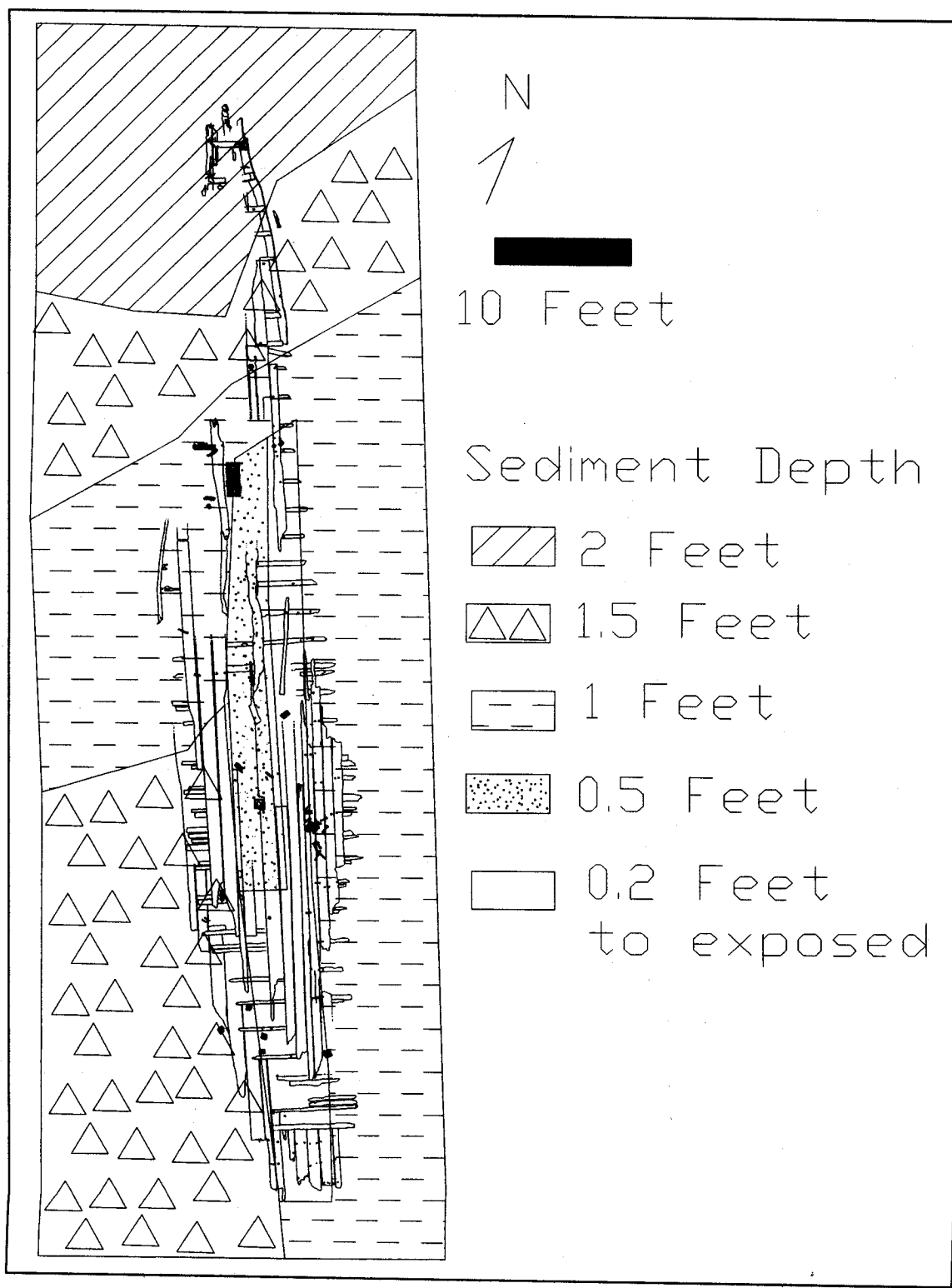


Figure 5.14 Sediment depth on the Oregon site in 2000.

### Conclusion

The initial investigation of site 0004TRR by North Carolina's UAU laid the groundwork for the 1999 Maritime Studies investigation. The UAU archaeologists located the site and ascertained that it was a wooden-hulled vessel, however, they did not provide specific evidence to conclusively identify the vessel. Preliminary research identified several possible candidates. The known characteristics of several vessels, such as an iron hull, precluded them from being site 0004TRR. Ultimately, three possible candidates emerged from the historical record: the *Oregon/Colonel Hill*, an unnamed Albemarle-class Confederate Ram, and a barge. The Principal Investigator drafted multiple working hypotheses to provide a framework where by the site's remains could be tested to arrive at a determination of its identity.

In June 1999, site 0004TRR was investigated and documented during a period of very low water. The goal was to map the vessel's remains and place it on an overall site map within the larger context of the Tar River. The wreck map was used to test multiple working hypotheses. Surprisingly after over a century, the overall site map compared well to the 1878 Army Corps of Engineer's map of the same area.

Analysis of the wreck indicated that the vessel's remains stretched a distance of 80 feet by 13 feet and consisted of very lightly framed lower hull structure. The vessel's sternpost was extant, however, an estimated 20 feet of structure including the vessel's bow was missing. Machinery mounts and a through-hull fitting near the vessel's stern, as well as coal clinkers, identified the vessel as a steamship. Overall size, light framing, and the machinery features refuted two multiple working hypotheses; the vessel was not a

Confederate Ram or a barge. The hypothesis with the best fit, the vessel was a steamship was subdivided into three components by propulsion variety. Evidence from the stern's shape and construction, as well as the vessel's overall dimensions indicated that it was a sidewheel steamship.

The historical record contained evidence of only one sidewheel steamship, the *Oregon/Colonel Hill*, sunk below Tarboro. Contributing to the identification were the site's dimensions, which closely match the *Oregon/Colonel Hill's* historic dimensions. Additionally, the site's position, as surveyed during the field school, corresponded with the *Oregon's* position on the 1878 Army Corps of Engineers' map.

Once site 0004TRR was identified, the *Oregon/Colonel Hill's* site formation processes were explored. After burning, by the Federal cavalry, a flood swept the steamer downriver to its current resting place where it underwent salvage by local citizens and the Army Corps of Engineers who reduced it to a less formidable navigation hazard.

The Tar River's flow also impacted the site during periods of extreme flooding. One such event in the fall of 1999, unleashed the greatest quantity of water ever recorded on the river. Maritime Studies students and staff returned in the fall 2000 to determine if the site was still extant and assess any changes. Nearly double the amount of sediment covered the site after the hurricanes. The deeper sediment layer will likely better protect the *Oregon/Colonel Hill* in the future from biologic degradation and from the depredations of curio seekers.

## CONCLUSIONS

The *Oregon* story presented in this thesis shows the steamer to be an unusual vessel unlike its contemporaries on the Tar/Pamlico River. The differences manifest themselves not only in the way it was built but also how it was used. The *Oregon's* construction features meld typical East Coast steamer construction with a shallow draft hull and a high-pressure engine better suited to fresh-water rivers rather than the brackish Patapsco or Pamlico. It seems particularly amazing that the vessel was capable of an ocean passage from Cape Henry to Oregon Inlet; however, the use of the untried inlet suggests that the vessel's captain was in a hurry to move into the protected Pamlico Sound.

The *Oregon* proved unsuited to navigating the shallow Tar River. Instead of being sold to another North Carolina river, the way in which nearly all other Tar/Pamlico River vessels were disposed of, William H. Willard purchased the *Oregon* for his own use on the Pamlico River. The steamer became the only vessel that transitioned from the Tar River to the Pamlico River. It was also the only steam vessel on the river that operated solely for its owner rather than on a schedule carrying freight or passengers. These characteristics clearly show that the *Oregon* was not representative of Tar/Pamlico River vessels.

Chronicling steam navigation on the Tar/Pamlico River elucidated several trends possessed by the *Oregon* and other river steamers and allowed characterization of the typical Tar/Pamlico River steamer. Not surprisingly, vessels operating on the river can be divided into two varieties in much the same way the river has two names based upon a

geographic transition from broad and relatively deep to narrow and shallow. In general, steamers either navigated the Tar River or the Pamlico River. Successfully navigating the Tar River required a much different vessel design than what was utilized on the Pamlico River.

The foremost difference between the vessel varieties was their draft. Pamlico River steamers were easily categorized as small East Coast sound steamers. Representative vessels, such as the *Post Boy* and *Pamlico*, were built in the vicinity of New York City and reflect the area's shipbuilding traditions, including walking-beam engines and deeper draft hulls to navigate waters around Long Island. Sidewheel propulsion was another characteristic common to nearly all Pamlico River vessels (only the propeller-driven *Loper* was different).

Conversely, Tar River steamers needed an extremely shallow draft to operate. Low water levels and sandbars meant that steamers could only draw a few feet of water. The river's steam navigation pioneers did not fully recognize how shallow draft their vessels needed to be. This underestimation resulted in the purchase of the *Oregon*, whose draft was too excessive to stay on the Tar. Ultimately, steam navigation interests gave up operating to the river's head at Tarboro, finding it uneconomical to combat the snags and shallow water above Greenville. In response to abandonment of steam service, Tarboro's business interests looked toward the Wilmington and Weldon Railroad to move produce out and bring manufactured products in.

Another trend common to the *Oregon* and almost every other steamer that navigated the Tar/Pamlico River was that these vessels were northern-built. Ten of the



twelve vessels that navigated the river at least once were built in northern shipyards. This trend seems remarkable given the established shipbuilding industry in Washington, North Carolina. Even stranger is that the Myers operation never built a steamer before the Civil War. Instead, Myers chose to import the *Governor Morehead* and its iron-hull technology from the Delaware River.

The *Governor Morehead* was an extremely successful vessel in comparison to its predecessors. Due to the *Governor Morehead's* success, the Myers's hull material choice was emulated in 1860 when the *Cotton Plant* was brought to the Tar River. The presence of two iron-hulled stern wheel steamers qualifies this type of vessel as the predominant variety utilized on the Tar River. Reliance on northern-built vessels prevented the Tar/Pamlico River from developing its own regional building style.

Investigation of Tar/Pamlico steam navigation also delineated the economic impact of the vessel's patronage on towns. In 1852, the Tarboro *Southerner* provided a particularly detailed account of how the steamer *Amidas* influenced the marketability of Tarboro's produce. When the steamer visited the town, exporting prices for naval stores and agricultural produce increased. During periods of low water that prevented the *Amidas* from reaching Tarboro, prices for the same goods dropped as large quantities of non-perishable goods built up at the town's landing. Transportation of these goods downriver by flat did not have the same effect on the market even after several weeks without a steamer visit.

While steamer service to Tarboro served to expand or contract the market of the firmly established town, the arrival of steamer service at Greenville and the Pamlico

River ports of Wysocking, Germantown, and Oregon caused these small hamlets to grow. In particular, Greenville greatly increased in importance during the 1850s, especially after 1852 when John Myers and Son stopped Tarboro steamer service. Greenville became a transportation hub where people traveling to other states transitioned from steamer to stage and finally to points north or south on the Wilmington and Weldon Railroad.

Tar/Pamlico River steamers depended upon both passenger and freight traffic to be profitable and maintain a regular schedule. However, only Pamlico River steamers were in competition for patronage. Competition did not flourish on the Tar River because of the successful monopoly over that route by John Myers and Son. The firm maintained its monopoly by holding the contract to carry the U. S. Mail from Washington to Greenville and buying out their competitors who brought steamboats onto the route. Passage from Washington to Greenville cost a consistent \$1.

Competition flourished on the Pamlico River, especially between the *Post Boy* and *Pamlico*. These vessels competed directly against each other for passengers and freight, leading to offers of free passage. Not surprisingly, the newer, faster *Pamlico* out competed its slower rival. In general, Pamlico River fares were much cheaper per mile traveled than those charged by the Myers monopoly. The 1850s marked increasing population growth and economic development of the Tar/Pamlico region. This population and economic growth expanded the river's steam navigation markets creating a positive feedback cycle of prosperity.

The beginning of the Civil War abruptly ended the Tar/Pamlico region's economic development that had been partly brought about by steam navigation. People no longer traveled and the export of agricultural produce and naval stores to northern markets halted with the blockade. With civilian commerce dried up, the *Oregon* and its fellow steamers entered Confederate service. These and other North Carolina steamers and sailing ships became collectively known as the Mosquito Fleet, but many were not officially Confederate States naval vessels. Instead, North Carolina state government contracts moving troops and supplies provided partial employment for *Oregon* and its compatriots.

North Carolina's vast inland water allowed the Tar/Pamlico steamers freedom of movement during the war's early months, but the Federal invasion of the sounds forced the *Oregon* and *Governor Morehead* to escape up the Tar River. Establishment of a Federal garrison at Washington effectively dominated the region without forcing a complete occupation. The Federal foothold at Washington was somewhat tenuous and was only saved from capture by the strength of the U. S. naval forces on the Pamlico River. Concern about a combined attack from land and river, whether by the *Oregon*, *Governor Morehead*, or a Confederate ram, resulted in the extensive fortification of Washington and repeated efforts to destroy the Confederate naval component upstream. A Federal cavalry raid against the lightly defended countryside destroyed the *Oregon* and the remaining Tar River Confederate naval presence in June 1863.

The archaeological investigation not only identified site 0004TRR as the remains of the *Oregon*, it also shed light upon vessel construction features of a relatively early

East Coast river steamer. Overall vessel construction was very light without the significant longitudinal timbers expected in a vessel with a nearly 7 to 1 length to breadth ratio. The lack of strong longitudinal support makes the *Oregon's* 17-year life span particularly surprising. Evidence for the vessel's paddle wheels and steam engine was located considerably aft of amidships, a feature not archaeologically documented on East Coast vessels.

Using the historical record to augment the archaeological record, it was possible to explain the present site location and understand its wrecking process. This process continues, however fieldwork demonstrated that even the Tar River's dramatic 1999 flooding did not further degrade the wreck site.

Even though the Tar/Pamlico River was the least prosperous major river in North Carolina, to the region's inhabitants, it was centrally important since it connected them with the outside world. As the market revolution took full hold of the Tar/Pamlico region, river steamers increased the communication rate and expanded the region's economy. While not representative of its contemporaries, the *Oregon* nevertheless was an ideal candidate for a case study in East Coast river steam navigation because of its varied activities, long life, and archaeological remains.

Steam navigation before the Civil War was only a prelude greatly increased activity during the 1880s and 1890s. The Tar/Pamlico depended upon steamers to transport agricultural production well into the twentieth-century. Railroads generally diminished steam navigation's value on most North Carolina rivers before the twentieth-

century, however, this was not the case on the Tar/Pamlico River where railroads only reached Washington in the 1890s and never actually paralleled the river's route.

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