Archaeological Mitigation at the 17A Derelict Vessel Site on Back River, Chatham County, Georgia

Georgia Department of Transportation
3993 Aviation Circle
Atlanta, GA 30336

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Abstract

The Georgia Department of Transportation (GDOT) plans to construct a new Highway 17 bridge over Back River in Chatham County north of Savannah, Georgia. Plans for new bridge construction indicate that on-site activity could damage or destroy the remains of a derelict vessel identified as the 17A Wreck. That vessel lies on the south bank of Back River immediately north of the extant Highway 17 Bridge. To ensure that design and construction data associated the 17A Wreck will not be destroyed by the proposed project, GDOT issued a task order for a Phase III investigation of the wreck site to Post, Buckley, Schuh & Jernigan (PBS&J) of Atlanta, Georgia. The task order included provisions for excavation and documentation of the surviving wreck structure. The mitigation investigation was carried out by personnel from Tidewater Atlantic Research of Washington, North Carolina under terms of an agreement with PBS&J. Project fieldwork was carried out during April 2008. Data from the investigation was analyzed and developed into drawings and descriptions of the surviving hull remains. Both a literature survey and an examination of historical records was carried out in conjunction with the archaeological investigation to support a typological and vessel specific wreck identification. Based on the archaeological and historical research the GA BR 17 derelict appears to be a mid to late nineteenth century bark (barque) of approximately 375 to 450 tons. The types of wood employed in construction suggest that the vessel was built in northern Maine or perhaps in Nova Scotia or Newfoundland. A lumber hatch and water-tight construction of the bilge ceiling indicate that the vessel was employed in the lumber trade but also carried water sensitive cargos such as guano, phosphate, rice or salt. A brief article in the 26 October 1893 Savannah Morning News confirmed that a fire destroyed an "old wreck" near the Back River entrance to Planter's Cut. The GA BR 17 derelict is the only vessel in that vicinity and it was burned at the site. The Phase III historical and archaeological investigation carried out by TAR recorded sufficient design and construction data to mitigate any adverse impacts to the derelict associated with construction of a new Highway 17 Bridge over Back River.

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Introduction

The Georgia Department of Transportation (GDOT) plans to construct a replacement for the Highway 17 Bridge over Back River in Chatham County north of Savannah, Georgia. Plans for new bridge construction indicate that on-site activity could damage or destroy the remains of a derelict vessel identified as the 17A Wreck. That vessel lies on the south bank of Back River immediately north of the extant Highway 17 Bridge and was first recorded by TAR personnel during a survey of Back River cultural resources in 1991. Personnel from the United States Corps of Engineers, Savannah District investigated the site again in 1993. Data from the investigation confirmed that the remains were those of a late 19th or early 20th century sailing vessel and concluded that the wreck was eligible for nomination to the National Register of Historic Places.

To ensure that design and construction data associated the 17A Wreck will not be destroyed by the proposed project, GDOT issued a task order for a Phase III investigation of the wreck site to Post, Buckley, Schuh & Jernigan (PBS&J) of Atlanta, Georgia. The task order included provisions for excavation and documentation of the surviving wreck structure. The mitigation investigation was approved by the Georgia State Historic Preservation Officer and was carried out by personnel from Tidewater Atlantic Research of Washington, North Carolina under terms of an agreement with PBS&J. Project fieldwork was initiated with a reconnaissance on 13 and 14 February and excavation and documentation was carried out during the period from 31 March through 20 April 2008. The project staff consisted of Gordon P. Watts, Jr., principal investigator, John W. Morris, senior archaeologist, Joshua Daniel and Justin McNesky, archaeologists, William Utley and Raymond Hayes, archaeological assistants. Literature and historical records research was carried out by Gordon Watts, Robin C. Arnold and Joshua Daniel. Data analysis and report preparation was accomplished by Gordon Watts, Robin Arnold and Joshua Daniel.

Data from the investigation was analyzed and developed into drawings and descriptions of the surviving hull remains. Both a literature survey and an examination of historical records were carried out in conjunction with the archaeological investigation to support a typological and vessel specific wreck identification. Based on the archaeological and historical research the 17A Wreck appears to be a mid to late nineteenth century bark (barque) of approximately 375 to 450 tons. The types of wood employed in construction suggest that the vessel was built in northern Maine or perhaps in Nova Scotia or Newfoundland. A lumber hatch and water-tight construction of the bilge ceiling indicate that the vessel was employed in the lumber trade but also carried water sensitive cargos such as guano, phosphate, rice or salt. A brief article in the 26 October 1893 Savannah Morning News confirmed that a fire destroyed an "old wreck" near the Back River entrance to Planter's Cut. The GA BR 17 derelict is the only vessel in that vicinity and the wreck was burned at the site.

The Phase III historical and archaeological investigation carried out by TAR recorded sufficient design and construction data to mitigate any adverse impacts to the derelict associated with construction of a new Highway 17 Bridge over Back River.

GA BR 17 Wreck Location and Environment

The Back River location of the 17A Wreck is in Chatham County Georgia adjacent to the north shore of Hutchinson Island (Figure 1). The hull lies slightly diagonal to the shoreline immediately north of the Highway 17 Bridge. The bow is oriented to the south and the starboard side of the structure extends into the marsh grass along the shore. The stern lies to the north and is embedded in the mud and clay of the riverbed in approximately seven feet of water at low tide.

Georgia (east zone) state plane NAD83 coordinates for the site are:

Location	**Easting**	**Northing**
Bow	988957	764736
Mainmast Step	988917	764786
Stern	988881	764830

Water at the site is brackish and tidal. The tidal range can be as much as 9 feet depending on the lunar cycle and winds. Visibility in the water column varied with the tidal cycle during the project. At slack low tide visibility was near zero but near slack on a rising tide as much as two feet was observed. The hull structure was filled with mud, sand and clay. Outside the hull the sediment profile was mud over clay.

Description of Research

Literature, Historical and Cartographic Research

In conjunction with submerged and terrestrial cultural resource investigations on and adjacent to Hutchinson Island, TAR conducted a literature and records search to identify historic agricultural, commercial and industrial structures, fortifications, and shipwrecks. TAR historians prepared a general background history of the Savannah area and Hutchinson Island from source material in its research library. That research focused on activities that would have been contributing factors in the deposition of cultural resources in the project area. These topics include exploration, colonization, agriculture, industry, trade, shipbuilding, commerce, warfare, transportation and fishing.

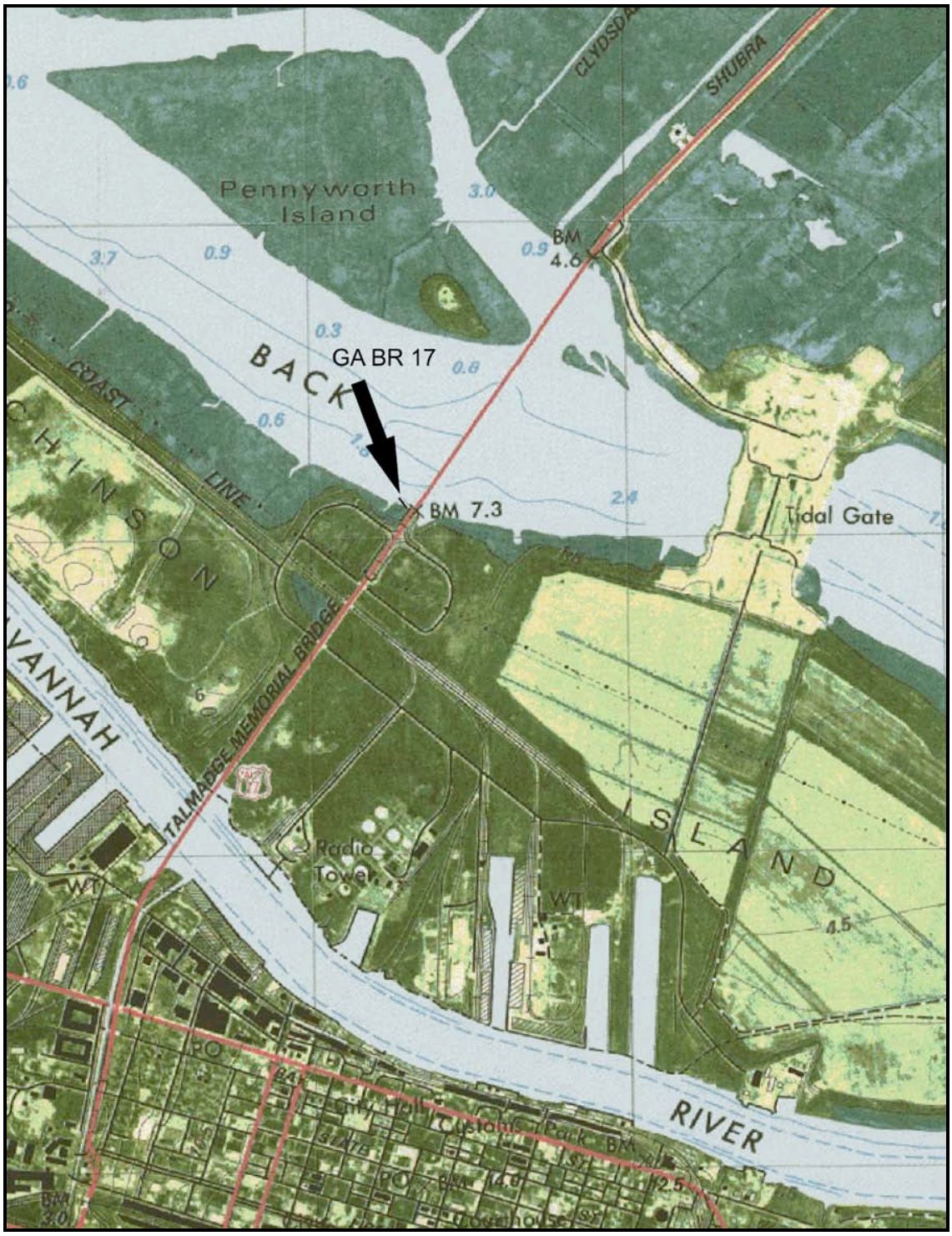

Figure 1. GA BR 17 site location map (Savannah, 7.5 Minute Quadrangle 1981).

Additional area-specific information was generated by examining records associated with the development of Savannah and the lower Savannah River basin in archives and libraries in Savannah. Archival research was carried out at the Georgia Historical Society, the Savannah Public Library, the Chatham County Courthouse

and the U.S. Army Corps of Engineers, Savannah District. TAR personnel reviewed area maps in its research library gathered from the collections of the Georgia Historical Society; the U.S. Army Corps of Engineers, Savannah District; the Savannah City Map Collection and the office of the State Historic Preservation Officer (SHPO) in Atlanta. TAR also contacted and interviewed personnel from Fort Pulaski National Monument, as well as archaeologists, historians and other individuals knowledgeable in the area's history and shipwreck research to solicit their assistance to generate research data.

Preliminary wreck-specific information has been collected from the "Georgia Shipwreck Index and Vessel Files" (Wood n.d.). Files and records of local historical and archaeological societies and libraries were examined for additional information, as were regional sources. TAR focused project-specific research on the annual reports of the Savannah District, cartographic records, aerial photography and historical sources related to structures, derelict vessels and agricultural development on Hutchinson and Fig islands. TAR personnel contacted the Georgia SHPO for a list of reported sites in the project area, and for information on whether any of those sites have been listed on the *NRHP*.

Area Historical Development

The City of Savannah was settled by James E. Oglethorpe in February 1733. Oglethorpe chose the site because of its pleasant and temperate climate (Figure 2). "I went myself to view the [location]" he wrote. "I fixed upon a healthy situation about ten miles from the sea. The River here forms a half moon, along the South side of which they call a Bluff ... Ships that draw twelve foot water can ride within ten yards of the bank -- The River is pretty wide, the water, fresh" (Harden 1969:12). Within a few months of Oglethorpe's arrival the Yamacraw Indians ceded the land between the Savannah and Altamaha Rivers to the English (Coleman 1978).

Although Oglethorpe's reasons for selecting the site were valid, from an economic viewpoint, Savannah was handicapped. The channel to the sea was long and winding, with tricky sandbars which offered numerous chances for grounding by vessels. Before improvements at Garden Bank, the river was quite shallow, approximately seven feet deep at low water and about double that at high tide (Albion 1939:24). Also, another disadvantage of the location of Savannah was "the great height of the land which is very inconvenient in the loading and unloading of ships" (Harden 1969:13). Economically, the site's most attractive feature (probably not recognized by Oglethorpe initially) was its extensive hinterland.

The Savannah River took its name from the Shawnee or Savannah Indians who controlled much of the river and its tributaries (Rahn 1968:1). The Spanish were familiar with the river they identified as "Rio Dulce." In 1603, the Spanish surprised and captured a French trading vessel at the mouth of the river. Spanish Jesuit and Franciscan missionaries traveled on the Savannah River and made their presence at Spanish colonial outposts as far along the coast as Santa Elena (Reese 1963:54).

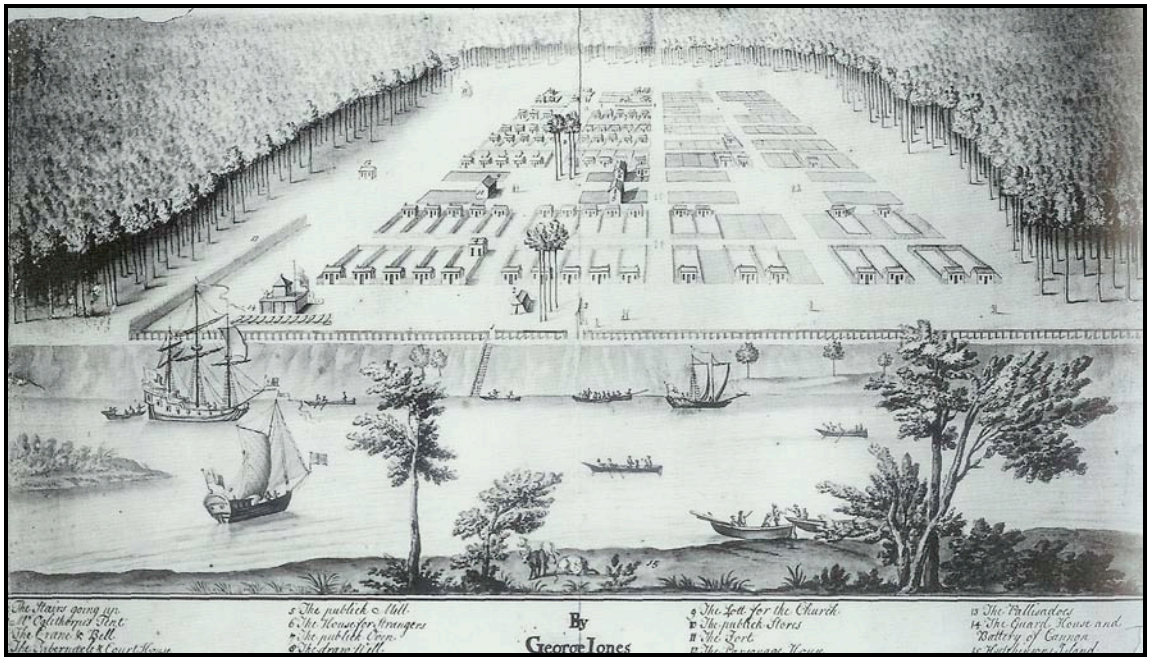

Figure 2. The 1734 map of the Colony of Georgia commissioned by Oglethorpe. (Cumming 1998:Plate 55A).

It was the presence of the Spanish in Florida that prompted the English to colonize Georgia. Georgia provided a military buffer zone between the profitable rice-growing Carolina colony and the Spanish in Florida (Bartley 1983:2). Oglethorpe established a system of outposts and later, fortifications along the Savannah River and other coastal waterways. He also created a flotilla of small but heavily armed boats to patrol the waterways and provide communication between the various outposts. The flotilla included several schooner-rigged, double ended galleys.

Georgia was founded for economic as well as military reasons. Oglethorpe was convinced that the colony's climate would allow tropical and oriental crops to be grown there (Garrison 1982:44). A limited amount of silk was produced, but with the exception of oranges, no tropical products were successfully grown. The governor found more success in the local forests. In 1735, two years after Savannah's founding, Augusta was settled at the head of navigation on the Savannah River and the village became a center for the Indian fur and deer skin trade.

Initially, canoes were the only means of transporting cargoes to and from Augusta. Large canoes, known as "Indian trade boats," were capable of carrying 400-500 deer skins or several thousand pounds of trade goods (Rahn 1968:6). The rapid increase

in the Augusta to Savannah trade led to the introduction of large boats of hewn or rough lumber, pushed or poled back and forth between Augusta and Savannah (Figure 3). In general, these riverboats could carry about 9,000 pounds (Garrison 1982:171).

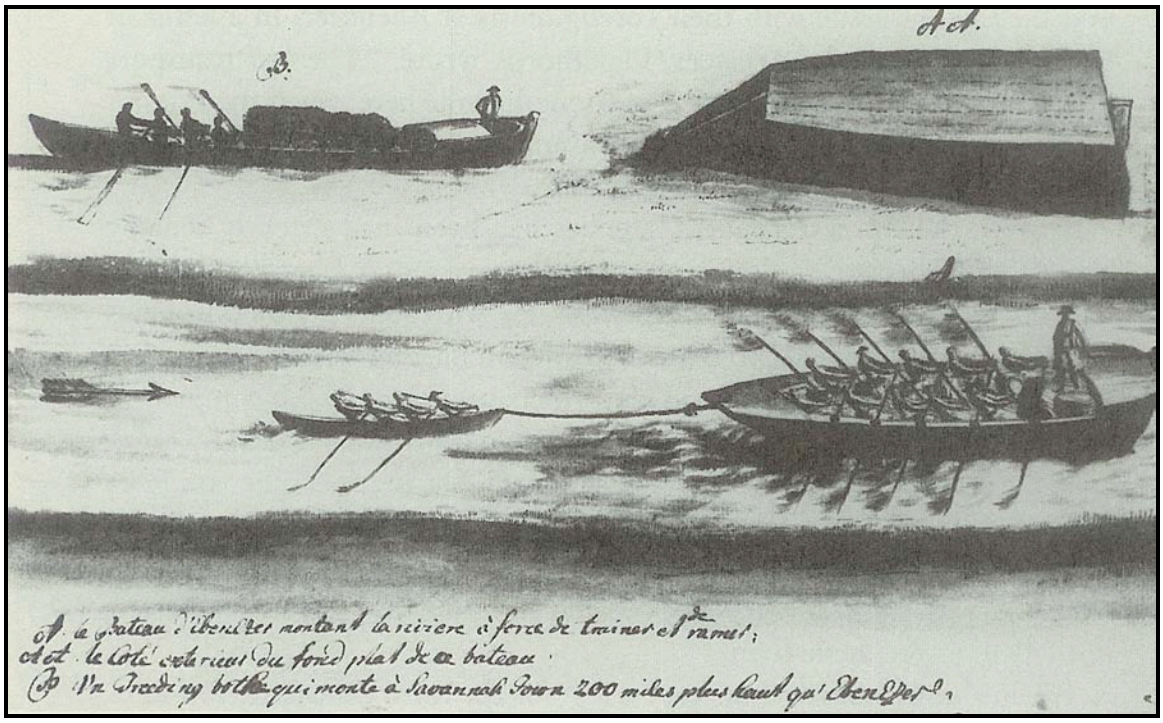

Figure 3. Contemporary mid-eighteenth-century watercraft used near Savannah. (Jones 1992:42).

Deerskins were sent to Great Britain, and although a valuable export item, the quantity remained relatively small. Very little of the import trade was direct. A triangular trade developed between Savannah, New York and England. Provisions and other English goods were shipped to Savannah from New York, while deerskins and other products from Savannah went directly to England (Harden 1969:100). For a brief period, however, the deerskin trade bypassed Savannah and was shipped directly from Charleston.

In the early 1740s, timber, staves, hoops, shingles and naval stores began to be exported from Savannah. Although the quantity remained small for more than a decade, maritime commerce slowly increased. In 1741, a Savannah merchant wrote:

> My present thoughts are that the Colony never had a better appearance than now. There have been more vessels loaded here within these months than have been since the Colony was settled. Our exportations for a year past are an evident proof that if proper labouring hands [meaning slaves] could have been had years before, this Colony before now would have demonstrated its utility to the Mother Country and the West India Islands.

> Two days ago a large ship arrived here ...which is the fifth sea vessel which has been here to load within a year; more, I may affirm, than has ever been loaded in this Colony before since its first settlement, with real produce (Harden 1969:101).

By mid-century, Savannah's population fluctuated between 700 to 800 individuals. During the quarter century before the outbreak of the American Revolution, Savannah's maritime trade became increasingly prosperous, despite continuous trouble with the Spanish and French. Between 1755 and 1775, the number of vessels leaving the Georgia port for Great Britain and its Western Hemisphere colonies increased more than 400 percent.

Lumber was an important commodity in Savannah during the eighteenth century. Some lumber was exported to England, but the bulk went to the West Indies where it was needed to build houses. In a three-month period in 1755, 11 of 14 vessels clearing Savannah carried cargoes made up entirely or in part of lumber. Only one of these vessels was bound for England, the others sailed for the West Indies. In 1762, some 417,449 feet of timber, 325,477 staves and 685,265 shingles were exported from Savannah. Within a decade this increased to 2,163,582 feet of timber, 988,791 staves and 3,525,930 shingles (Reese 1963:127). By the third quarter of the eighteenth century, lumber became a critical factor in the port's economy.

Savannah's export trade during these years was not confined to deerskins, naval stores and lumber products. Rice became a valued bulk cargo as the number of slaves increased. In 1755, exports of rice from Savannah totaled 2,299 barrels. By 1762, exports had multiplied nearly three and a half times, and in 1768 it reached 17,783 barrels (Reese 1963:130). Settlers had begun harvesting rice in upland areas without the aid of irrigation soon after the founding of the colony. Later, lands surrounding swamps, where streams and springs could be used to hold water in reserve, were put into cultivation (Figure 4). However, problems such as droughts and floods caused a shift in rice cultivation to tidal areas. The marsh areas around the Savannah River were ideal for rice cultivation, and by the end of the eighteenth century, most plantations had moved to the tidal areas (Leech 1988:27).

Other exports included indigo, hemp, flax, bricks, tobacco, fruits, vegetables, beef and pork (Figure 5). Despite incentives such as bounties and free seeds, indigo, flax and hemp never became important trade items. Food products such as grain and meats, however, were exported in increasing amounts. More than 1,000 barrels of beef and pork left Savannah annually for ports in England and the West Indies. After 1763, the bulk of the food products went to the West Indies (Reese 1963:131). During these years, imports included large quantities of manufactured goods from Great Britain, and rum, sugar, molasses, coffee and salt from the West Indies. Grain, primarily oatmeal and wheat, was also imported (Reese 1963:131).

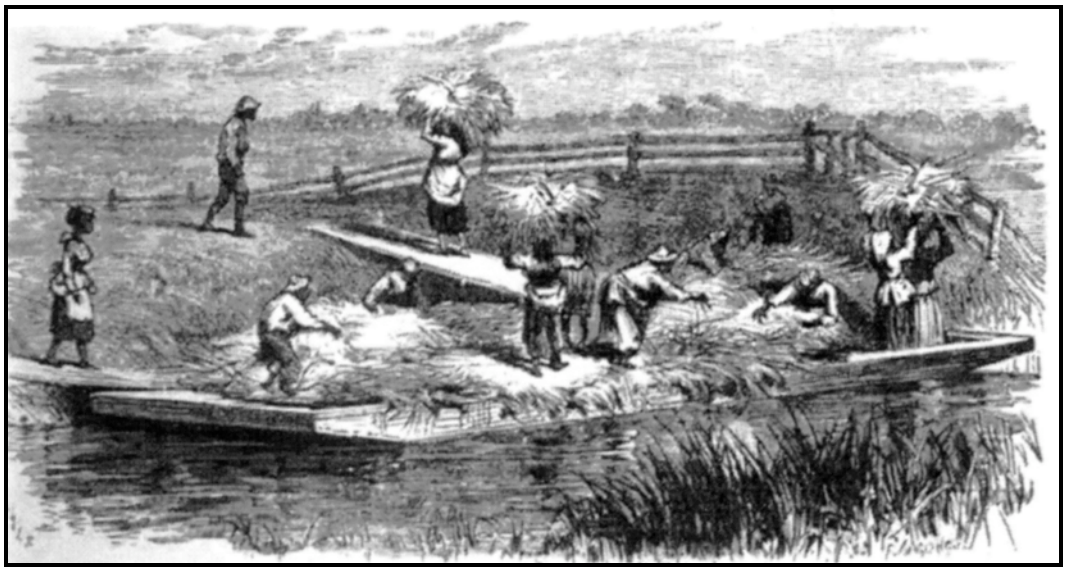

Figure 4. Rice from plantation fields was transported in flats.

Figure 5. Indigo provided Georgia planters with a marketable commodity in the 18th century.

Savannah's maritime commerce was carried by an assortment of vessels (Figure 6). Canoes and trade boats were engaged in river commerce, while small sloops, schooners and large ships were involved in the coastal and oceanic trade. A report written shortly before the Revolution listed 5 ships, 1 snow, 7 brigantines, 13 sloops and schooners and 10 "coasting vessels" as belonging to Georgia merchants engaged in trade. The report also mentioned that in 1761, 45 vessels entered and cleared Georgia ports, primarily Savannah; while in 1774, Savannah's trade was reported as being one sixth that of Charleston (Harden 1969:164-165).

The American Revolution disrupted that trade. Georgia was not initially involved in the crisis between the 13 American colonies and Great Britain that led to the outbreak of fighting. It was the only colony to enforce the Stamp Act and refused to

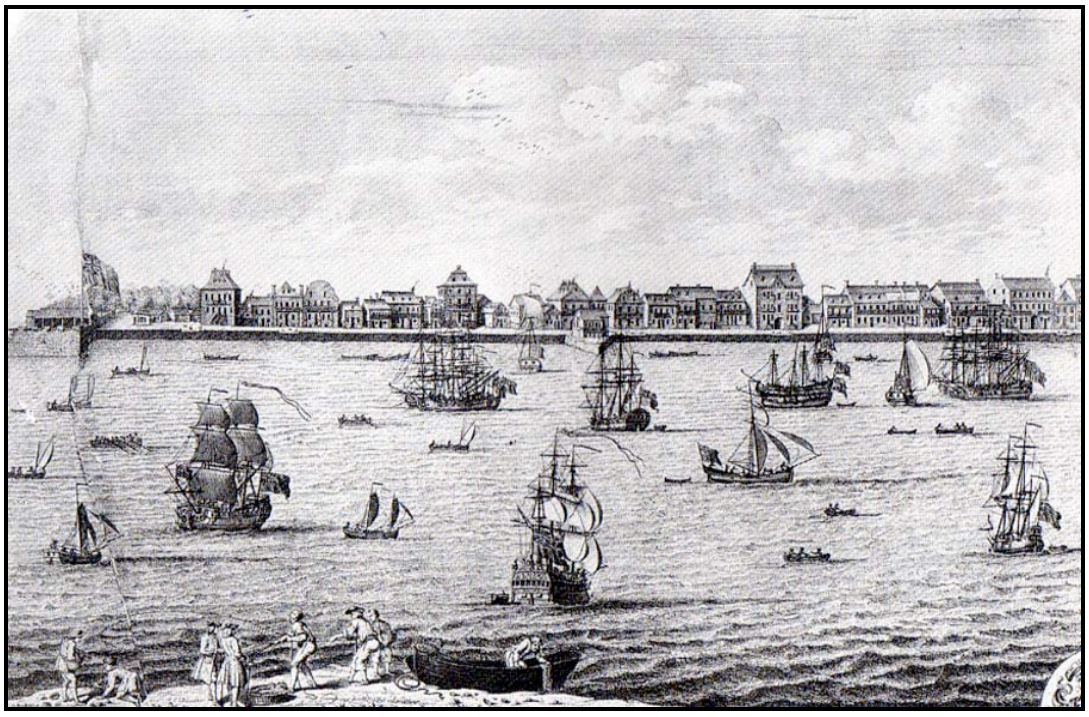

Figure 6. Vessels in the Port of Charleston about 1730 reflect the types that would also have frequented the Port of Savannah.

send delegates to the Continental Congress (Bartley 1983:7). Nevertheless, Georgia was inevitably drawn into the conflict, particularly after the initial clash of arms at Concord and Lexington.

In January 1776, British warships arrived off the mouth of the Savannah River. By March, the war had reached Savannah. The presence of the ships brought the city's maritime commerce to a halt. Approximately 20 merchant vessels loaded with rice and other goods were ready to sail in March, but were unable to leave because of the British ships. The British naval commander, in need of provisions, sent a small flotilla into the river to seize the ships. During the night of 1 March, a detachment of 200 British marines and sailors landed on Hutchinson Island and captured the "riceboats," as the merchant vessels were called. Before they could be removed, the local militia attempted to set them on fire. Two were fired, but the British escaped with 10 others (Jackson 1974:239). Eight remained in colonial possession after the action. To keep them from being taken by British forces, the local Council of Safety ordered the removal of their rigging and rudders (Jackson 1974:239). Except for privateering activities, Savannah would have little direct involvement in the war for the next two years. To protect Savannah from another attack, four galleys, the *Bullock, Lee, Congress* and *Washington* were built. They patrolled the rivers and occasionally attempted to raid the British, who were in control of the coast.

Attempts to close off the Savannah and Back rivers to enemy vessels began in 1776 with the construction of an earthen battery on Salter's Island. Marsh areas provided a natural defensive position at the confluence of the Front and Back rivers. Construction of the battery, at the present site of Old Fort Jackson, provided a safe

anchorage at Five Fathom Hole for all Continental shipping and closed off the Front and Back rivers to British dominance. As early as 1777, the fortification was garrisoned by Captain Thomas Lee's company of artillery. The site was abandoned in December 1778 when British forces landed at Gerardo's Landing and captured Savannah *(Coastal Current* 1991:3).

In November 1778, a British expedition of 3,500 men sailed from New York for Savannah. On 29 December, the British landed, and after a brief fight with American forces, including the galleys *Congress* and *Lee,* Savannah was occupied (Coleman 1978:22). British troops then secured control of most of Georgia. American efforts to retake Georgia failed, and the colony remained in British hands until nearly the end of the war.

Only once, in September-October 1779, was the British hold on Savannah seriously threatened. Under Count d'Estaing, a French fleet of 12 ships of the line, 4 frigates and several smaller vessels and troop transports arrived off the Georgia coast. After capturing two British warships and two merchant vessels in the Savannah River, d'Estaing landed some 3,500 French troops. They joined with an American force under General Benjamin Lincoln and laid siege to Savannah (Tilley 1987:171). The British sank several ships to block the channel and guarded the obstructions with batteries and armed vessels (Figure 7). Because of the shoal water in the river, d'Estaing's powerful vessels had to remain outside, vulnerable to potential hurricanes. On 9 October, the combined French and American force tried to take Savannah, but the attack failed. The siege was abandoned and the French departed (Weller 1962).

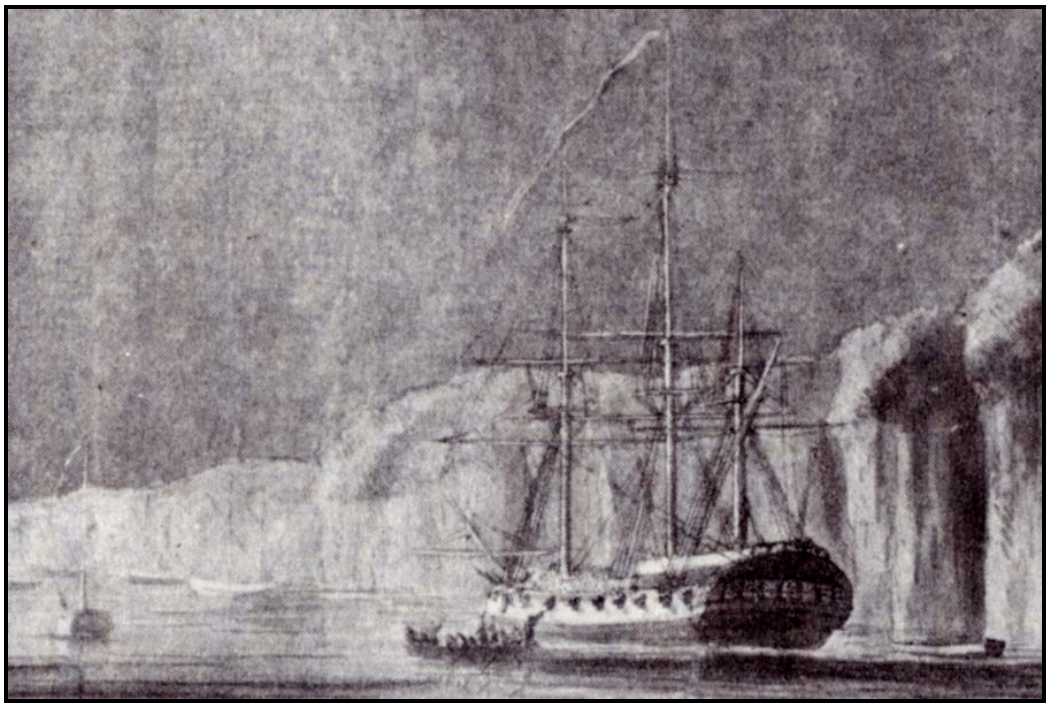

Figure 7. HMS Rose one of the British warships sunk as an obstruction at Savannah in 1779.

British misfortunes elsewhere resulted in Georgia gradually coming under American control again. In 1781, Augusta was recaptured. By July 1782, Savannah had to be evacuated by British forces. The war came to an end the following year with the signing of the Treaty of Paris recognizing American independence.

Savannah's maritime trade, like that of the rest of the nation, was slow to revive after the war. The American states were no longer a part of the British Empire and were not permitted to trade with Britain or British colonial ports. With the loss of its natural markets, particularly in the West Indies, it would be years before Savannah's trade recovered. In 1786, the value of all exports was only $321,377, $58,000 less than in 1773 (Harden 1969:471; Strong 1949:31). The port's exports generally consisted of the same products as before the Revolution. Although lumber would continue to be an important export item, rice would be replaced by cotton as the major export commodity (Harden 1969:472).

Savannah's value as a port resulted in two galleys and one revenue cutter being built in the city. The galleys *Savannah* and *St. Mary* were under the control of the War Department (there was no navy department until 1796), while the cutter *Eagle* was under the Treasury Department. In 1807, President Thomas Jefferson recommended the construction of 200 small gunboats as part of his four-part system to defend the nation's harbors. Twenty-five were built to defend the area from Savannah to Charleston (Tucker 1993:28). An undetermined number of these "Jeffersonian gunboats" operated in the waters off Savannah in the years preceding the War of 1812.

The War of 1812 was not as devastating to Savannah's maritime commerce as was the American Revolution. British efforts to blockade Savannah were ineffective and merchant vessels were able to enter and clear throughout the war. Privateers operating out of Savannah brought in a number of valuable British prizes. Defended by the 16-gun brig *Troup* and a number of barges, Savannah was never seriously threatened (Dudley 1985:154).

Following the War of 1812, Savannah's population grew steadily. Five thousand people lived in the city in 1810, and a half a century later, it grew to more than 25,000 residents (Albion 1939:105). This growth was a direct result of Savannah's maritime commerce. The port's trade totaled approximately $4 million in 1815. By 1818, this trade soared to more than $18 million. Throughout the antebellum period, Savannah's trade would be impressive. In 1855, one writer ascribed Savannah's commercial prominence to the port's ability to tap the interior. "Savannah," he wrote, "is every day extending lines of communication into those parts of the country hence their produce should naturally and will come" (Greenough 1853:57-63).

That same author accurately predicted that "the railways which converge to the city of Savannah, with the great extensions that are now being made, and others in contemplation, will soon connect her with a large part of the best cotton growing region of the South ...and increase very largely the shipments from the port" (Greenough 1853:57-63). Yet in relation to other cotton ports, Savannah's position

would decline (Albion 1939:102). Savannah's maritime trade in those years was based largely on two products, cotton and lumber. In 1793, Eli Whitney built a cotton gin at Mulberry Grove, a plantation near Savannah (Figure 8). Before the turn of the century, cotton fields began appearing throughout the South and ships clearing southern ports, particularly Charleston and Savannah, were carrying an increasing amount of this new cash crop.

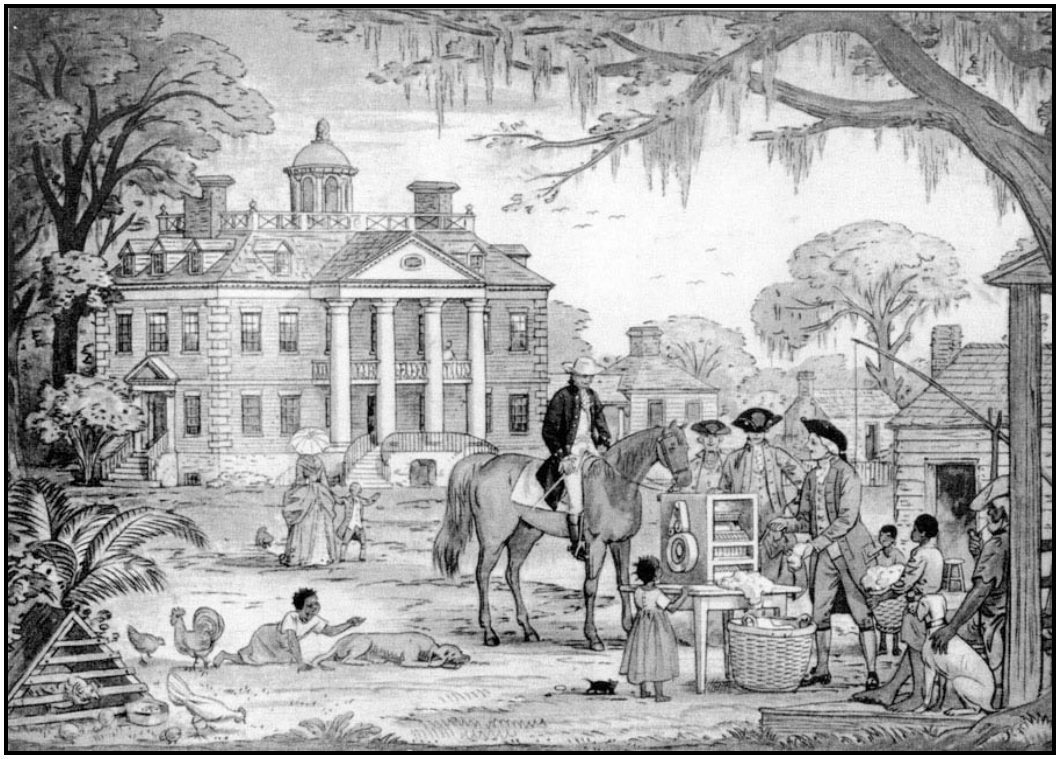

Figure 8. Eli Whitney with the first model cotton gin developed at Mulberry Grove plantation.

In 1825, Savannah shipped 137,257 bales of cotton. By 1845, more than 300,000 bales were shipped, and in 1859, 469,053 bales left the port by ship (Harden 1969:473). As in the colonial period, very little of this trade went directly to the textile mills in England and France. Instead, a triangular trade resulted with ships carrying cotton to New York and from there to European ports. To make this "cotton triangle" attractive to shippers, New York developed coastal packet lines (Albion 1939:95).

Throughout the nineteenth century, cotton was challenged by lumber as the most important export from Savannah. In 1810, lumber accounted for only $23,560 worth of the port's export trade, but after the War of 1812, the amount of lumber shipped increased dramatically. The major reason was the re-opening of the West Indies market to American trade (Eisterhold 1970:48). By the mid-1840s, the annual volume of lumber shipped exceeded 18 million board feet. It increased to almost 35 million board feet in the mid-1850s. Savannah had indeed become the "lumber center of the South Atlantic" (Eisterhold 1973:526 543).

Unlike the cotton trade, lumber was usually shipped directly to market. Although a large percentage of it went to the West Indies and South America, some was shipped directly to Europe. In 1843, five British registered ships cleared Savannah with cargoes of lumber. In 1847, 38 British ships carrying lumber sailed from Savannah (Eisterhold 1970:51). Direct trade continued to grow right up to the Civil War. Lumber was usually rafted down the Savannah and Ogeechee rivers. The rafts, which carried an average of approximately 30,000 board feet, were generally narrow (75 feet long, 25 feet wide) and were poled or allowed to drift down the river (Eisterhold 1973:532).

"Poleboats" were used extensively on the Savannah River to haul cargoes of lumber and cotton to Savannah. One writer has estimated that in the years between 1800 and 1825, there were 75-100 poleboats in use on the Savannah River (Fleetwood 1982:89). The size of the boats was usually determined in terms of cargo capacity, whether tobacco, rice, cotton or lumber (Figure 9). Pole boats included a type known as a "cottonbox." That type of vessel was used to carry several hundred bales. Pole boats also included the "flat," used for hauling rice. These vessels began to disappear in the 1830s with the growth of steamboats on the Savannah (Fleetwood 1982:89; Rahn 1968:19).

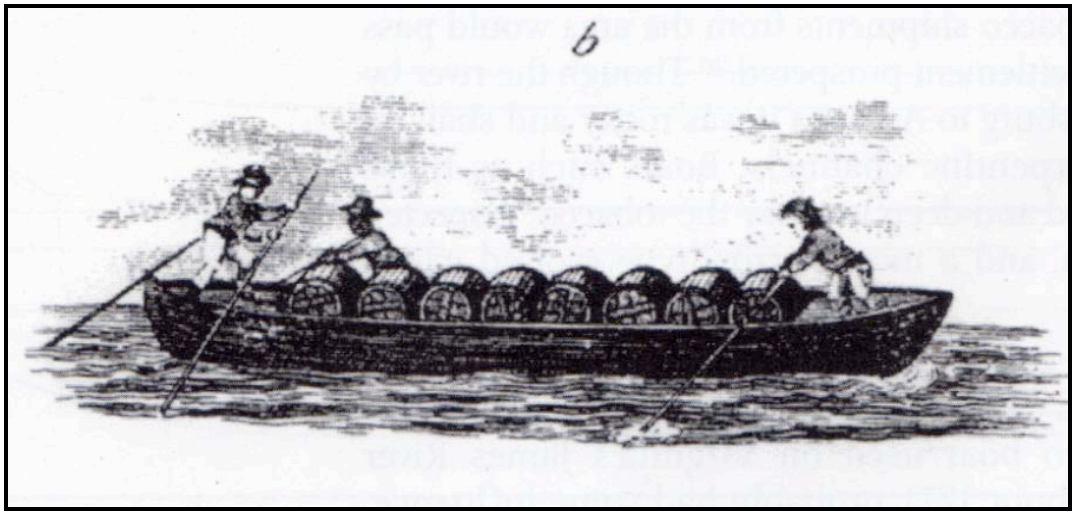

Figure 9. A pole boat carrying a cargo of tobacco hogsheads.

In 1814, Samuel Howard was granted exclusive rights to operate steamboats on the Savannah River. Two years later the steamboat *Enterprise* was launched at the John Watts shipyard in Savannah (Goff 1928:240). In 1819, the Steamship SS *Savannah* sailed for Liverpool on a voyage that made it the first steamship to cross the Atlantic (Figure 10). The following year, Howard organized the Steamboat Company of Georgia (Figure 11). By 1820, the company had three steamers, *Enterprise, Ockmulgee* and *Samuel Howard,* operating on the Savannah.

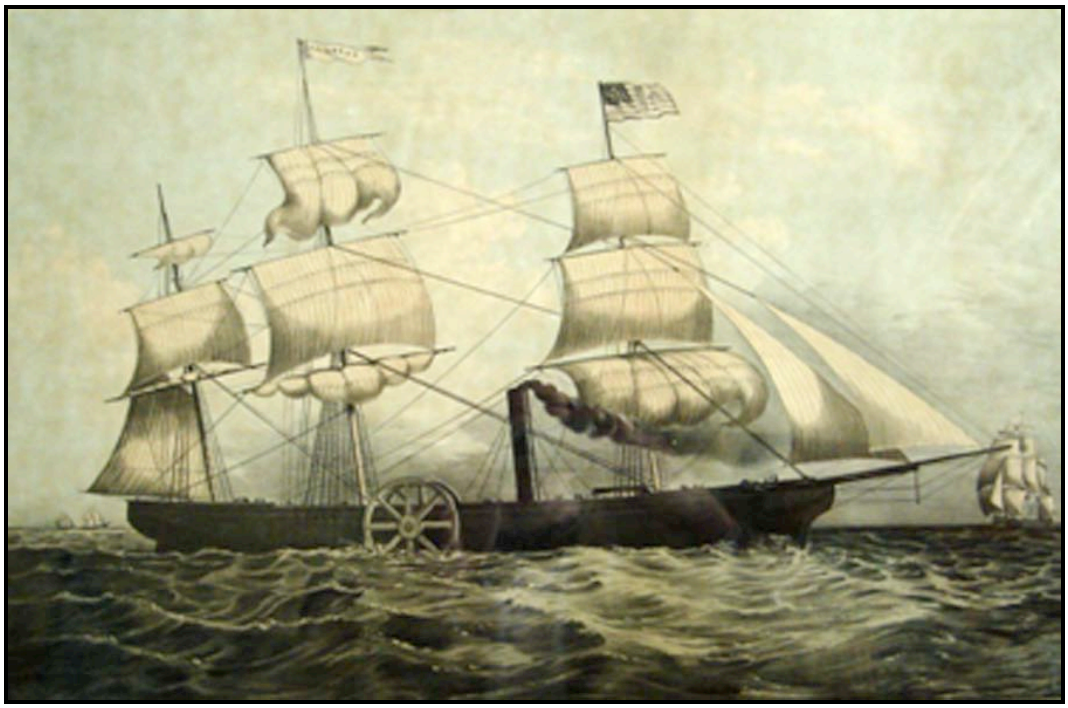

Figure 10. In 1819, SS Savannah became the first steam vessel to cross the Atlantic.

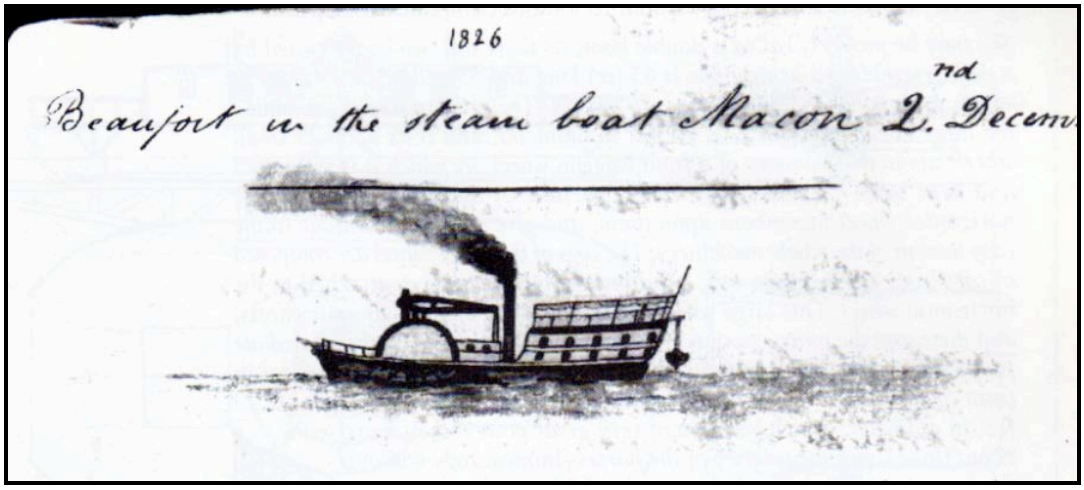

Figure 11. The earliest southern steamboats were small generally resembling this illustration of a vessel by South Carolina planter Charles Heywood.

In the 1820s, the Supreme Court declared steamboat monopolies to be in violation of the Constitution. This resulted in a proliferation of steamboats on America's rivers. In 1834, an iron-hulled steamboat, the *John Randolph,* was launched in Savannah. Historians have recognized this vessel as the first commercially successful iron-hulled steamboat in the United States (Brown 1952:32). The *John Randolph* and two additional iron-hulled side-wheel steamers were built by John

Laird and Company of Birkenhead, England (Figure 12) and shipped to Savannah, where they were assembled and put in use. In 1836, there were 20 steamers on the river, and by 1853 the number had increased to 27 (Goff 1928:43).

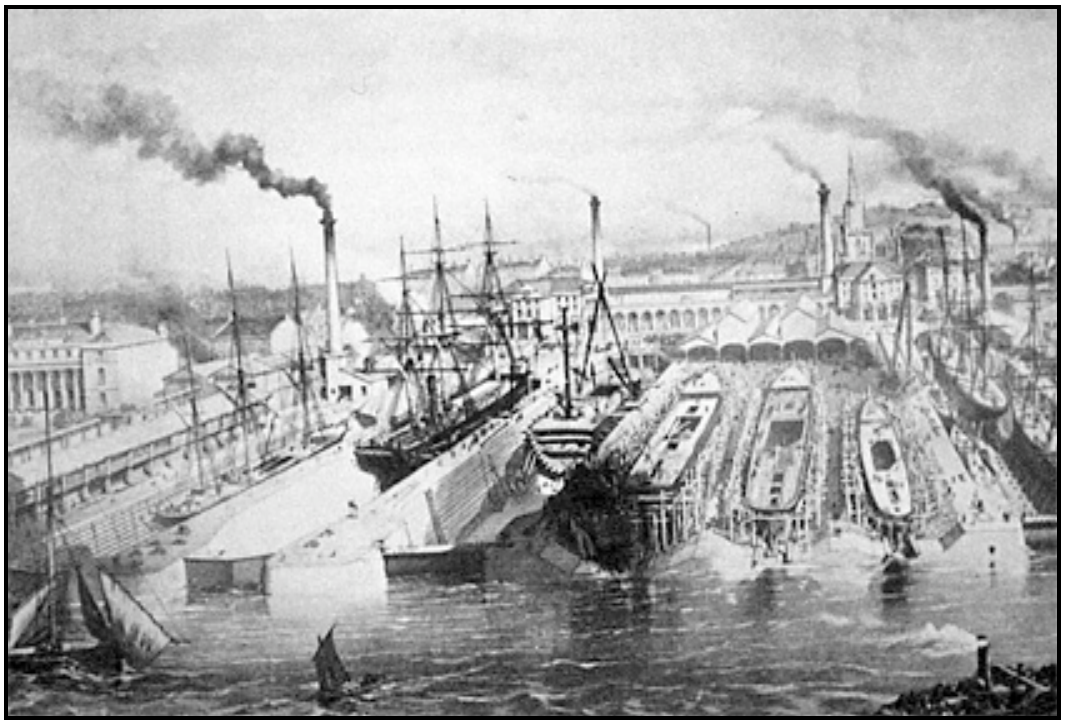

Figure 12. John Laird and Company shipyard in Birkenhead.

The 1820s saw not only the emergence of steam transportation on the Savannah River, but also the beginning of steam packet service between Savannah and New York City. In January 1834, two rival ship lines began running coastal steamers between these two ports (Albion 1938:108). The steam packet service lasted for two decades after which the steamers were shifted to the rapidly developing "cotton ports" on the Gulf. Sailing vessels replaced the steamers on the Savannah-New York run until the Civil War (Albion 1938:108).

Savannah's prosperity and growth were largely dependent upon its maritime trade. This trade was seriously threatened in 1830 when the South Carolina Railroad, linking the Savannah River opposite Augusta with Charleston, was constructed and began to divert trade from Savannah to Charleston. Georgians challenged Charleston's rail connection with railroads of their own. A line connecting Macon with Savannah was started in 1836 and completed in 1853. Other railroads would eventually link Savannah with much of the state's interior, in time nullifying the South Carolina railroad's earlier success (Delgado 1987:34). Although railroads contributed to Savannah's success, the port nevertheless continued to depend primarily upon water transportation. In order to connect the Ogeechee River to Savannah, a canal was dug in the 1830s. For more than 30 years, the canal was used by horse-drawn canal boats, lumber rafts and flatboats (Fleetwood 1982:89; Harden 1969:311).

Georgia's secession and the outbreak of the Civil War in 1861 disrupted the city's growth and temporarily disturbed its maritime trade. President Lincoln's proclamation of a blockade of the Southern coastline led to the port's closure. Prior to its closing in April 1862, blockade runners were able to slip in and out of the river, bringing in military supplies and general cargoes, and carrying out cotton and naval stores. In April 1862, Fort Pulaski was captured by Federal forces. That effectively eliminated commercial traffic on the river below Savannah and only a few blockade runners were successful in entering the river from inland passages. From that time until the end of the war, Savannah's maritime trade was negligible.

A small naval flotilla of converted merchant vessels and riverboats, known as the "Mosquito Fleet," was established at Savannah at the beginning of the Civil War (Figure 13). This force, however, was too weak to contribute much to regional defenses. The Georgia Secession Convention gave authorization to the governor "to purchase or procure for the defense of sea-bound Georgia, three propeller, or other steamers, of light draft, to be armed and manned in such a manner as their tonnage and capacity may require." For this purpose three small steamers, the *Savannah, Sampson* and *Resolute* were purchased and armed (Still 1989:2). In 1861, Commodore Josiah Tattnall was placed in command of "the few small harbor tugs and river steamers that comprised the Georgia Navy" (Fleetwood 1982:117).

Figure 13. Mosquito fleet vessels of the Savannah Squadron.

In the fall of 1862, the first of several ironclad warships was added to the naval force. The floating battery *Georgia* was built entirely from funds collected in the State of Georgia. The vessel was considered a failure, however, because of inadequate machinery and serious construction deficiencies (Still 1985:87). Unable to propel itself under its own weak engine power, the ironclad relied upon tugs or towboats to

move about (Still 1989:6). The *Georgia* operated in the river above the obstructions until scuttled upon Sherman's approach in December 1864.

A second and far more powerful ironclad, the *Atlanta* (Figure 14), was converted from the iron-hulled blockade runner *Fingal*. In June 1863, the *Atlanta* passed through the obstructions and steamed downstream with the objective of clearing the river of Union warships. Unfortunately, the ironclad ran aground and surrendered to two approaching monitors at the entrance to Wassaw Sound after only a few shots were exchanged. A third ironclad, the *Savannah,* was completed and added to the defenses, while others, like the *Milledgeville* were laid down in the city's shipyards. None were completed and commissioned before Sherman's arrival. Most were burned and sunk in the river shortly after launching (Still 1985:217).

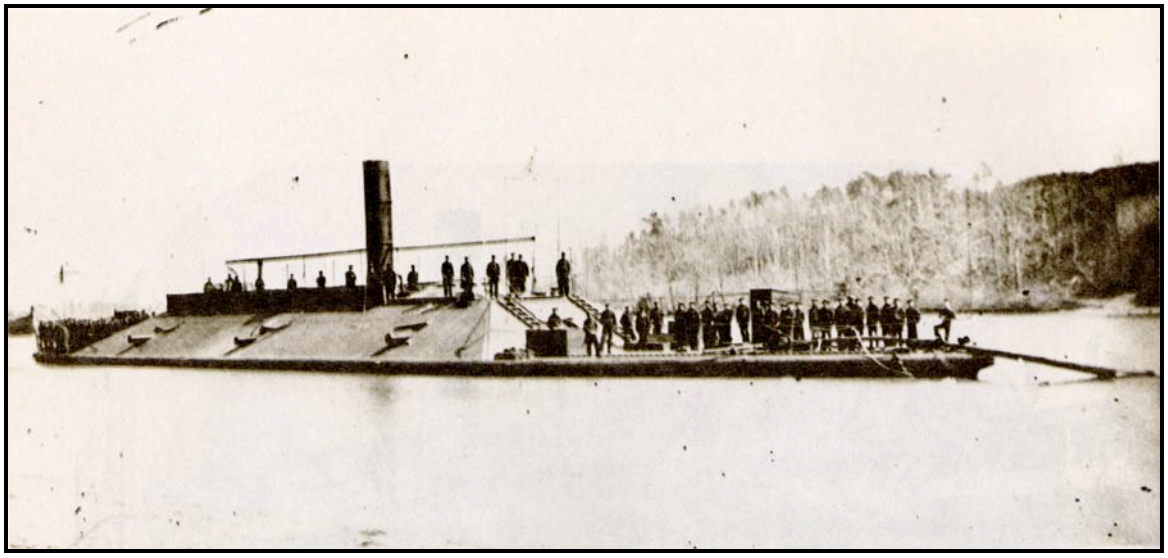

Figure 14. CSS Atlanta after being captured and converted for U.S. Navy operations.

As Sherman's forces approached Savannah in December 1864, preparations were made to evacuate the city. Lt. General William J. Hardee had only 13,000 men to defend the city and, therefore, ordered its evacuation on 14 December 1864. Pontoon bridges were built across the Savannah River to Hutchinson Island. The roadway leading to the north side of Hutchinson Island was connected to a second bridge that extended across the Back River to Pennyworth Island and from there across to South Carolina. Confederate forces evacuated Savannah on 19 December. All bridges were ordered destroyed after the evacuation (Jones 1874:149). The Confederate Navy was also busy during the evacuation of Savannah. On 10 December 1864, CSN Commander Thomas Brent ordered the torpedoes obstructing the Savannah River removed in anticipation of a sortie against the Federal blockading fleet.

Brent reported that a Lieutenant McAdam was unable to remove any of them despite the availability of various appliances such as grapnels. Apparently, the motive power of the boats was insufficient to budge the anchors of the torpedoes

that were firmly imbedded in the sand. Brent's report confirmed the impasse: "Under these circumstances it did not seem to me possible to carry out the instructions of the Department in regard to taking the *Savannah* to sea and fighting her way into [Charleston] or some other port" (Navy Department 1971:148).

Those vessels that could retreat up river to Augusta were ordered to do so. Other vessels, including the CSS *Savannah* and CSS *Georgia* were scheduled for destruction. The CSS *Isondiga,* a shallow draft steamer, was destroyed by fire after running aground in Back River (Hunter 1865; Wood n.d.). The *Savannah* was run aground on 21 December at Screven's Ferry and it was burned to prevent Federal seizure. The *Savannah*'s consort, CSS *Firefly,* was destroyed as well.

The Battle for Savannah and subsequent Confederate withdrawal left the city at a standstill (Figure 15). Many commercial buildings and warehouses were destroyed. However, restricted maritime commerce was quickly restored. When Federal forces occupied Augusta, they discovered thousands of bales of cotton accumulated during the war stranded because of the Union blockade (Rahn 1968:50). With the final defeat of the Confederacy in the spring, efforts were made to clear the river and get the bales to Savannah. At the end of the war there was only one steamboat, the *Amazon,* still running on the river to Augusta, but by 1866, as many as 30 were engaged in the Savannah to Augusta trade. However, after the removal of the confiscated cotton, Savannah's trade declined dramatically. By 1873, only two steamboats, the *Rosa* and the *Katie,* made regular runs (Rahn 1968:51).

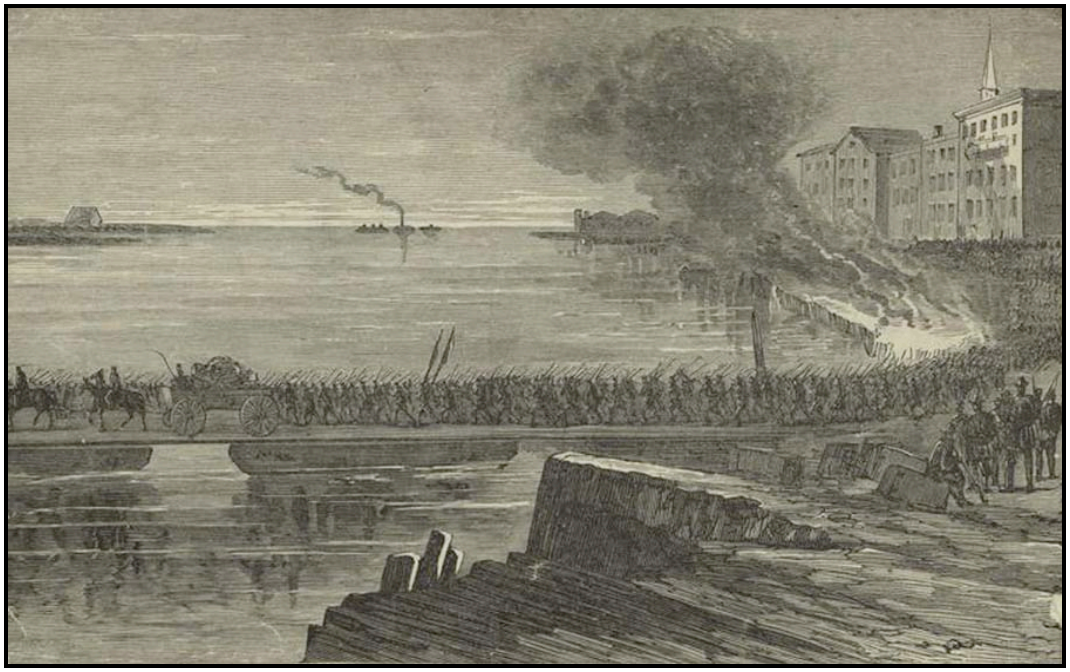

Figure 15. Confederate retreat across the Savannah River in December 1864.

By 1880, the inland transportation between Savannah and Augusta, some 202 miles by river, had revived. In 1894, the Army Corps of Engineers stated that "on the inland waters there are seven small steamers plying between Savannah and adjacent ports, making annually from 500 to 600 trips, and carrying 67,000 tons of freight, valued at more than $4,000,000. The total annual tonnage of the port, inward and outward bound, is more than 2,000,000 tons." By 1896, the Corps reported that "many small steamers and sailing craft ply the waters of the inland route" (U.S. Army Corps of Engineers [USACE] 1894, USACE 1896).

Savannah also benefited by developing rail links with the interior. By the mid-1890s, four railroad lines entered the port and another, the Macon & Atlantic, was under construction (USACE 1896). Although the railroads initially complimented the river transports, they would eventually replace them. Nevertheless, the railroads were a major factor in Savannah's prominence as a port in the 50 years that followed the Civil War. Through various lines, Savannah was able to tap the naval stores industry in Florida and Alabama, and the cotton industry in eight states as far away as Texas and Oklahoma (Gamble 1942:10).

Before the Civil War, Savannah had been an important steamboat building center. The industry, however, would not recover after the end of hostilities. Most of the riverboats were built elsewhere. Between 1866-1871, only six vessels - two sloops, two schooners and two steamboats - were built in Savannah. In the 1880 licenses on shipbuilding, Henry Hall wrote that at Savannah "a few shipwrights find some repair work to do" (Fleetwood 1982:131; Hall 1882).

Oceanic trade steadily increased as river navigation improved. In 1872, the Savannah Line was established to once again operate a packet service to New York City (Figure 16). By 1914, this line alone operated nine steamships, totaling 43,484 tons, between the two ports. Before the twentieth century, several regular lines were in operation to New York City, Boston, Baltimore and Philadelphia (USACE 1896). Between 1880-1905, the number of steamers that made regular calls to Savannah increased from 43 to 192. The USACE reported in 1888 that an average of one steamer per day cleared for northern ports plus "a large fleet" of sailing vessels and foreign vessels (USACE 1888). Savannah's export trade in the post Civil War years consisted primarily of lumber, naval stores and cotton, the same as before the war. In 1878, nearly 42 million board feet of lumber were exported (Figure 17). The amount would double in the decade that followed and would eventually reach a peak of approximately 200 million board feet (Gamble 1942:13; USACE 1879, 1896).

Naval stores were of limited importance as an export before the Civil War, but afterwards, the industry shifted from North Carolina to Georgia and the Gulf states. Savannah became the principal shipping point for naval stores. In 1883, the Savannah Board of Trade stated that "twelve years ago a barrel of rosin or spirits of turpentine was scarcely known in this market in the world. Our receipts for the past fiscal year being 133,139 barrels of spirits and 564,026 barrels of rosin, the aggregate value of which is about $4,000,000, ranking second to cotton in value" (Harden 1969:474). During the 12-year period from 1891-1903, Savannah exported 1 to 1.5 million barrels annually (Gamble 1942:11).

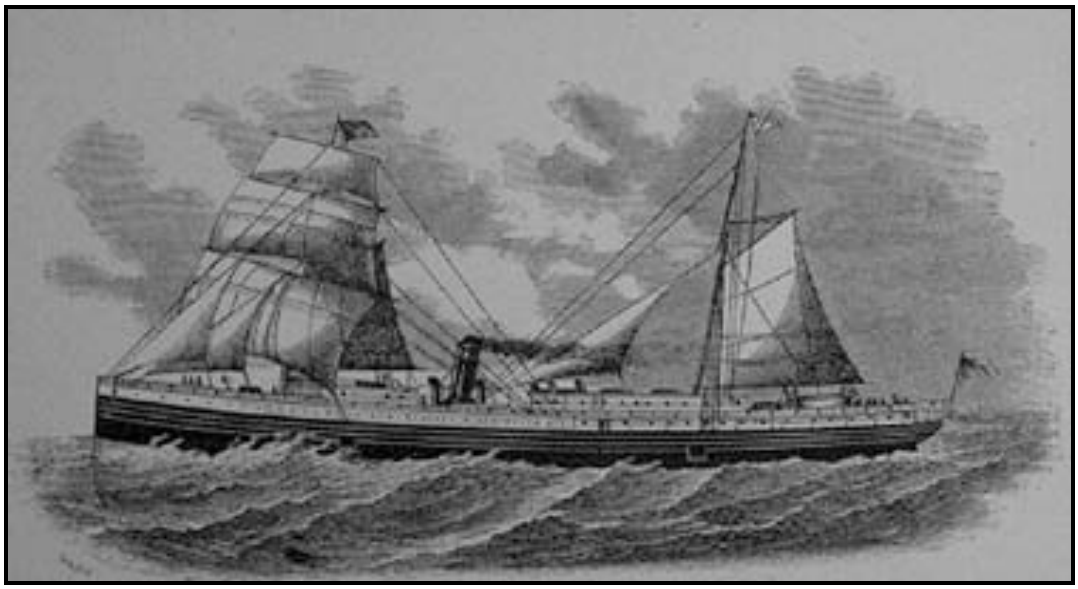

Figure 16. Steamer *City of Savannah* 1872.

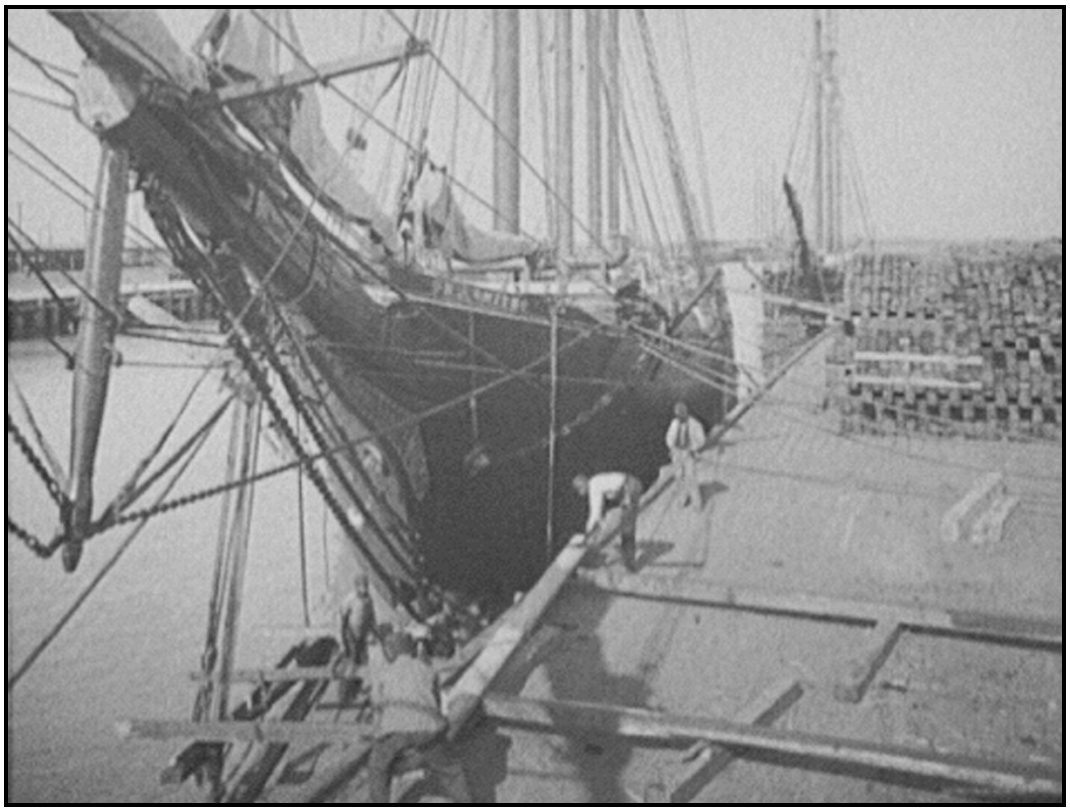

Figure 17. Ships loading lumber at the docks in Savannah.

A large number of small craft for commercial fishing and recreational purposes were built in the city in the decades between the Civil War and World War I. Although the waters adjacent to Savannah were not as important for commercial fishing as

those near Charleston and Florida, by 1890, Savannah became the most important fish market and distribution center in the southeast (Fleetwood 1982:101, 106-109). Recreational boating, particularly yachting, had been popular among Savannah's wealthy before the Civil War. After the conflict, it increased in popularity. Regattas involving a variety of small rowing and sailing craft were held annually. Many of the boats were built locally (Fleetwood 1982:101, 106-109).

During the years preceding World War I, Savannah rose to become the second largest exporter of cotton in the country. In 1866, Savannah exported 257,000 bales of cotton, much of it having accumulated in Augusta during the war. By the beginning of the twentieth century, nearly one million bales were being exported, and in the first 15 years of that century, an average of 1.5 million bales per year were exported (Figure 18). The peak year was 1911, when over 2 million bales were shipped out of the port (Harden 1969:473; USACE 1896).

Figure 18. Steamers loading cotton at Savannah about 1900.

Other exports during these years included rice, phosphate, cotton seed oil and a limited number of manufactured goods. In 1912, more than 1,110 steamships along with 170 sailing vessels cleared Savannah (Gamble 1942:13; *Savannah Morning News [SMN]*, 18 September 1945). Total tonnage in 1913 was more than 3 million. This increased tonnage resulted in larger vessels traveling on the river. The USACE kept pace by steadily deepening the channel. In 1873, a ship drawing 17 1/2 feet could enter the harbor. By 1917, a ship with a 26-foot draft could safely dock at the port (Jones 1916:188).

Savannah's boom years were periodically slowed by disasters and disease. A yellow fever outbreak in 1876 killed more than 1,000 people; a fire in 1883 and another in 1889 destroyed entire blocks and hundreds of buildings (Sieg 1985:76). In 1881, 1893 and 1896, the City of Savannah was struck by devastating storms. The hurricane of August 1881 produced wind gusts estimated at 75-80 mph, blowing away the

meteorological instruments. The hurricane of August 1893 destroyed 30 vessels, mostly small fishing boats *(Harper's Weekly [HW],* 16 September 1893; *SMN*, 22 August 1943; 1 March 1959).

On 27 August 1893, every island in the river was inundated under tons of seawater forced upriver by sustained winds of 72 mph by the worst hurricane recorded until that time. The dead numbered over 3,000, with damage estimated in the millions of dollars. Four vessels were wrenched from their moorings at the city docks and tossed across the river to settle on Hutchinson Island. One ship was sent ashore on Tybee Island, while the steamship *City of Savannah,* en route to Savannah from Boston, ran aground off Hunting Island *(HW,* 16 September 1893; *SMN,* 22 August 1943; 1 March 1959).

World War I marked a watershed in the port's history. By 1917, with some 70,000 inhabitants, Savannah had become a small but thriving metropolis. During the 1917-1918 period, shipping prospered because of the war. The desperate need for merchant vessels resulted in a shipbuilding boom in the city. When the war came to an end in Europe, Savannah's boom in maritime trade waned.

A number of factors destroyed Savannah's cotton exporting industry. In 1918/1919, the federal government inaugurated barge line service on the Mississippi and Warrior Rivers and set rates (both rail and water) for shipping to New Orleans and Mobile that favored these two ports at the expense of others. Savannah lost most of its cotton trade and naval stores from the Gulf states and Oklahoma as a result of this *(SMN,* 18 September 1945).

Another factor was the appearance of the boll weevil that reduced production by more than 50 percent in 1921 and 1922. Cotton exports dropped sharply in the early 1920s, slowly climbed again, but dropped again in the 1930s. Annual exports which once reached 2 million bales, dropped to less than 400,000 by 1928. From 1935 to 1940, exports averaged 93,000 bales per year (Gamble 1942:10; Lawrence 1955:8).

Fortunately for the port, cotton and naval stores were replaced by other shipping industries. In 1916, the Savannah Sugar Refinery was built. In 1922, 175,056 tons of sugar were imported. The number of tons would increase to more than 300,000 before World War II *(*Lawrence 1955:8; *SMN,* 13 November 1936). The fertilizer business steadily increased during the post World War I years. In the 1920s, three oil companies built terminals in Savannah. Petroleum products increased from 7,000 tons in 1917 to 314,299 tons in 1923. In that year, Savannah, following the lead of Mobile, successfully gained approval to create a publicly financed port authority (Bartley 1983:186). Also, in 1923, Savannah was ranked among the 10 largest shipping centers in the nation. By 1929, one authority wrote that Savannah's waterborne commerce exceeded $500,000,000 annually and more than 1,000 vessels entered the harbor each year (Lawrence 1955:8).

In December 1941, the United States entered World War II. As in the First World War, Savannah would become an important shipping and shipbuilding center. The city's population in 1940 was 117,940, but the city's industries resulted in a significant increase. Before the war ended, the population had passed 150,000

(SMN, 15 September 1945). The war "turned Savannah from a sleepy, traditional backward-looking town on a muddy river into a full fledged twentieth-century American City" (Sieg 1985:107).

For the first nine months of the war, the presence of German submarines operating in the Atlantic off the coast virtually closed the port. After the submarine crisis eased, Savannah became a shipping center for war material and lend-lease cargoes to Great Britain and elsewhere. Once Germany was defeated and the war shifted to the Pacific, Savannah continued to ship material. In August, the final month of the war, more than 72,000 tons of material was shipped out of Savannah *(SMN,* 18 September 1945).

Thousands of workers were employed in Savannah shipyards during the war; at least 15,000 by the Southeastern Shipbuilding Corporation alone. This firm built 93 vessels during the conflict, including 88 Liberty ships (Figure 19). The Savannah Machine and Foundry Company constructed 25 barges, and the MacEvoy Shipbuilding Corporation launched seven *(*Sieg 1985:107; *SMN,* 25 September 1945). When the war ended, however, the yards closed.

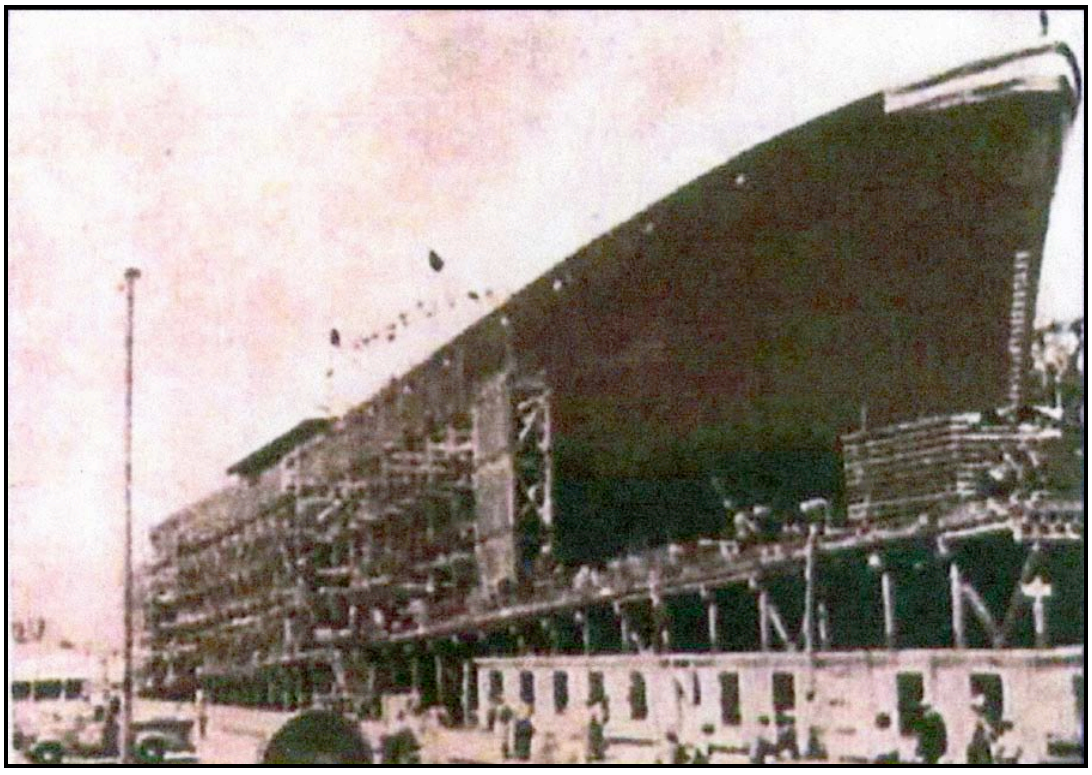

Figure 19. Liberty ship on the ways at Southeastern Shipbuilding.

Immediately after the war, maritime activities in Savannah slowed down as they did nationally, but from 1949 to the present, activity accelerated. In 1948, the state purchased the deactivated Federal Quartermaster Depot and turned it into the first

state port in Georgia. The USACE deepened the channel and harbor to 34 feet. Numerous new industries and businesses were located in Savannah and nearby on the river, and with the completion of the bridge in 1954, the north side began to develop. By 1955, Savannah had four deepwater public terminals and at least 10 privately operated terminals (Lawrence 1955:8).

Cargoes included agricultural products, lumber products, seafood, raw sugar, steel and a variety of general products. Some shipping developed around military operations out of Fort Stewart and Hunter Army Airfield *(Savannah Evening Press [SEP],* 14 October 1981). In the 1950s, Seatrain Incorporated began running ships to northern ports. In the past two decades, Savannah has become an important container port. In 1980-82, container tonnage grew at a rate of 50 percent a year. By 1985, Savannah was collecting more money in custom revenue than any port from Baltimore to New Orleans. Today, maritime activities including port work, employ more than 15,000 people. As the harbor is improved and port facilities expand, maritime activities will continue to increase (Lawrence 1955:10; *SEP*, 14 October 1981).

Development on Hutchinson Island

The earliest commercial use of Hutchinson Island began in the eighteenth century shortly after the founding of the colony. In 1746, brickmason Thomas Salter obtained a seven year lease on 10 acres of Hutchinson Island. Salter found the clay on Hutchinson Island to be much superior to other sources in the Savannah vicinity (Granger 1997:28-30).

Hutchinson Island and the other marsh islands along the Savannah River proved to be ideal for wet rice cultivation (Wilson 1858:133). At least five plantations were established on Hutchinson Island near the vicinity of Savannah during the 1790s (Franklin 2002:25). The Stouf map of 1797 identifies two Hutchinson Island plantations near the east end of the island (Figure 20). Thomas Young cultivated rice on Hutchinson Island following the War of 1812 (Granger 1997:364). The *Plan of the City of Savannah in the State of Georgia* produced in 1812 by the engineers' department of the U.S. Topographical Bureau documents the extent of agricultural development on Hutchinson Island (Figure 21).

In 1817, the Dry Culture Law was enacted in Savannah. Meant as a measure to prevent disease, the law stated that no wet agriculture was permitted within two miles of Savannah (Ledbetter and Doyon 1984:21). As a consequence of the Dry Culture Law, most of the plantations on Hutchinson Island switched over to corn and cotton cultivation. However the 1820 McKinnon and Wright survey map illustrates that the southern portion across from Musgrove Creek was also used as a "vegetable garden." Historical cartography indicates that Fig Island was not used for cultivation of either wet or dry crops. The most complex development adjacent to the Back River shoreline of Hutchinson Island was the Thomas Spaulding plantation settlement. Cartographic sources suggest that Spaulding's complex of structures predated the War of 1812 and existed until the Civil War **(Figure 22)**.

Although Hutchinson and Fig islands remained essentially undeveloped, more than a decade prior to the Civil War a lighthouse was constructed at the eastern end of Fig Island. The 1851 chart *Reconnaissance of the Approaches to the City of Savannah* produced by the U.S. Coast Survey illustrates the lighthouse (Figure 23). The *Preliminary Chart of the Savannah, River* published by U.S. Coast Survey in 1855 also illustrates the lighthouse and an unidentified development on the western end of Fig Island.

Historical and cartographic sources also confirm a fortification was constructed on the extreme eastern end of Hutchinson Island. The Charles Platen map of Chatham County published in 1875 identifies the fortification as "Fort Augusta" (Figure 24). *Official Records of the Union and Confederate Armies* identify a fortification at that location as the Hutchinson Island Battery and document that the earthwork contained three 32-pounders and two 10-inch mortars (Broadfoot Publishing Company [BPC] 1997:645, 662, 663). A 16 January 1862 letter included in Headquarter Expeditionary Corps records confirmed that a "Battery has been constructed on the very lower end of Hutchinson Island, near Fig Island, and the guns are there" (Franklin 2002:26). Those records also mention a "fort on Fig Island near the city of Savannah, about a mile above Fort Jackson" (Franklin 2002:26). On 20 October 1862, the fortification on Hutchinson Island was examined by General P. G. T. Beauregard. General Beauregard indicated that the "Hutchinson Island Battery" was "a small three-gun battery (three 32-pounders)…enfilading the river, and Screven's Causeway on the South Carolina side" (BPC 1997:646). The report also confirmed that while the battery occupied an advantageous position the location was "low and damp" (BPC 1997:646).

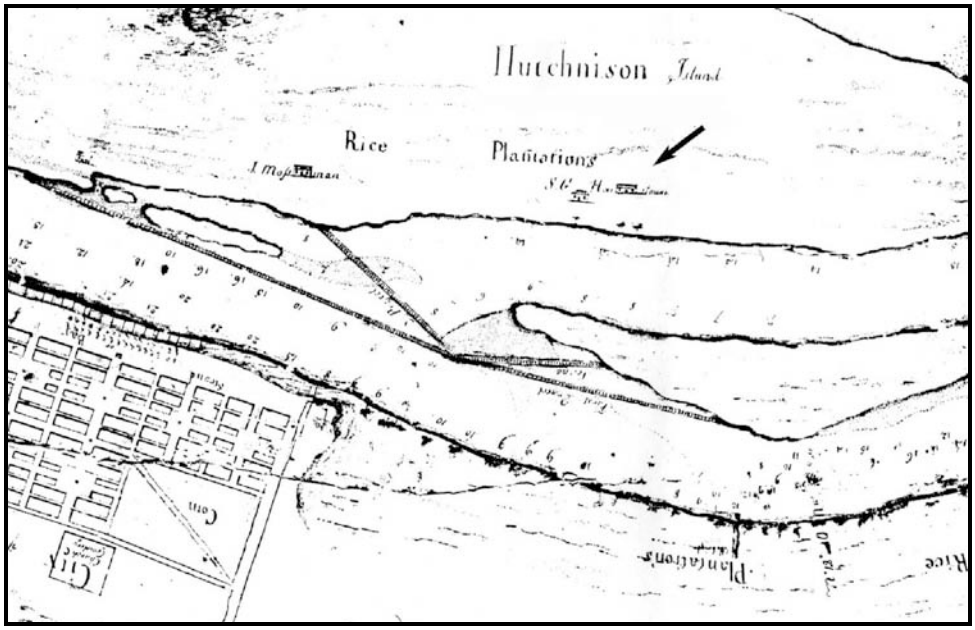

Figure 20. 1797 Stouf map showing two Hutchinson Island plantations southeast of the project area.

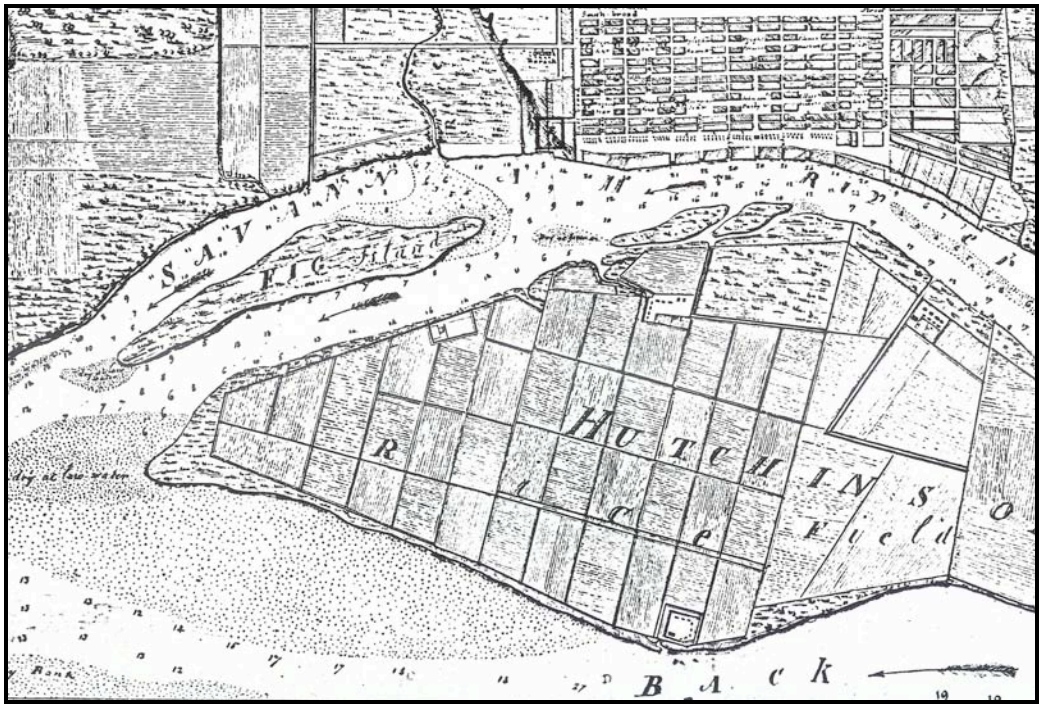

Figure 21. 1812 U.S. Topographical Bureau map depicting agricultural development on Hutchinson Island.

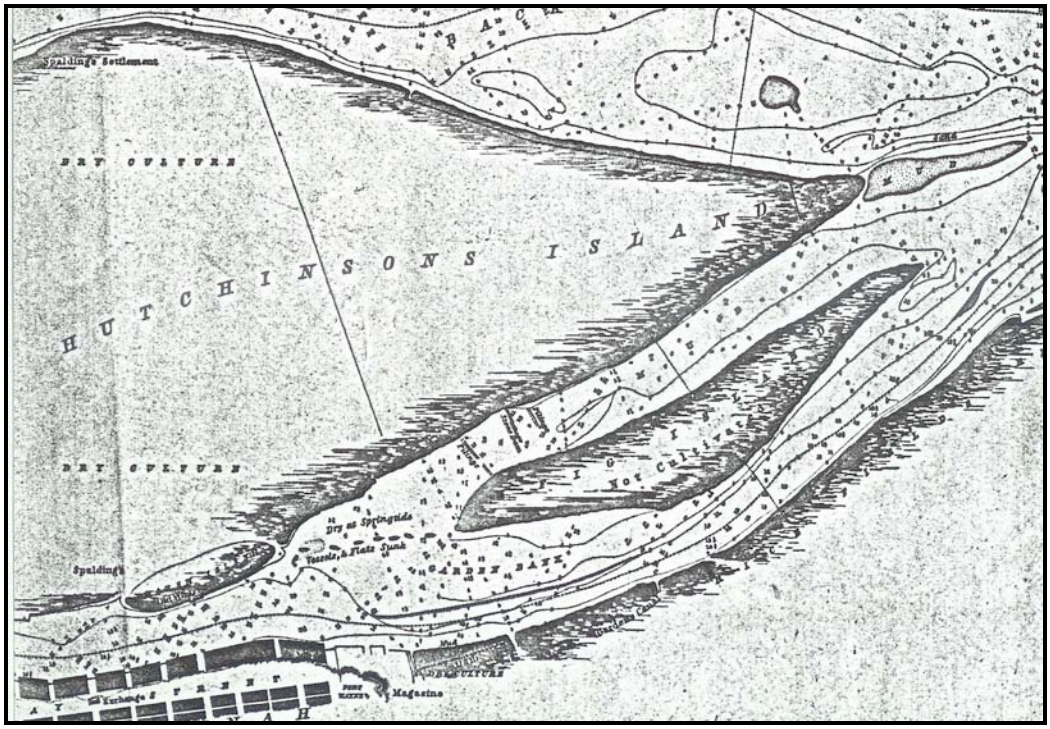

Figure 22. 1833 map by John Mackay depicting the Thomas Spaulding plantation settlement on the Back River side of Hutchinson Island.

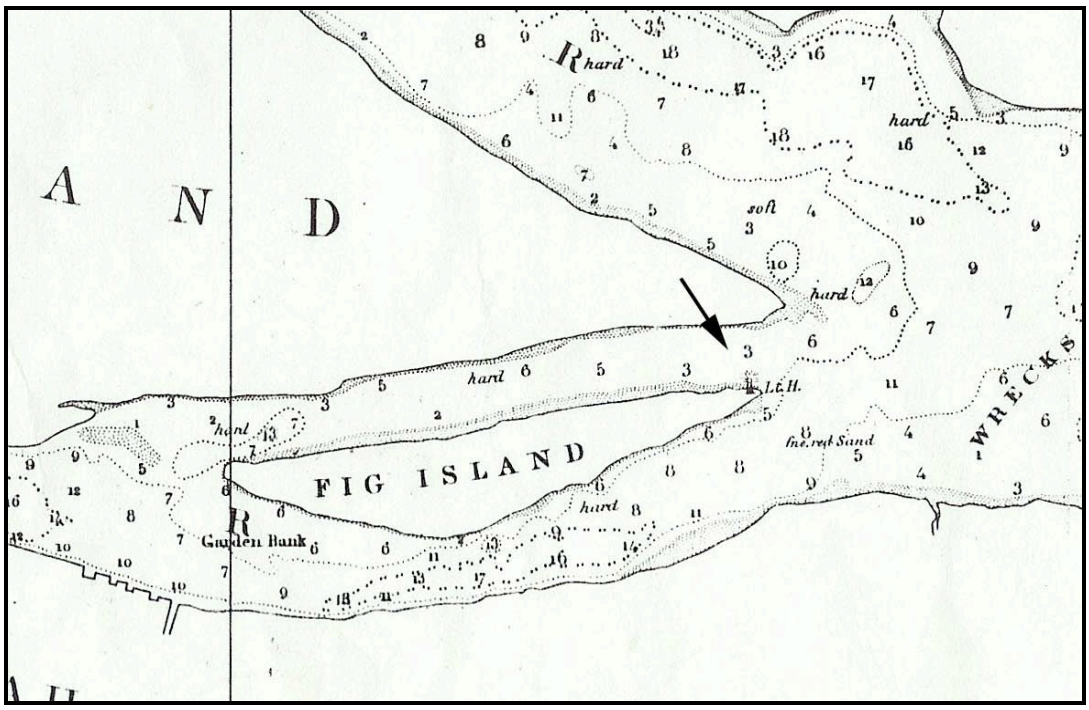

Figure 23. 1851 U.S. Coast Survey map depicting a lighthouse on the eastern tip of Fig Island at the southeastern end of Hutchinson Island.

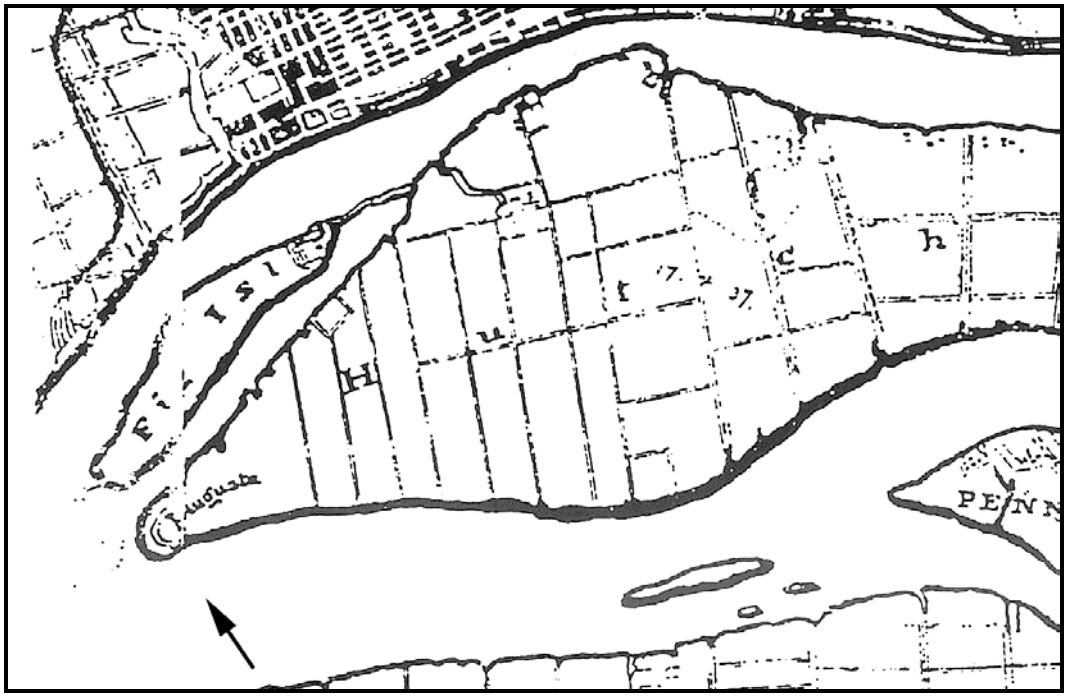

Figure 24. 1875 Charles Platen map depicting Fort Augusta on the eastern tip of Fig Island.

While Fig Island remained essentially undeveloped, the Savannah River shoreline began to attract maritime industry prior to the Civil War. William Mein, a local attorney, purchased part of James Mossman's Hutchinson Island plantation in 1806. He subdivided the property and offered the lots for public sale in 1817 (Babits and Barnes 1984:7-8). The division and sale of this property eventually lead to the industrial development of the section of Hutchinson Island opposite of Savannah.

Development of Hutchinson, however, showed no appreciable changes until 1850 when the Floating Dry Dock Company of Savannah began operations. The floating dry dock, constructed by Charles P. Landershine and secured at Andrew Low's wharf, measured 220 feet in length, 65 feet wide and 20 feet deep (Babits and Barnes 1984:8). The dry dock appears to have been in operation until the Civil War, after which no further mention of it can be found in the local newspapers (Babits and Barnes 1984:15). In 1868, the city passed a resolution for replacement of the dry dock.

Apparently the city did not have to wait long for a new repair facility, for in 1872, the *Savannah Morning News* reported the launch of the pilot boat *Belle* at the Usina & Jones dry dock (*SMN*, 20 September 1872). Historic maps indicate that the dock was located on Hutchinson Island on Lot 23 at the mouth of Fig Island Channel, which was in the process of being closed by the disposal of derelict vessels and the erection of a series of wing dams (Figure 25). The structure was located in what is now Slip No. 1. The dry dock was in operation until 1894. In April of that year the Usina & Jones facility was destroyed in a fire that was started on an old hulk located nearby.

Other industrial development on Hutchinson Island after the war included the Willink's Marine Railway. The railway, completed in 1874, comprised part of an extensive shipyard complex owned and operated by Henry F. Willink, Jr. of Savannah on lots 4 through 9, west of the project area (Babits and Barnes 1984:16). Among the earliest vessels to be hauled upon the railway for repairs were two tugs (Babits and Barnes 1984:16). Both local and regional shippers utilized Willink's marine railway throughout the 1870s and 1880s. In 1898, the Georgia and Alabama Railway Company (GARC) purchased a large portion of Hutchinson Island including wharf lots 4-8 that contained the marine railway site (Babits and Barnes 1984:18-19). While the Savannah River side of Hutchinson Island was being developed for maritime industries, rice was still being grown on the north side of the island. In 1876, Mitchell and J. Gadsden King sold their Rae's Hall Plantation property that included 320 acres of rice fields called Ham on Hutchinson (Granger 1997:377).

Another marine railway was apparently operated by the entrepreneur George F. Byrnes. Byrnes' marine railway was located across the river from East Broad Street west of the Willink facility. Byrnes may also have maintained a shipyard in the same area. It is not known exactly when these businesses were open, or how long
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they functioned. The last mention of the marine railway comes from Byrnes' 1890 will. It is possible that equipment from the marine railway was sold at auction in that year (Simmons 1996).

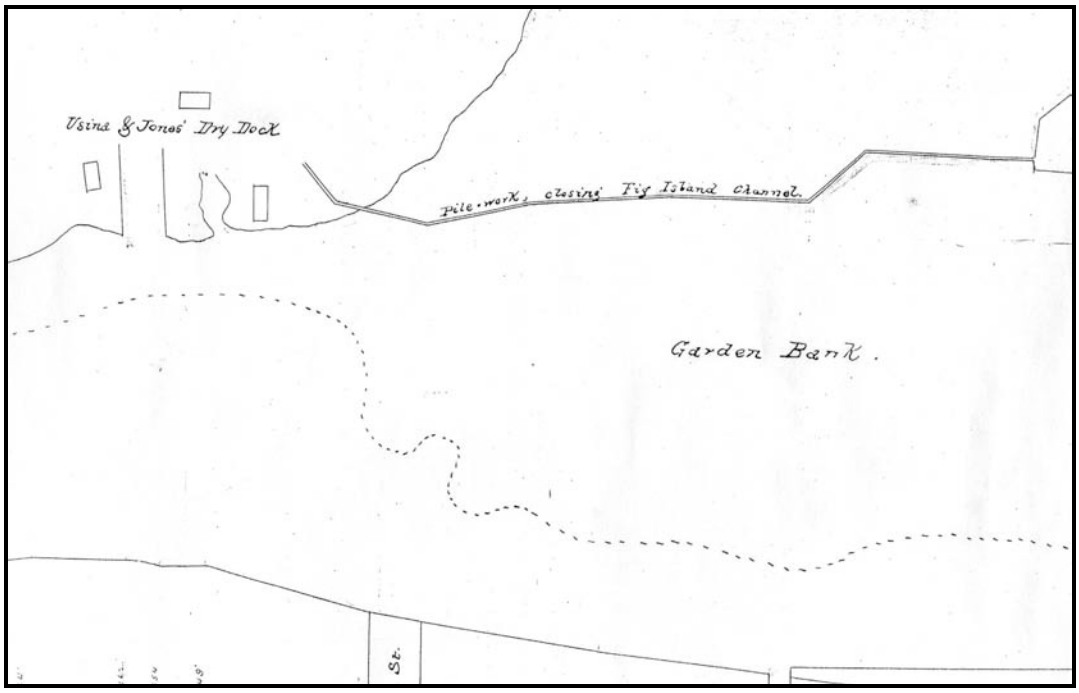

Figure 25. 1868 Hogg map depicting the location of the Usina & Jones Dry Dock and Fig Island Channel wing dam.

In October 1897, the Hutchinson Island waterfront was purchased by GARC. The company intended to turn Hutchinson Island into a "great railroad terminal" (Franklin 2002:30). The facility was incorporated as the Georgia and Alabama Terminal Company in 1898, a subsidiary of the railway. By 1899, over 1,200 men were employed in the construction of the new terminals and the *Savannah Morning News* described the facility as:

> [E]xtremely important to river trade in Savannah and no other comparable facility existed at the time…it was designed to widen the river at point of location at least 135 feet, the result being, including the slips, a water frontage of 9,452 feet, accommodating thirty-one steamers 300 feet long, which will have all facilities for loading or discharging cargoes at the same time (*SMN*, 7 September 1899).

On 1 July 1900, GARC and their Hutchinson Island terminals were purchased by the Seaboard Air Line Railway (SAL). SAL quickly developed its Hutchinson Island facilities. In 1910, the company had constructed three slipways and a number of support buildings. By 1916, all three slipways were surrounded by numerous buildings and storage sheds (Figure 26). The 1916 Sanborn Insurance Company map of the SAL facilities confirms the extent of their development (Figure 27).

Figure 26. Seaboard Air Line Railway facilities on Hutchinson Island.

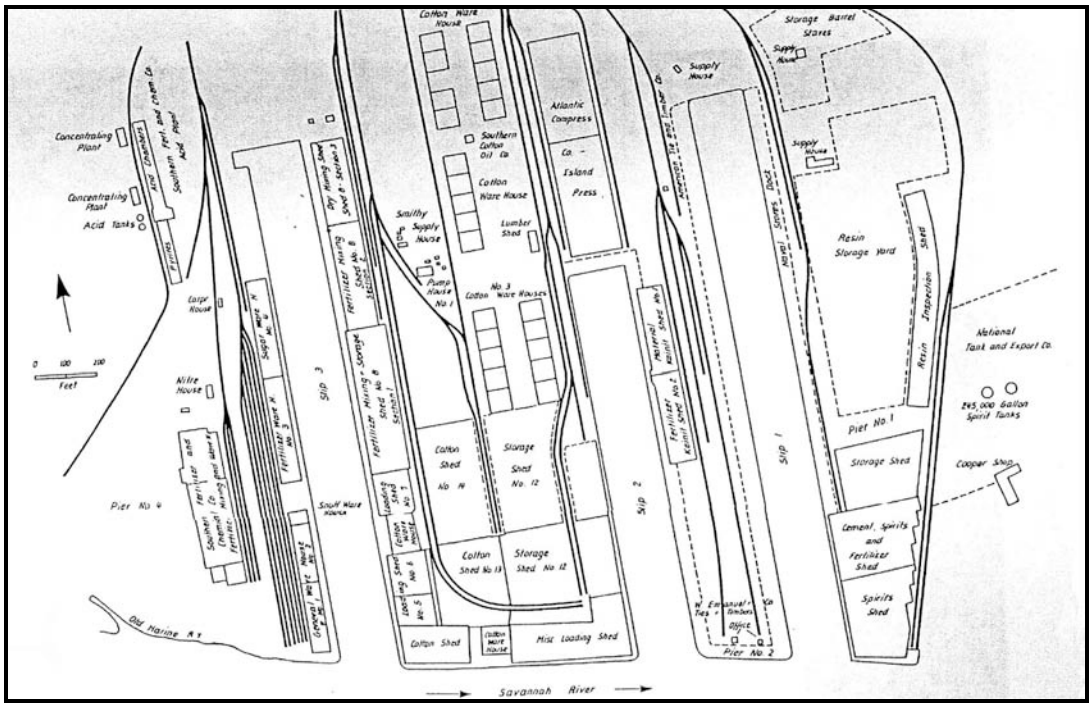

Figure 27. 1916 Sanborn Insurance map showing development around Seaboard Air Line Railway Terminals.

In 1925, the USACE reported that the SAL terminals "constituted the largest railway and steamship terminal units at the port of Savannah" and that "three slips about 200 feet wide and ranging between 1,360 and 1,980 feet in length have been dredged into the island. About 11,800 linear feet of berthing space is provided, with depths ranging from 22 to 24 feet mean low water" (Franklin 2002:32). Terminal facilities handled a variety of cargoes including: cotton, naval stores, fertilizer and lumber.

A 1955, a report by the Board of Engineers noted that SAL had abandoned both slips No. 1 and No. 2 and all buildings connected with their operation had been torn down (Franklin 2002:33). Slip No. 3, however, was still in operation and was reported as undergoing repairs and rebuilding.

Implications of Literature and Historical Research

Historical activities located along the Back River side of Hutchinson Island were primarily related to agriculture. Almost all of this agricultural activity was directed toward rice cultivation. Early navigation on the Back River must have focused on support for that economy. Military activities began in the Back River area in 1776 with the "Battle of the Rice Boats," and lower Back River served as an anchorage for ships. During the Civil War the Back River was lightly fortified with a battery near Screven's Ferry which served as a transshipment area for supplies and personnel. It was also the location where several Confederate vessels were scuttled to prevent capture by Union forces.

Research has shown that throughout the 18th and 19th centuries a variety of small vessels traveled the waters of the Back River. Back River was also used as a convenient location to abandon vessels that were unserviceable. The Austrian Bark Undine was raised from the Savannah River channel and sunk behind the Fig Island Jetty to ensure the vessel would no longer threaten navigation (Wood Undine 1893). Historical evidence indicated the submerged archaeological record in the survey area could contain material associated with all types of maritime activity. From the earliest times of European involvement in Georgia the volume of traffic on the river was directly proportional to the prosperity of Savannah itself. This in turn was affected by the political and economic state of the nation in general. When Savannah prospered, so did commercial activity on the river.

Cartographic Research

Cartographic research identified a variety of maps and charts illustrating historical activity on Hutchinson Island. The earliest maps were associated with the settlement of Savannah and included the map commissioned by Oglethorpe in 1734. A half dozen 18th century maps of the area produced information about agriculture and navigation. Without question the most comprehensive and valuable maps dated from the 19th century when improved cartography made maps and charts more accurate. Maps produced in the 20th century provided some insight into the Back River area and confirmed some information from historical documents.

However, as Back River was not the main artery of Savannah's shipping, the location and identification of wrecked and abandoned vessels was not a major concern for cartographers. A 1899 "Plan of Hutchinson Island" produced by the Georgia Construction Company provides a detailed record of Planter's Canal but no evidence of Cooley's store or the derelict east of the Back River mouth of the canal (Figure 28).

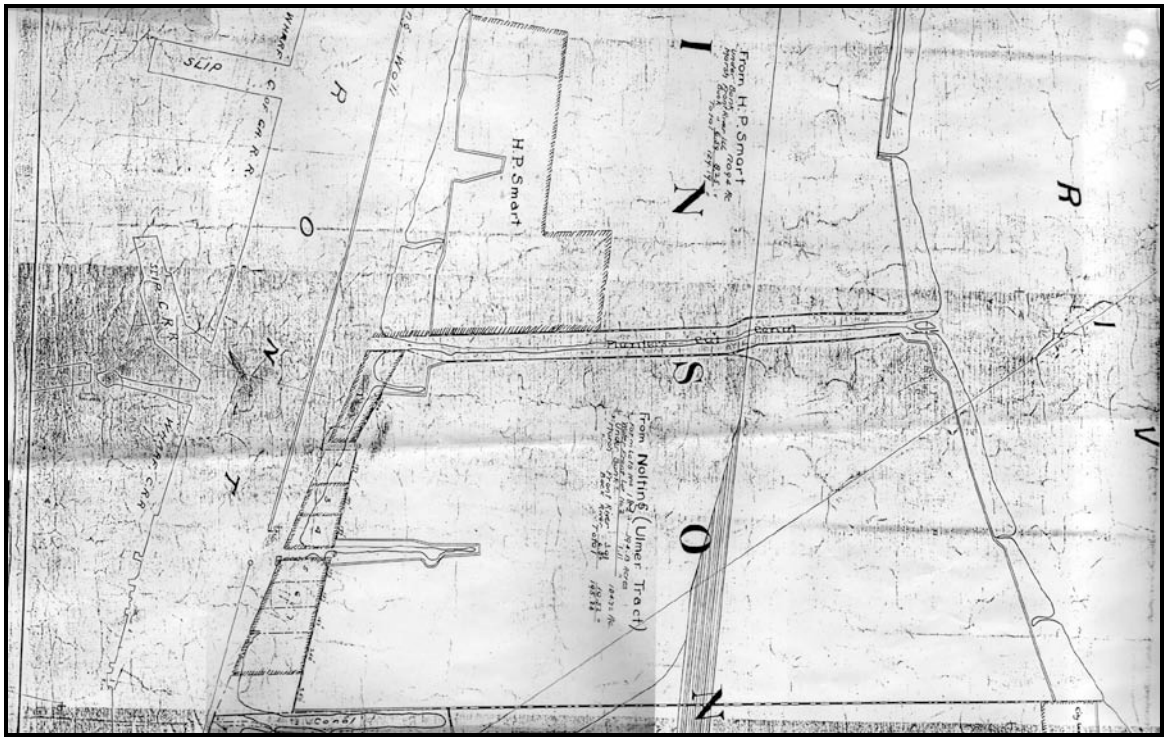

Figure 28. Plan of Hutchinson Island produced by the Georgia Construction Company showing Planter's Canal.

Description of Previous Investigations

1991 Survey

The U. S. Army Corps of Engineers, Savannah District proposed closing New Cut between Back and Middle Rivers and locking open the tide gate at Hutchinson Island on the Back River in Savannah Harbor in 1990. In order to assess the potential impacts on cultural resources associated with altering the Back River environment, Tidewater Atlantic Research of Washington, North Carolina was contracted by Gulf Engineers and Consultants, Inc. for the U.S. Army Corps of Engineers, Savannah District, to conduct historical and cartographic research, a remote sensing survey of Back River and a reconnaissance of the shoreline to identify intertidal and terrestrial archaeological sites.

The shoreline survey was conducted from 21 to 27 October 1991, and focused on the low water shoreline from New Cut to the lower end of Fig Island. Ultimately the

survey identified a total of 31 archaeological sites consisting of vessel remains and shoreline structures. Twenty-five of the shoreline sites were recommended for further investigation, including documentation and assessment prior to impacts resulting from the effects of closing New Cut and locking open of the tide gate system.

One of those sites was the vessel designated GA BR 17. The wreck had been brought to the attention of USACE Savannah archaeologist Judy Wood by Robert Holcombe, curator of the Confederate Naval Museum in Columbus, Georgia. A Savannah resident contacted Holcombe claiming that the vessel remains were those of the Confederate gunboat CSS *Isondiega*. A December 1988 inspection of the wreck by Wood, Leech and local maritime historian Rusty Fleetwood confirmed that the hull was much larger and heavier built than contract specifications for CSS *Isondiega* identified by Holcombe. In addition there was no evidence of the CSS *Isondiega*'s steam machinery (USACE Savannah 1994:153-154).

During the 1991 TAR survey GA BR 17 (Figure 29) was identified as a heavily constructed sailing vessel that measured 121 feet in length and 26 feet 8 inches in width (Figure 30). The keelson was 12 inches wide with two possible mast steps. The interior planking measured in random widths, 9 to 11 inches, and were 4 inches thick. The exterior planking measured 2 inches thick. Iron spikes attached the inner planks to the futtocks. The 9- by 9-inch futtocks were located on 1-foot centers. The space between the exterior surface of the outer planking and the inner surface of the ceiling measured 1 foot 5 inches. The construction features suggested the vessel was built sometime in the late 19th or early 20th century. The vessel was determined to be potentially eligible for inclusion in the National Register of Historic Places. Recommendations included additional investigation and monitoring to identify impacts associated with the New Cut Closure Project and opening the Back River Tide Gate (TAR 1995:113).

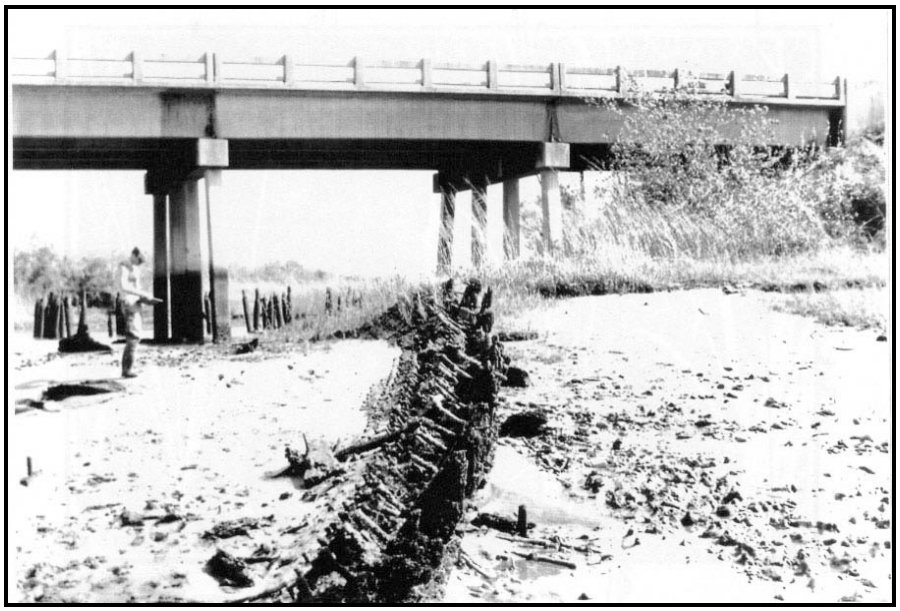

Figure 29. Exposed remains of the GA BR 17 derelict in 1991.

1993 Investigation

In February 1993, USACE Savannah archaeologist Judy Wood initiated a program of more intensive documentation and monitoring of Back River cultural resources. Under Wood's direction archaeological technicians Richard W. Leech, Jr., and Gregory D. Cook carried out a systematic investigation of sites located during the TAR survey. One of the wrecks Leech and Cook documented was GA BR 17 (Figure 31). Wood and Cook also carried out research to shed light on historical activities and associations with the various wreck and derelict sites (USACE 1994:7-8).

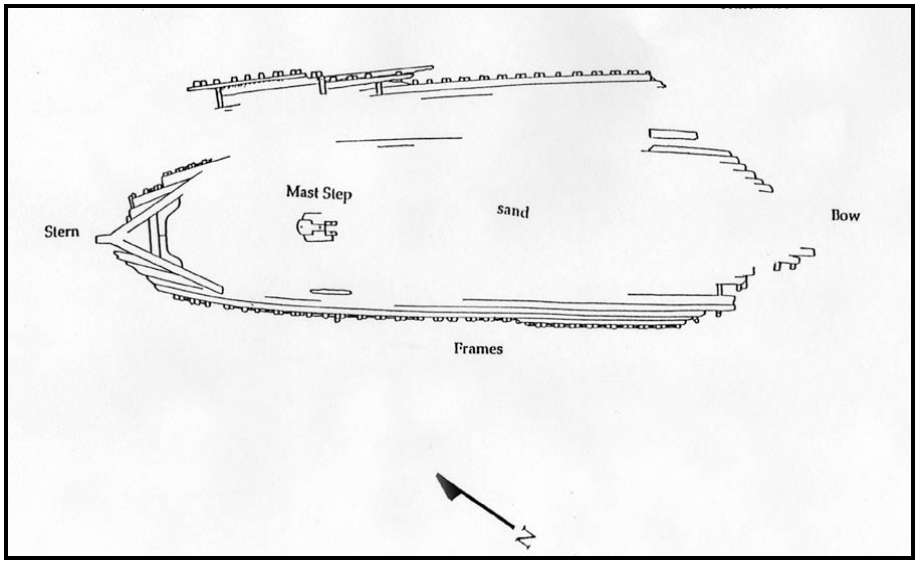

Figure 30. Plan of exposed structure on the GA BR 17 site in 1991.

Figure 31. Richard Leech and Greg Cook map in features of GA BR 17.

Leech and Cook recorded the length of the GA BR 17 wreck at 120 feet 4 inches (Figure 32). The maximum width of hull material was 35 feet 6 inches. The orientation of the keel was determined to be on a 29/209 degree axis with the bow to the south-southwest. The starboard side of the hull was supported by the bank and was found to be in relatively good shape to the approximate level of the turn of the bilge (Figure 33). The port side was less well preserved and had collapsed loosing virtually all of its original shape (USACE 1994:155-159).

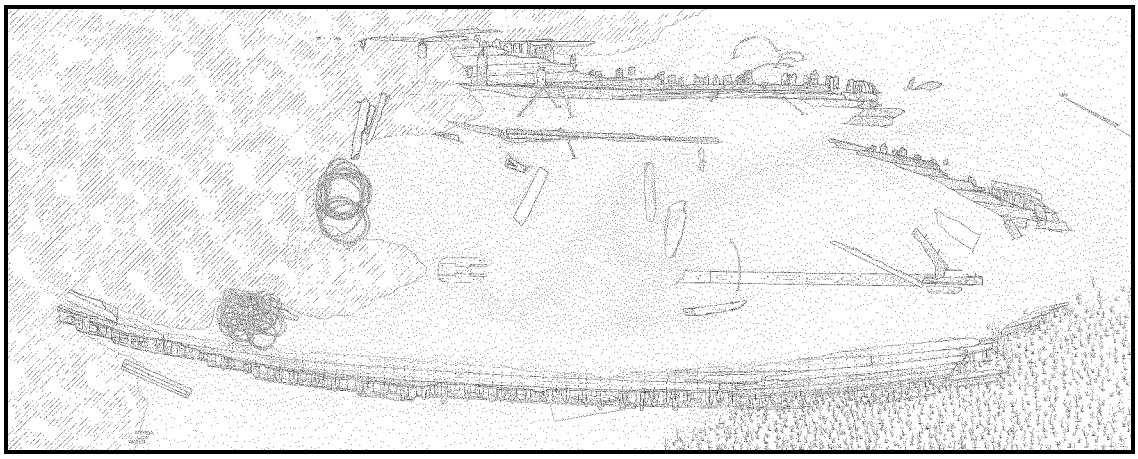

Figure 32. GA BR 17 site plan developed by Leech and Cook in 1993 (USACE, Savannah 1994:156).

Figure 33. Exposed remains of GA BR 17 in 1993 (USACE, Savannah).

No excavation was undertaken but design and construction details of exposed structure were recorded. About 30 feet of the 13-inch sided birch keelson was exposed above low water. Probing revealed a molded dimension of at least 24 inches. Two mast steps were identified along the exposed length of the keelson. The foremast step was approximately 19 feet aft of the surviving bow structure. The mainmast step was located 48 feet aft of the foremast step. A sample of wood from the aft or mainmast step proved to be white oak (USACE 1994:159).

The forward mast step measured 6 feet in length and was at least 8 inches in width (Figure 34). Side chocks 8 inches sided and 5 inches molded reinforced the step. Based on an impression in the chocks, the mast was approximately 19 inches in diameter at the heel. The aft mast step was 4 feet 8 inches in length with a width of 12 inches (Figure 35). The side chocks were 10 inches sided and 5 inches molded.

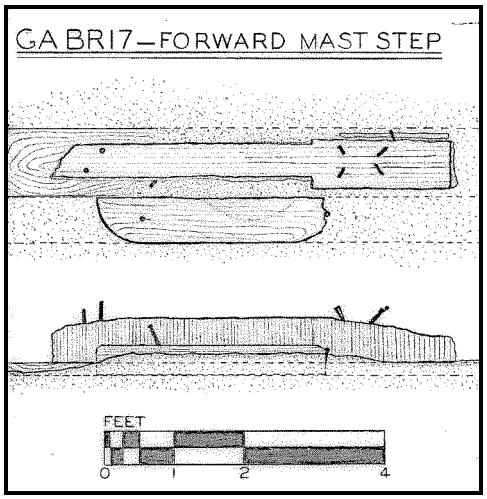

Figure 34. Drawing of the forward mast step (USACE, Savannah 1994:164).

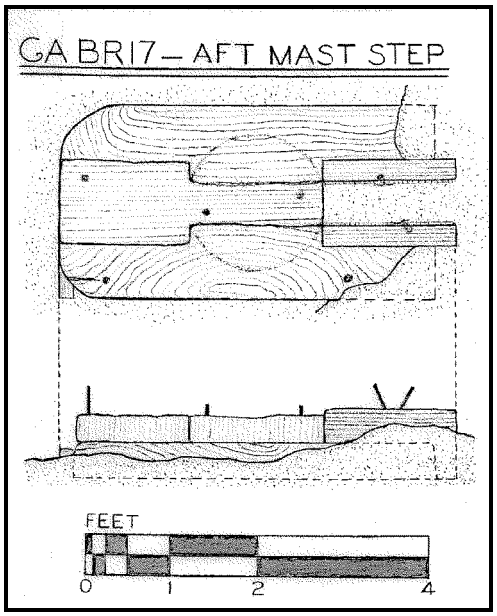

Figure 35. Drawing of the Mainmast step (USACE, Savannah 1994:164).

Their length was slightly shorter than the step at 4 feet 5 inches. The chocks appeared to have been bolted to timbers attached to either side of the keelson. The diameter of the heel of the mast was calculated to be 19 inches (Figure 36). Based on the step design the heel of the mast would have been rebated to fit into a saddle step (USACE 1994:159-160).

Figure 36. Remains of the mainmast step in 1993 (USACE, Savannah).

Although the framing pattern at the bow and in the stern could not be established, frames were composed of doubled futtocks. On the starboard side of the hull some of the iron crossbolts that attached the futtocks were exposed (Figure 37). The sided dimension of measured futtocks was approximately 9 inches and the moulded dimension above the turn of the bilge was approximately 8 1/2 inches. Space between frames averaged 6 inches making room and space about 24 inches (USACE 1994:160-161).

Leech and Cook reported that the GA BR 17 vessel was fitted with a "double ceiling" with a thickness of 6 inches (Figure 38). A sample of that material proved to be spruce. Iron drift bolts, 1 inch in diameter and 12 inches in length attached the ceiling to the futtocks. Two bolts were employed per ceiling strake on the centerline of every futtock. Wedged black locust trunnels, 1 1/4 inches in diameter and 17 inches in length, were also occasionally employed to attach the ceiling (USACE 1994:161).

Figure 37. Starboard side of the hull illustrating the futtock and fastener pattern (USACE, Savannah).

Figure 38. Remains of the starboard bilge wales and fasteners in 1993 (USACE, Savannah).

Although the port side of the vessel was heavily deteriorated and distorted Leech and Cook found a partially exposed "stringer". At least 37 feet of the 12 inch wide stringer was observable. At a point 31 feet 6 inches aft of the forward extremity of

the stringer the first of four hanging knees was identified. The knees were placed on 6 foot centers and originally rested on the stringer. The vertical arm of the knees was all that survived and they measured 4 feet in length and an average width of 10 inches was established. A sample from one of the knees was identified as spruce (USACE 1994:162)

The exposed outer planking was also heavily deteriorated. A thickness of 2 inches was established. Spikes that attached the planking to the frames measured 1/2 inch square. The remains of brass tacks on the outer surface confirmed that the vessel had been sheathed in copper or a copper alloy to protect the structure from teredo and fouling (USACE 1994:162).

While not addressed in the text, illustrations in the report documented the partial remains of the inner sternpost, sternpost and rudder. Both elements of the wreck structure were found disarticulated and lying inside the hull remains. The fragment of inner sternpost and sternpost (Figure 39) measured 11 feet in length contained a brass or possibly Muntz metal gudgeon strap and pintle stop. The smaller section of the rudder (Figure 40) measured approximately 5 feet in length and contained a matching brass or possibly Muntz metal pintle (USACE 1994:162).

Figure 39. Lower section of sternpost with gudgeon and pintle stop (USACE, Savannah).

Although Wood, Leech and Cook concluded that the vessel was clearly not CSS *Isondiega*, they indicated that it was eligible for nomination to the National Register of Historic Places. Eligibility was based on meeting two of the criteria for consideration. The GA BR 17 derelict clearly preserved design and construction

data associated with vessels engaged in trading in the Savannah region and possibly reflected the means of salvaging material from derelicts that were employed at the time the ship was abandoned. Because no impacts to the site were anticipated from the New Cut Closure Project, no additional investigation was recommended. It was observed that the vessel remains had been constantly deteriorating over the last decade (USACE 1994:163-164).

Figure 40. Section of the rudder with pintle attached (USACE, Savannah).

2008 Mitigation

Prior to developing a plan for fieldwork, a reconnaissance of the wreck site was carried out on 13 and 14 February to identify environmental considerations and assess the condition of the wreck structure. During that investigation it was determined that the stern had settled much further into the river as a consequence of erosion. In addition to distorting the hull, even the upper elements of the surviving stern structure were no longer exposed even on the lowest tides. The port side of the hull was found to be even more heavily damaged than reported by Leech and Cook in 1993. The disarticulated fragments of the inner sternpost, sternpost and rudder were no longer at the site and the remains of hanging knees on the port side of the hull had almost completely disappeared.

Based on the condition of the wreck observed in February, a plan of excavation and documentation was formulated. Because of the amount of the hull structure only accessible by diving and the limited amount of time the remaining elements of the wreck were exposed at low tide, traditional approaches to mapping and documentation would not produce sufficient data in the time allotted for the field investigation. The decision was made to employ a laser system for mapping. That system required no on-site grids or other reference structures that would be subject to disturbance by the intertidal elements. In addition, the laser system was capable of recording thousands of three dimensional data points in the time traditional methods would produce less than 10% of that number. Because of the extent of damage to the port side of the vessel, the decision was made to focus on excavation and recording the starboard side from just to port of the keelson sisters to the extent of structure. The exceptions were the area of the port side where the hanging knees were located and in the stern where diagnostic features extended across the keelson.

Excavation and documentation was initiated on 31 March 2008. The first objective was to deploy a mooring anchor for work vessels. That anchor was positioned offshore and north of the sternpost and remained set for the duration of onsite work (Figure 41). With the bow on the mooring, the stern of the work vessel could be positioned with smaller anchors to support work on any location within the wreck.

Figure 41. Pump boat on the mooring near the stern of GA BR 17.

Next primary reference datums were driven into the bottom at the bow and stern. A baseline over the keelson was deployed between the two primary datums. Once that was accomplished, a low water survey of the site was carried out to determine the most effective means of clearing the starboard side of the hull of sediment. Using hydraulic induction dredges powered by centrifugal pumps on the workboat, work could begin as soon as tidal conditions permitted (Figure 42). With the tide high, efforts to clear the hull were focused on the bow. As the tide fell excavation proceeded aft. Material removed by dredging was deposited outside the hull.

Figure 42. Clearing debris and sediment from the starboard side of the hull.

When excavation progressed to the point that excavators could stay ahead of mapping and documentation, that work was initiated. Each tide the hull was washed clear of accumulated sediment and debris. Measured drawings were made of diagnostic features of the wreck (Figure 43). In addition measurements of

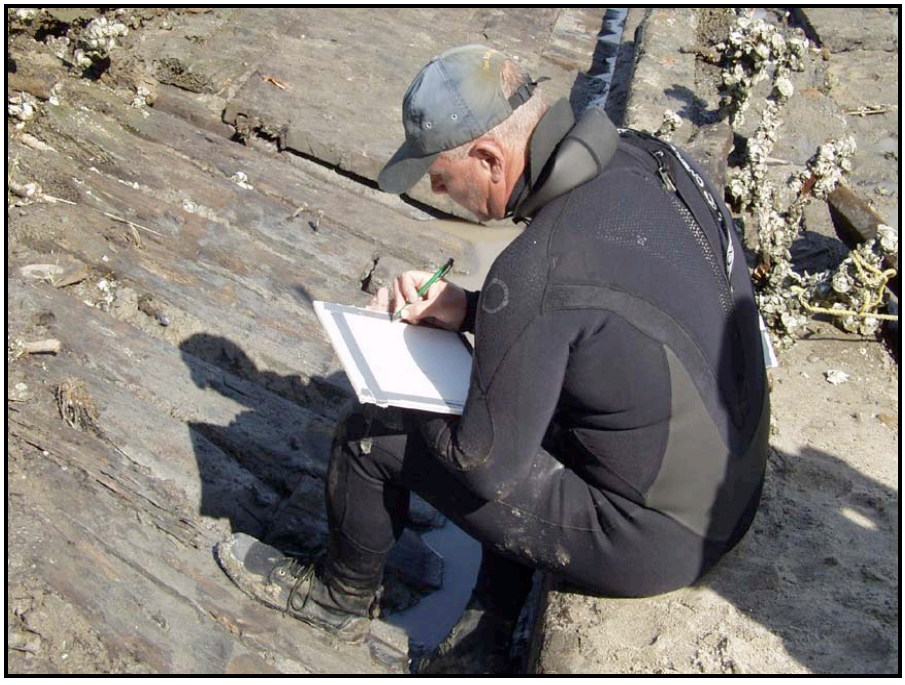

Figure 43. Recording features of the derelict in measured drawings.

design and construction features were made to confirm subsequent laser mapping. Photographs were taken to record exposed sections of the hull. When recording and photography of the starboard side of the vessel was complete to the level of low water, the laser system was used to collect points identifying all exposed features.

The Vulcan Spatial Measurement System consisted of two rotating laser transmitters (Figure 44) and a wand attached to a data recorder (Figure 45) used to identify and record mapping points in three dimensions. The two laser transmitters were mounted on tripods in the marsh south of the wreck. The system was calibrated using a combination of the datums and permanent references on the hull. Well secured bolts, spikes and pins provided calibration references along the length of the hull (Figure 46). Once calibrated the laser was used to record sufficient data points to define the three dimensional characteristics of the feature. As the tide ebbed mapping proceeded aft and as it rose, mapping activity returned toward the bow.

Figure 44. One of two laser transmitters mounted on tripods in the marsh.

Unless there is an unusually low tide, the aft section of the wreck remains underwater. Once that section of the hull was cleared of sediment and debris, divers made measured drawings to document diagnostic features. The position of diagnostic features was established in conjunction with the baseline running between the primary datums. Although visibility at times during the tidal cycle was sufficient to permit close observation, measurement and recording of features, meaningful photography proved to be impossible.

Once the stern structure was understood and diagnostic features identified, the laser system was employed for mapping. With the transmitters mounted on tripods in the marsh and the system calibrated to reference points on the wreck. Mapping

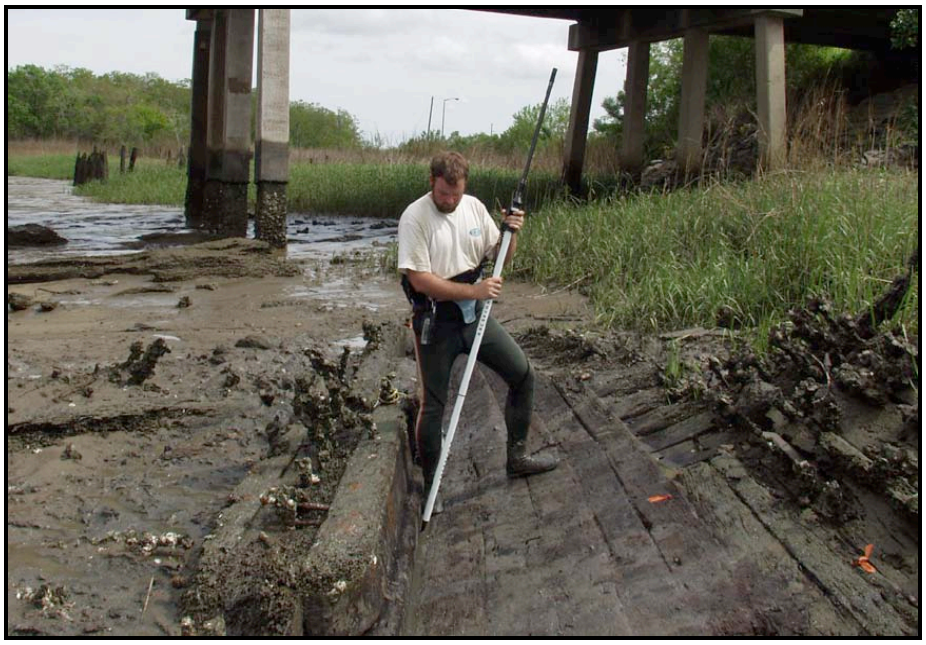

Figure 45. Survey wand identified data points.

Figure 46. Calibrating the laser system using points on the hull and baseline.

underwater sections of the hull required extensions to the wand and floating the data recorder in a waterproof vessel. A diver positioned the tip of the wand on points to be recorded. The command to record was transmitted to an individual holding the wand and the data was referenced by a third person operating the data recorder (Figure 47). Using that system thousands of highly accurate data points could be recorded in three dimensions without semi-permanent mapping references. Mapping of selected features on the port side of the hull was accomplished to provide insight into the configuration of whales, clamps and hanging knees.

Figure 47. Using the Vulcan system to map the stern.

After the quality of laser data was confirmed by processing, sections of the bilge ceiling were removed (Figure 48). Exposed floors, futtocks and the upper seams of the hull planking were recorded using measured drawings and the laser system. Those floors and futtocks exposed at low tide were also photographed. Removal of the starboard ceiling permitted spaces between the frames to be cleared of sediment and the relationship of floors and half floors to the keel and keelson to be documented (Figure 49).

A very limited number of artifacts from the undisturbed bilge were recovered for analysis and dating. Those consisted primarily of a representative collection of fasteners that included spikes, bolts nails, roves and screws. Several fragments of ceramic vessels, examples of hinges, a lock plate, a chisel and bilge ceiling wedges were also recovered from the bilge (Figure 50). Wood samples for identification were also removed from the bilge ceiling, floors, futtocks, keelson, sister keelsons and other features.

Figure 48. Exposed floors on the starboard side of the hull.

Description of the Structural Remains

Surviving remains of the GA BR 17 derelict consist primarily of the lower hull from the forefoot to the rudder (Figure 51). The more intact starboard side of the hull survives to an approximate elevation above the turn of the bilge. Although the hull structure is hogged, the starboard side retains more of its original form than the port side. The port side of the hull has collapsed with the subsequent loss of original hull form.

However, a separated section of the hull preserves design and construction data to the level of a clamp above the bilge wales. Adjacent to the mainmast the fragmentary remains of three hanging knees provide insight into the level of the main deck. The total length of surviving hull structure measures 121 feet 2 inches from the forefoot to the sternpost. The maximum width of hull remains in the vicinity of the main mast is 32 feet 7 inches (Figure 52).

Figure 49. Mapping molded dimensions and plank seams.

Figure 50. Recovering artifacts and wood samples from the bilge.

Excavation under the forefoot permitted the dimensions of the keel to be established forward. Immediately aft of the forefoot the keel measures 12 inches sided and 15 inches molded. Although it was impossible to determine, that dimension could include a 2 to 3 inch shoe. The keelson is 7 inches molded and 12 inches sided (Figure 53). It extends in several sections from a butt behind the fore deadwood to a butt at the forward end of the lower stern deadwood. The fragmentary remains of a birch rider keelson survive. The molded dimension is indicated to be approximately 8 inches and the sided 12-inch dimension matches that of the keelson. The keel, keelson and rider keelson are attached through the floors by iron drift bolts 1 inch in diameter. The pattern is random and not every floor appeared to be fastened.

The top of the keelson rider was rebated for stanchions and a single disarticulated stanchion was found inside the hull. That stanchion measured 4 inches in thickness, 10 inches in width (Figure 54). Wrought iron elbows were attached to the intact end of the stanchion to secure it to the keelson rider.

Beech sister keelsons extend from the fore deadwood to the aft deadwood. While they narrow at both bow and stern, the timbers are sided 11 3/4 inches through the run of the hull. Ship scarfs 24 inches in length attached the sections of the sister keelsons. The molded dimension through the run of the hull is 9 1/2 inches. As the

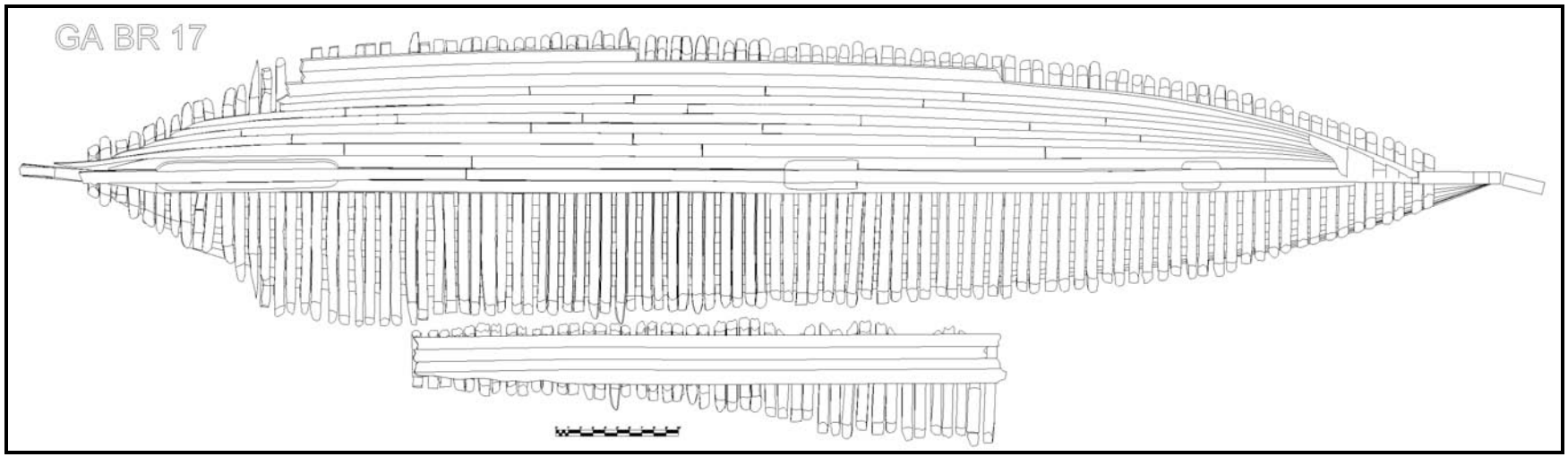

Figure 51. Site Plan.

Figure 52. Extent of surviving hull remains in 2008.

cant frame angle increases in both bow and stern that dimension decreases. While the fastening pattern associated with the keelson is random, the sister keelsons are attached to every floor by two iron drift bolts located on the approximate centerline of each floor. Randomly spaced 1 inch bolts were also driven horizontally through the sisters and keelson. Generally they were located over the futtocks.

Figure 53. Bilge ceiling, keelson, rider keelson and starboard sister keelson showing scarfs and fastening pattern.

Figure 54. Stanchion found inside the hull.

Birch floors extended from aft of the fore deadwood to the forward extremity of the first stern deadwood timber (Figure 55). The molded dimension of the floors at the keelson averaged 10 inches. The sided dimensions varied from 8 to 10 inches. First futtocks are also molded approximately 10 1/2 inches at the keel and ranged from 8 7/8 to 13 5/8 inches sided.

Figure 55. Pattern of floors and first futtocks exposed on the starboard side of the hull.

The birch first futtocks were butted under the keelson and the space between their butts was approximately 3 inches. At the first wale the molded dimension of the floors and futtocks was approximately 9 5/8 inches. Floors and first futtocks and second and third futtocks in frame sets were attached by horizontal iron bolts 7/8 of an inch in diameter. All of the floors and futtocks were butt scarfed. While there

was considerable variance, a room and space measurement of 26 inches is the average. Forward of the first floor and aft of the last floor cant frames were fayed to the deadwood with a combination of bolts and spikes.

At the bow none of the stem structure remained (Figure 56). The forward end of the keel was cut diagonally to accommodate the gripe (Figure 57). A single deadwood timber remained between the keel and keelson. The forward end of that timber was also cut diagonally to accommodate an apron piece. The forward end of the keelson was fitted to the top of the deadwood and feathered out to provide a base for a stemson. The forward end of the rider keelson was notched to fit over the aft end of the stemson. Forward of the first floor, cant frames were attached to the deadwood in a rising pattern (Figure 58).

Figure 56. Remains of the bow with deadwood and knee visible.

In the stern the keel was scarfed for the base of the sternpost (Figure 59). A deadwood timber extended from the last floor to the sternpost and butted against it. An inner sternpost was mounted on top of the aft end of the deadwood timber and is bolted through the sternpost. The aft edges of the inner sternpost were beveled to form a made rabbet for the hoods. The keelson rider extends aft to butt against the inner sternpost. Additional deadwood extended forward from the inner post to a point underneath the aft ends of the lower wale strake. The knee of the stern rests on that section of deadwood and butts against the inner post.

The lower wale extends forward from the knee and is rebated for two horizontal timbers that reinforce the stern. The aft reinforce is just forward of the butts of the

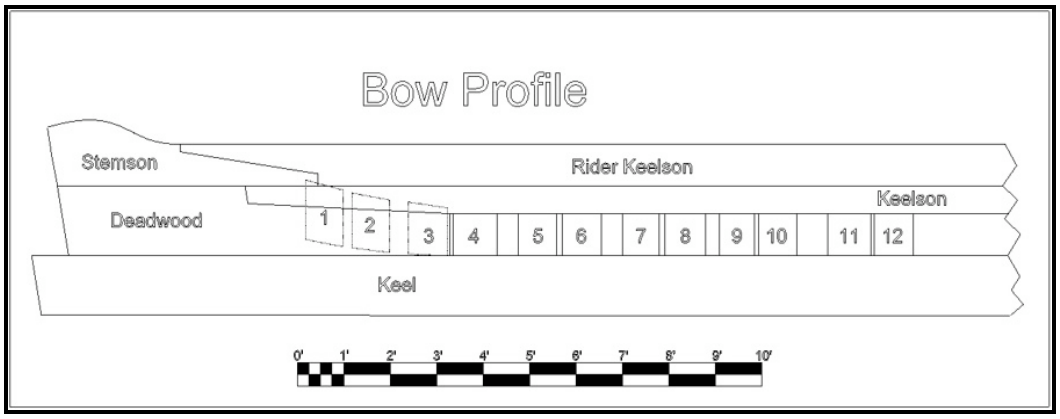

Figure 57. Profile drawing of the surviving bow structure.

Figure 58. Cant frames on the starboard bow.

wale and is 14 inches sided. The second is composed of two timbers and is located 14 inches forward of the first reinforce. Those timbers measured together are 24 inches sided and are supported by a short 15 inch stanchion that rests in a rebate in the keelson. The aft arms of two lodging knees fayed to the clamps extend across the face of the second reinforcing timber.

A single gudgeon strap of bronze or Muntz metal is attached to the sternpost. Below the gudgeon a pintle stop of similar material was attached. A corresponding pintle was attached to the remains of the rudder. The pintle strap measures 2 1/2

inches wide. The pintle has a diameter of 2 inches, and is received in a corresponding 2 1/8 inch diameter opening in the gudgeon. The rudder is unshipped, probably due to settling into the clay bottom sediment.

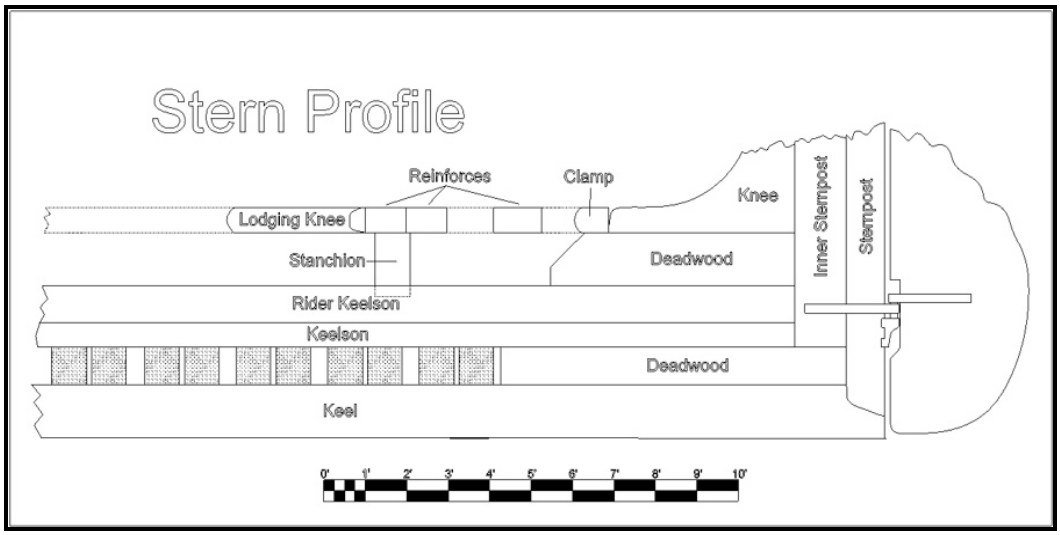

Figure 59. Profile drawing of the surviving stern structure.

Hull planking measured 3 inches in thickness and approximately 12 inches in width. A combination of iron spikes and black locus trunnels were employed in fastening the planking. The remains of brass sheathing tacks confirmed that the bottom was sheathed and a sample was recovered. A sample of hull planking proved to be yellow pine. Beech ceiling planks measured 3 inches thick and ranged from approximately 12 inches in width over the limbers to 8 inches at the wale (Figure 60). In the proximity of both bow and stern the width of the ceiling planks decreased. The ceiling was randomly attached with iron spikes and black locus trunnels and the wales were attached by iron drift bolts.

At the turn of the bilge the hull was reinforced by 6 inch thick 12 inch wide wale strakes (Figure 61). Each wale strake was attached to each futtock by two iron drift bolts peened over a rove. The 9 wale strakes continued up the hull to a clamp. That clamp measured 10 by 15 inches and provided a seat for hanging knees that supported a deck. Only the fragmentary remains of three knees survive at the site. A sample from one of the knees taken in 1993 was identified as spruce (USACE 1994:164). A single wrought iron knee was found inside the hull. That knee measured 23 inches by 26 inches (Figure 62).

Longitudinal buttress timbers reinforce the three mast steps. These buttresses support both sides of the keelson and rider keelson. The buttress timbers are pinned through the sister keelsons at every floor and bolted horizontally through the sisters and keelson over each floor. A sample from the foremast buttress timber

Figure 60. Bilge ceiling planking adjacent to the foremast.

was identified as yellow pine. The edges of the buttresses are chamfered, and the fore and aft ends are rounded into the vertical sides of the keelson and rider keelson. The foremast buttress is 14′ 10 1/2″ long and is located 11' 1" aft of the extremity of the keel (Figure 63).

Figure 61. Configuration of the bilge wales aft of the mainmast on the starboard side.

Figure 62. Single disarticulated iron knee recovered from the bilge ceiling near the foremast.

Figure 63. Buttresses for the foremast step.

Figure 64. Mainmast showing buttresses.

The mainmast buttresses are 62' 6″ aft of the extremity of the keel and measure 5′ 11″ in length (Figure 64). The buttress timbers are pinned through the sister keelsons at every floor and bolted horizontally through the sisters and keelson over each floor. A sample taken previously from the mainmast buttress timber was identified as white oak. The edges of the buttresses are chamfered, and the fore and aft ends are rounded into the vertical sides of the keelson and rider keelson.

The mizzenmast buttresses are located 95′ 1″ from the extremity of the keel. They are only fragmentary but survive for a length of 3′ 4″. Remains of the mizzen buttress timbers are pinned through the sister keelsons at the futtocks and bolted horizontally through the sisters and keelson over each floor. Upper edges of the buttresses are too deteriorated to determine if they were chamfered, but the fore and aft ends are rounded into the vertical sides of the keelson and rider keelson.

Data from the 1993 survey by USACE Savannah personnel indicate that the foot of the fore and main masts were round. Evidence from that survey also confirmed that the mast steps were not the traditional mortise in the keelson and tenon at the base of the mast. The base of the mast was inlet to fit over a section of the mast step (Figure 65).

An intact hatch was recovered from within the hull in the vicinity of the bow (Figure 66). The hatch measured 18 by 19 inches and was 3 inches thick. The three planks that composed the hatch were through bolted with two 1 inch diameter bolts. An eyebolt with a ring was attached to one corner. The size and thickness of the plank suggests that it was for a lumber port in the bow.

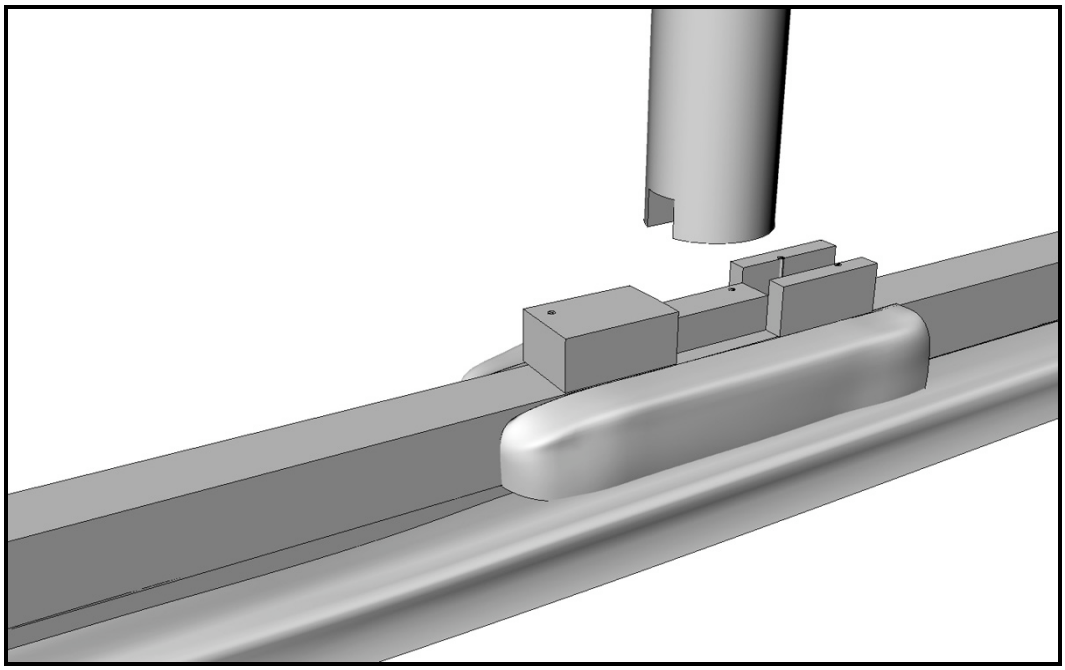

Figure 65. Configuration of the mainmast step and heel of the mast.

Figure 66. Hatch for lumber port.

Back River Wreck GA BR 17 Artifacts

A limited collection of artifacts was recovered from the GA BR 17 Site during the 2008 investigation. The majority of recovered material consisted of fastening samples recovered from the bilge and clearly associated with the vessel. The fasteners are all products of industrial manufacturing. Collectively they can be considered as representative of material readily available to northeastern shipbuilders throughout the second half of the 19th century. The fasteners are almost entirely iron and reflect the economy of construction also apparent in the selection of structural wood in the hull remains. The number of eyebolts recovered from the site could be an indication of the method of securing a cargo like lumber.

Ceramic and glass recovered as a sample provides little additional insight into dating the wreck. The two glass samples could not be absolutely associated with the vessel at the time of the fire in October 1893. They are however period pieces reflecting alcoholic beverage regulation in the last quarter of the 19th century. The ceramic samples were recovered from undisturbed areas of the bilge and do have a clear association with the GA BR 17 vessel. All have been identified as stonewares. On-going research may provide more specific insight into the dates and locations of manufacture.

Figure 67. Artifact #1

Artifact #1 is an iron pin approximately 16″ long with a body diameter approximately 0.875″. The rod is peened on one end, which has a diameter of 1.25″.

Figure 68. Artifact # 2

Artifact # 2 is an iron pin approximately 18″ long. The body diameter is 0.875″. One end is peened over a rove, which has a diameter of 1.5″.

Figure 69. Artifact #3

Artifact #3 is an iron rod approximately 15″ long with a body diameter of 0.875″. One end is peened over a rove with a diameter of 1.5″.

Figure 70. Artifact #4

Artifact #4 is an iron pin approximately 12″ long. The body diameter is 0.875″. One end is peened over a rove, which has a diameter of 1.5″.

Figure 71. Artifact #5

Artifact #5 is a ringbolt approximately 4.125″ long. The ringbolt shaft is 0.625″ in diameter. The outside diameter of the eye is 1.75″. The eye is concreted and the inside diameter cannot be measured. The end opposite the eye is peened over a rove.

Figure 72. Artifact #6

Artifact #6 is an iron eyebolt with an oblong eye. The overall length is approximately 6″. The outside diameter of the eye at its widest point is approximately 4.250″. The inside diameter of the eye at its widest point is approximately 2.375″. The inside diameter of the eye at the center is approximately 1.187″. The end opposite the eye is peened over a rove. The diameter at that end is approximately 2.187″. The bolt diameter is approximately 1.0″.

Figure 73. Artifact #7

Artifact #7 is an eyebolt approximately 10.75″ long. The outside diameter of the eye is approximately 2.5″. The inside diameter of the eye is approximately 1.0″. The end opposite the eye is peened over a rove. The diameter of that end is approximately 1.75″. The bolt shaft diameter is approximately 1.125″.

Figure 74. Artifact #8

Artifact #8 is a ringbolt approximately 11.75″ long. The shaft is 0.875″ in diameter. The outside diameter of the eye is approximately 2.375″. The inside diameter is approximately 1.125″. The iron ring has an outside diameter of 5.25″ and an inside diameter of approximately 4.0″. The ring itself has a diameter of 0.625″.

Figure 75. Artifact #9

Artifact #9 is an eyebolt approximately 12.25″ long. The outside diameter of the eye is approximately 2.5″. The inside diameter of the eye is approximately 0.875″. The end opposite the eye is peened over a rove. The diameter of that end is approximately 1.875″. The bolt body diameter is approximately 1.0″.

Figure 76. Artifact #10

Artifact #10 is an eyebolt approximately 10.25″ long. The outside diameter of the eye is approximately 3.25″. The inside diameter of the eye is approximately 1.0″. The shaft below the eye tapers from a diameter of 1.5″ to a diameter of approximately 2.312″ and then decreases to a diameter of approximately 1.625″. On the end opposite the eye, a rove is located 1.25″ from the end of the eyebolt. The diameter of the rove is approximately 1.875″.

Figure 77. Artifact #11

Artifact #11 is an iron pin approximately 5.375″ long. The rod diameter at the center is 0.562″. One end of the rod is peened to a diameter of approximately 1.0″. The opposite end is peened over a rove. The rove diameter is 1.31″. The diameter of the rod over the rove is 0.625″.

Figure 78. Artifact #12

Artifact # 12 is an iron "U" shaped staple approximately 5.375 long. The diameter at the midpoint of the "U" it is approximately 2.31″. The diameter at the ends of the "U' is 0.625″.

Figure 79. Artifact Sample #13

Artifact sample #13 is a collection of square, hand made iron fasteners. They range is length from approximately 7″ to a broken fastener which is approximately 4.125″. Some are the product of cutting machines and all are industrially capped.

Figure 80. Artifact Sample #14

Artifact sample # 14 is a collection of 12 stoneware shards.

Figure 81. Artifact Sample #15

Artifact sample #15 is a collection of wooden wedges. The largest is approximately 3″ long, 1.375″ wide, and 0.437″ thick at the thickest point. Saw marks are visible on each wedge.

Figure 82. Artifact #16

Artifact #16 is a 19th century clear glass flask with embossed ridges on the shoulders around the base of the neck. It is 7.5″ tall, 3.125″ wide, and 1.25″ thick. The neck diameter is approximately 1.125″ thick. The neck extends beyond the bottle body approximately 1.675″.

Figure 83. Artifact #17

Artifact #17 is a clear glass bottle fragment. It is the bottom and part of two sides of a strap flask. It is approximately 4″ tall and approximately 3″ wide at the widest point.

Figure 84. Artifact #18

Artifact sample#18 is a collection of 4 brass screws approximately 1.5″ long.

Figure 85. Artifact #19

Artifact #19 is an iron chisel that is approximately 5.5″ long. The diameter at the top of the chisel is approximately 1.0″. The bit is approximately 1.0″ wide.

Figure 86. Artifact #20

Artifact #20 is part of a brass hinge that measures approximately 3.75″ long by approximately 1.5″ wide and 0.09″ thick. It has four tapered and staggered screw holes.

Figure 87. Artifact #21

Artifact sample #21 is a pair of brass hinges that measure approximately 4.0″ long by approximately 2.5″ wide and 0.09″ thick. Each hinge has 8 tapered screw holes, 4 on each side in a line.

Figure 88. Artifact #22

Artifact #22 is a piece of iron roughly trapezoidal in shape that measures approximately 3.375″ and 3.125″ along the linear edges. It is approximately 1.625″

wide. There is a hole in the object mid way the linear axis that has a diameter of 0.875″. Near the hole is a slotted brass disk that measures 0.562″ in diameter.

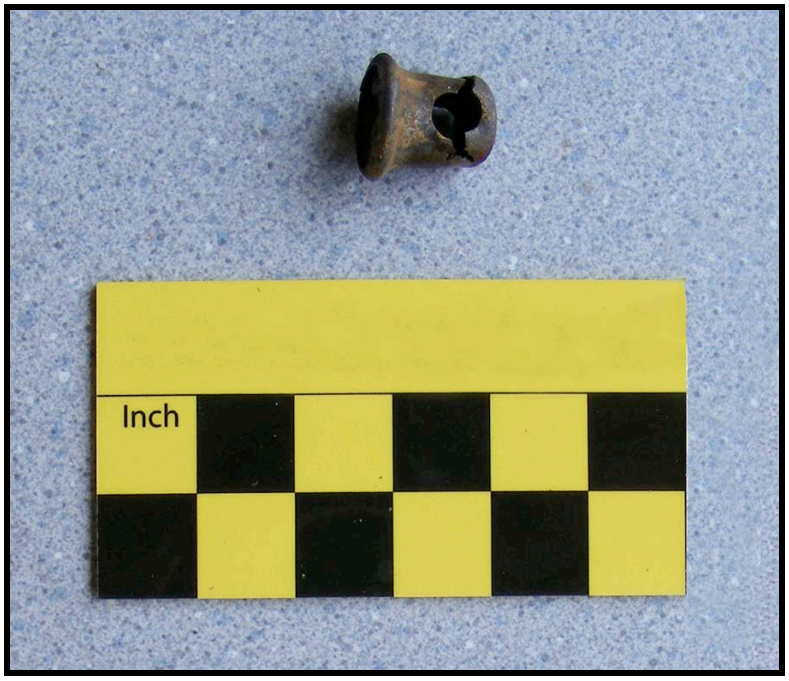

Figure 89. Artifact #23

Artifact #23 is a thimble shaped brass object with a hole on each side. Each hole has a diameter of approximately 0.21″. The object is approximately 0.61″ tall. The top of the object is flat and measures approximately 0.48″ in diameter. The bottom edge is rolled toward the interior and has a diameter of approximately 0.65″.

Figure 90. Artifact #24

Artifact #24 is part of a copper spike that measures approximately 4.75″ long. The body has a square cross section and measures approximately 0.42″ at the midpoint. The fastener head is roughly square and measures approximately 0.71″.

Figure 91. Artifact #25

Artifact #25 is part of a copper nail that measures approximately 2.75″ long. The body has a square cross section and measures approximately 0.33″ at the midpoint. The fastener head is roughly square and measures approximately 0.49″.

Figure 92. Artifact #26

Artifact sample #26 is part of a copper rod and rove. The rod is approximately 5.93″ long with a diameter of approximately 0.61″. One end of the rod has been peened to form a head, which has a diameter of approximately 1.04″. The rove diameter is approximately 1.44″, and its thickness is approximately 0.24″. The hole in the rove has a diameter of approximately 0.79″.

Figure 93. Artifact #27

Artifact #27 is a copper rove. The rove diameter is approximately 1.5″, and its thickness is approximately 0.25″. The hole in the rove has a diameter of approximately 0.76″.

Figure 94. Artifact Sample #28

Artifact sample #28 is a collection of 3 irregular stoneware pieces that came from the same object. Two of the pieces fit together. Each piece has one or two holes of which the diameter is approximately 0.18″. Each piece has a flat surface and a raised rim. The rim measures approximately 0.47″. The thickness of the pieces away from the rim is approximately 0.14″. The pieces are covered with a light gray glaze.

Figure 95. Artifact #29

Artifact #29 is an irregular shaped piece of copper sheathing with one fastener hole and part of another. It is approximately 0.02″ thick. Along its longest axis it is approximately 5.5″ and its maximum width is approximately 2.79″. There is one straight edge. The diameter of the fastener hole is approximately 0.16″.

Figure 96. Artifact #30

Artifact sample #30 is a wooden bung and part of the wood that surrounded the bung. The diameter of the beveled plug is approximately 0.83″. The maximum height is 0.44″, and the minimum height is 0.25″.

Figure 97. Artifact Sample #31

Artifact sample #31 is a collection of 7 iron fasteners. Four of the seven have square cross sections, one has a rectangular cross section, and the other two have a circular cross section. The longest is approximately 5.5″ long, and the shortest is 2.5″. One of the round fasteners is bent at an angle of approximately 90 degrees. The other round fastener is broken in two.

Figure 98. Artifact Sample #32

Artifact #32 is a wooden trunnel. It is 10.437″ long and has a maximum diameter of approximately 1.4″.

Figure 99. Artifact Sample #33

Artifact sample #33 is an irregular shaped piece of wood that has been heavily charred on one side. It is approximately 9.0″ long, 1.5″ at the widest point, and 0.73″ thick at the thickest point.

Analysis of the Findings

The GA BR 17 derelict appears to be the remains of a late nineteenth century merchant sailing vessel. The overall length between perpendiculars would have been about 124 feet measured on deck (Figure 100). A reconstruction of the hull section slightly aft of the midships bend, produced a molded beam of 28 feet (Figure 101). That same reconstruction indicated that the depth of hold would have been about 11 feet measured from the underside of the deck beam to the ceiling immediately outboard of the sister keelson. Based on equations for tonnage calculation in use in 1875, the GA BR 17 vessel would have been rated at approximately 375 to 450 tons.

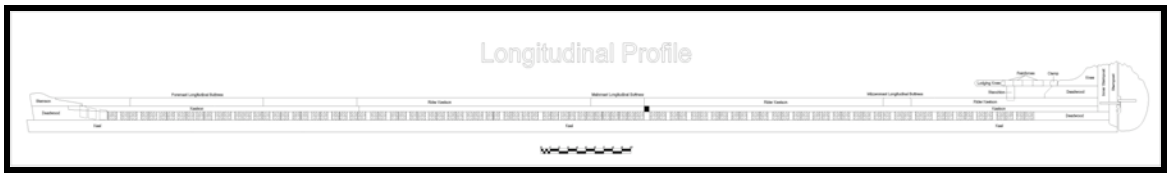

Figure 100. Inboard longitudinal profile.

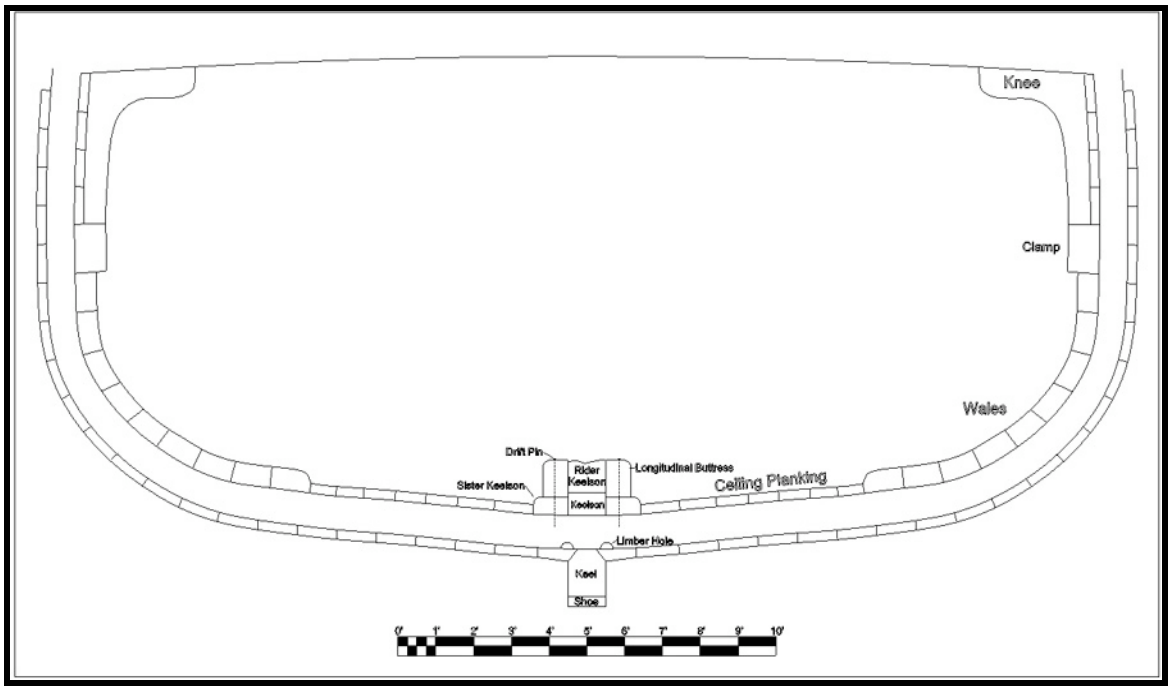

Figure 101. Hull section reconstruction at the mainmast step.

The lack of associated cultural material, ships fittings and equipment strongly suggests that the vessel was brought into Back River and salvaged. The fact that copper sheathing had been systematically removed from the hull reinforces that

hypothesis. Its location near the Back River mouth of Planter's Cut would have provided protected water access to markets for salvaged material in Savannah. The 26 October 1893, Savannah Morning News reported that:

> Quite a blaze was seen on the North side of Hutchinson's Island at 2 o'clock this morning. From the location of the fire it was evidently either Thomas Cooley's store at the mouth of Planter's Cut or the old wreck close by. From the outline of the blaze it was probably the wreck.

The article confirms that the "old wreck" had been moved to the site before the 1893 date of the fire. Evidence from the bilge confirms that the vessel was indeed burned (Figure 102). The proximity of the derelict to "Cooley's store" suggests that the vessel might also have been only partially salvaged and then served as a storage facility for Cooley before being burned. Using unseaworthy hulks for warehouse facilities was not uncommon (Sager & Fishcher 2008:3).

Figure 102. Example of charred wood from the hull.

The surviving hull structure indicates that the vessel was three-masted. The location of the mast steps (Figure 100) suggests that it was rigged as a bark (barque). On bark rigged vessels the distance between the main and mizzen mast was appreciably less than the distance between the main and the foremast (Figure 103). Like a ship rig (Figure 104) the main mast was stepped further aft than the mainmast for a schooner where the masts were generally equidistant from each other (Figure 105). Like a schooner, the barkentine rig masts were more equidistant than the arrangement of a bark (Figure 106).

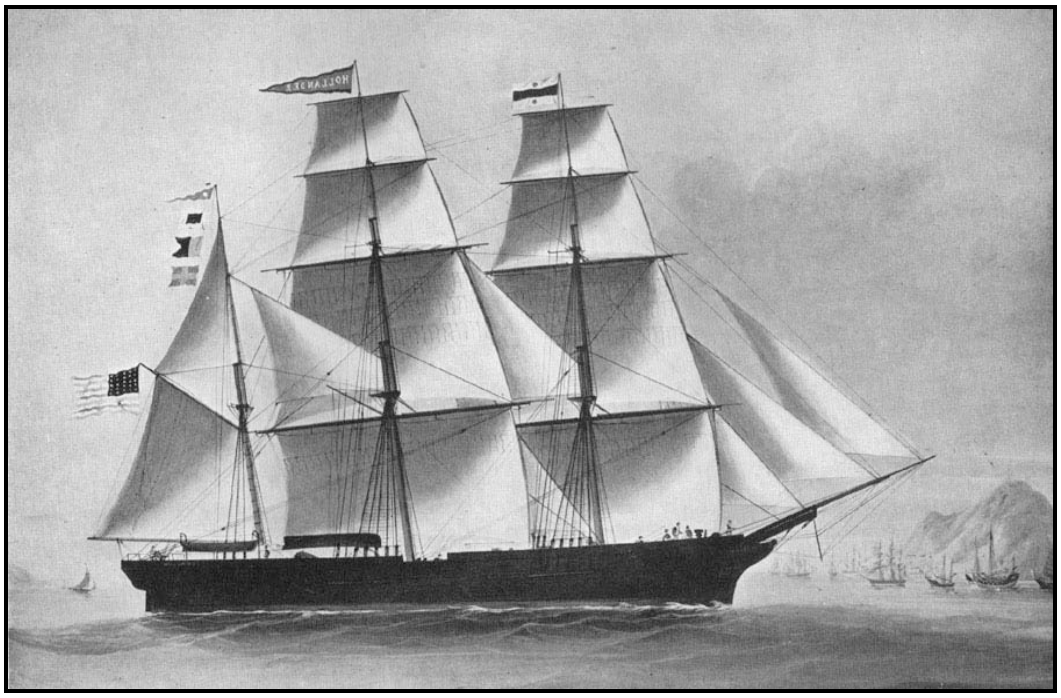

Figure 103. Mast placement on the bark Hollander built at Newburyport, Massachusetts in 1849 (Robinson and Dow 1924:405)

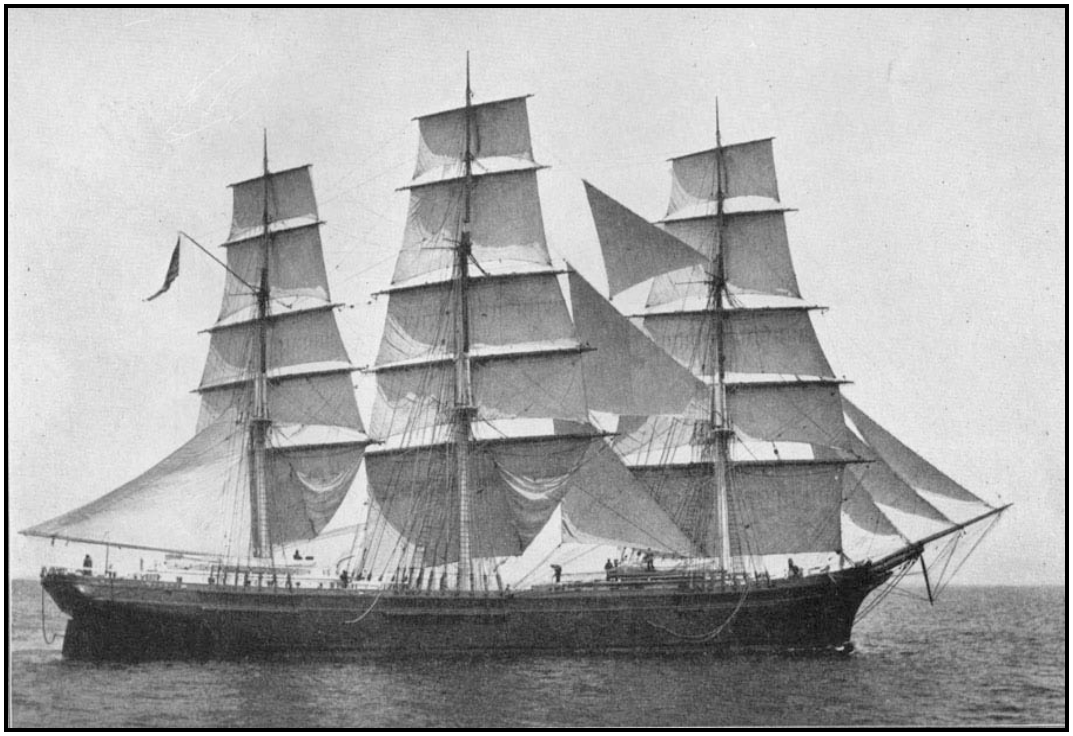

Figure 104. Mast placement on the ship Panay built at East Boston in 1877 (Robinson and Dow 1924:471).

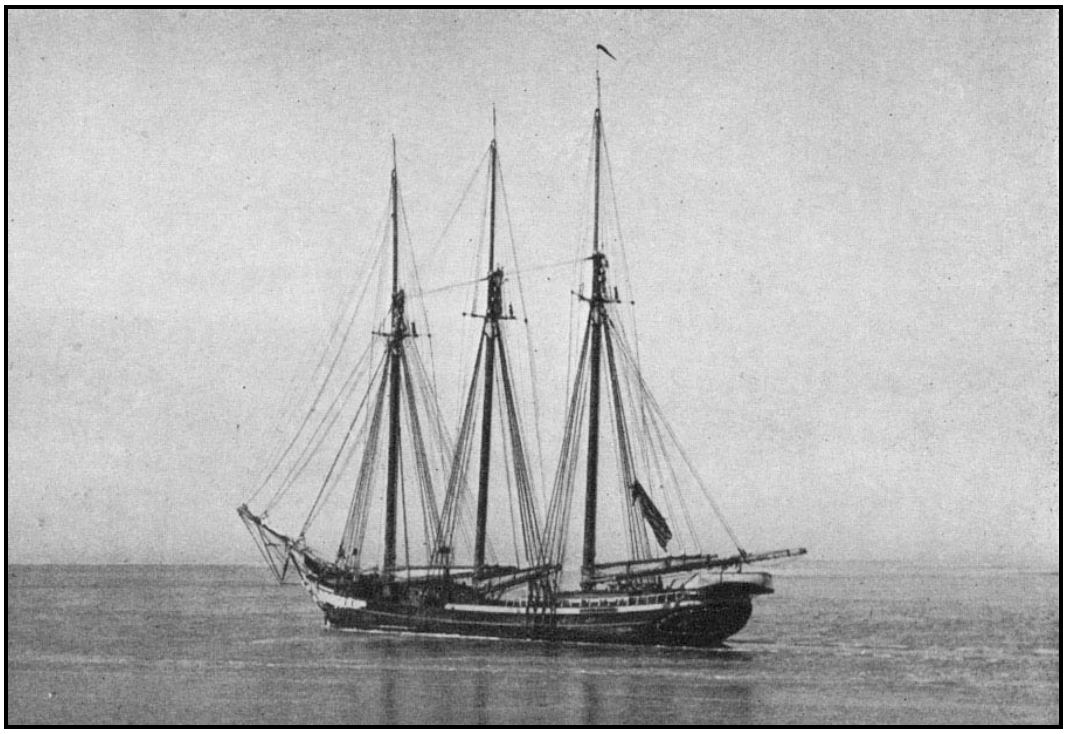

Figure 105. Mast placement on the tern schooner Peter H. Crowell built at East Boston in 1873 (Robinson and Dow 1924:473).

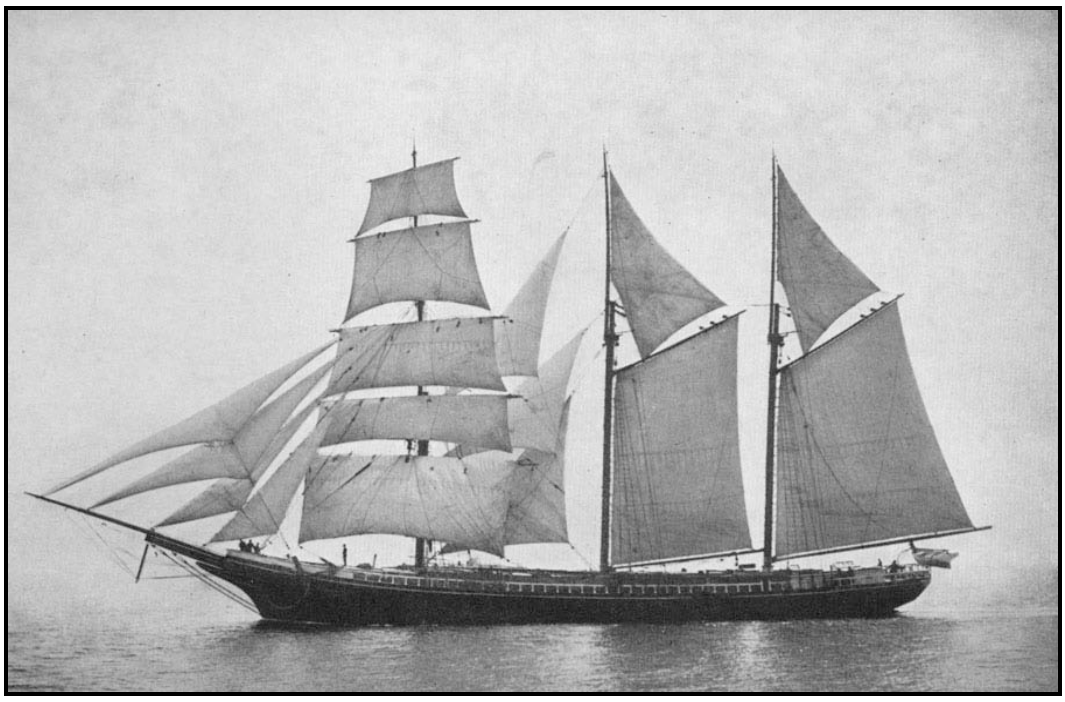

Figure 106. Mast placement on the barkentine Rachel Emory built at Waldoborough, Maine in 1883 (Richardson and Dow 1924:487).

While the vessel could possibly have been ship rigged, the relatively small size reinforces identification as a bark. Statistically, a vessel of this size and period would have more likely been bark rigged than ship rigged. That would have been in part due to fact that the number of crew required to handle a bark was significantly less than required to handle a full rigged ship.

Wood samples from the hull structure provide considerable insight into the location of construction. Beech, birch and spruce used to construct the GA BR 17 vessel are not the usual materials found in most American or British vessels. However, in the northern part of Maine and the Canadian Maritime Provinces all three were deemed acceptable during the second half of the 19th century. Although most American and British shipbuilders would have considered beech, birch and spruce to be unacceptable, shipbuilders on northeastern coast of Maine, Labrador and Newfoundland made extensive use of those locally available timbers.

In a comprehensive 1882 study of the shipbuilding industry in the United States Henry Hall indicated that, in the area around Passamaquoddy Bay, "the woods used are beech, birch, and maple in the bottoms of vessels, with very little oak" (Hall 1882:96). Eastport and Calais shipbuilders employed "spruce and hackmatack" for frames and planking as that material was less expensive and was generally found to be as long lasting as oak. White pine was used in decking (Hall 1882:96)

In Bucksport and Camden shipbuilders of the period employed similar materials in framing but their vessels included more oak and hackmatack. For keelsons, beams, ceiling of hold and outside planking they employed pitch pine imported from the southeastern United States. Stem and sternposts were fashioned from white oak and local white pine was used in decking (Hall 1882:97). In Camden the use of white oak was more prevalent and southern pitch pine was becoming the preferred, and almost universal, material for ceiling, planking, deck frames, stanchions and plank-sheer (Hall 1882:97).

As Hall moved south in his study the use of birch, beech and spruce rapidly became less prevalent. In Belfast and Thomaston, shipbuilders continued to use Maine "hardwoods", beech, birch and maple, in smaller coastal vessel but generally employed oak for frames and pitch pine for ceiling, planking, deck frames, stanchions and plank-sheer in larger vessels. In yards like that of Captain Samuel Watts in Thomaston, "frames are of white oak from the South; the planking and ceiling, keelsons, deck beams, deck plank, lower masts and topmasts pitch pine; the knees hackmatack from Maine and Canada; the treenails locust; the light spars spruce; and cabins white pine, oak and walnut" (Hall 1882:97).

In Bath shipbuilders of the period still employed beech, birch and maple in the lower hulls of smaller vessels. However "many of the frames, even of the smaller vessels…and nearly all of those for the larger ones, are cut in Delaware, Maryland and Virginia…from the superior white oak of that region. Only the top timbers were fashioned from hackamatack as it was lighter and had less adverse affect on iron fasteners. Southern pitch pine was used almost exclusively in other parts of large bath-built vessels (Hall 1882:102). Down the Atlantic seaboard, the use of

Maine "hardwoods" virtually ceased. Vessel construction to the southwest of Brunswick, Maine relied almost exclusively on oak for framing and pitch pine for planking.

The bark rig appeared around 1830 (Chapelle1967:382 and Gardiner 1993:22). The first barque, *Caroline*, was built in the Hallowell shipyard of John Agry in 1828 (Rowe 1948:153). That was just in time for the flush in Maine shipbuilding associated with the spiraling demand for southern cotton in Great Britain. Four-fifths of all southern cotton was shipped to European markets and vessels were needed to transport it. Maine yards responded with increased production until the financial disaster of 1837. As banks and businesses recovered in the 1840s, shipbuilding increased again. Barques of 300 to 450 tons became increasingly popular and yards in Bowdoinham, Richmond, Gardiner, Pittson and Augusta produced 75 during the 1840s (Rowe 1948:154-155).

Shipyards in Maine were responsible for all the wooden ships, barques and barquentines built until the early 1890s (Gardiner 1993:36). Historian John Lyman observed that "with only the meanest grade of lumber locally available, Maine shipbuilders continued to assemble Virginia oak, Georgia pine, Michigan hackmatack, Oregon pine spars, Pittsburg iron, Manilla hemp, Connecticut copper and Massachusetts canvas into the largest sailing vessels ever set afloat" (Gardiner 1993:35).

Only one sample of white oak and two of yellow pine represent materials popular in both America and Great Britain. The white oak sample was taken from the mainmast step in 1993 (USACE Savannah, 1994:159). Two samples of yellow pine were recovered from the foremast step and one of the wedges driven in between the ceiling planks (Alden pers.com. 14 June 2008). Neither the yellow pine nor the white oak came from elements of the hull that could absolutely be considered original to construction.

Identification of a lumber port inside the hull provides an important clue to the nature of at least one trade in which the GA BR 17 vessel might have been engaged. Lumber carriers were fitted with ports in the bow through which lumber could be loaded directly into the hold. At the time the GA BR 17 vessel was built lumber was a major export all along the Maine coast and the Canadian Maritimes. During the last decades of the 19th century lumber became a major export from the City of Savannah. Vessels from Canada, New England, Great Britain and northwestern European countries like Norway and Denmark crowded the Port of Savannah to load valuable cargos of southern pine. Finding a vessel equipped with a lumber port in Savannah suggests not only a strong tie with the late nineteenth century Georgia economy but, an origin in the northeast.

The bilge ceiling was found to be exceptionally tight and there was evidence of efforts to enhance waterproofing. Wedges had been systematically driven in between the strakes to prevent water from the bilge from rising into the hold (Figure 107). The limber planks, usually designed to be removable to facilitate cleaning the bilge and limber holes, was securely fastened to the floors and first futtocks with iron spikes. The only access to the bilge is pump holes in the limber strake aft of the

main mast step. Efforts to seal the bilge were clearly designed to protect water sensitive cargos. In the Savannah market that could include rice, a particularly water sensitive cargo, phosphate, guano and cotton. In the 1878 Report of the Chief of Engineers water sensitive cargos of salt, coffee, muriate of potash, superphosphate and manure salt were all imported at Savannah (USACE 1879:744). A tight bottom and a dry bilge were also essential for transporting lime, a major product of Maine. Wet lime could combust with disastrous results (Rowe 1948:257).

Figure 107. Bilge ceiling wedges with circular saw marks.

Although Maine shipbuilders constructed vessels using the types of wood found in the GA BR 17 derelict, those materials are also found in ships from the Canadian Maritime Provinces. Canadian vessels built in the Maritime Provinces of New Brunswick, Nova Scotia and on Prince Edward Island of the 1870s and 1880s were also constructed of local beech, birch spruce, hackmatack and pine. Of the 508 vessels launched in Canada in 1877, 365 were built in New Brunswick, Nova Scotia or on Prince Edward Island. Of that total 110 were sold foreign, the majority in Great Britain but others in northwestern Europe (Bolles 1878:936). Many new-built Canadian vessels were loaded with lumber and sailed to Britain where both lumber and vessel were sold (Gardiner 1993:29). By the 1880s availability and the low cost of iron and steel vessels significantly undermined that foreign market and Canadian shipbuilders focused on local demand (Gardiner 1993:22).

While Maine shipyards focused on ships, barques and barquentines until the early 1890s, Canadian yards in the Maritime Provinces shifted their attention to schooners. Tern schooners were popular products of yards in Nova Scotia, New Brunswick, Newfoundland and Prince Edward Island. As many as 700 to 800 three and four mast schooners were launched (Gardiner 1993:22).

The shipping records for the Port of Savannah included in the 1877 Report of the Chief of Engineers indicate that out of the 673 vessels that entered Savannah in 1876, 355 were American registered coastal traders. Another 58 were American vessels entering Savannah from foreign ports. Foreign vessels that entered Savannah from foreign ports numbered 260. That supports the possibility that the GA BR 17 derelict could also be a Canadian built vessel.

Barks owned in Norway also frequented Savannah. The Shipping Intelligence in the New York Times identified a number of those vessels entering Savannah in the 1880s. During a single storm in 1893, three Norwegian barks were wrecked at Savannah (New York Times 30 August 1893). It is possible that although those barks were Norwegian owned, they could have been constructed in Canada. Many purchased in Britain with loads of timber, were sold foreign. In Norway and Finland, ship owners took full advantage of the low prices of wood vessels in Britain. The extent to which they shifted from local construction to British owned, and frequently Canadian built, bottoms caused the wooden shipbuilding industry in those countries to shift to smaller coastal vessels or collapse (Gardiner 1993:72)

Several additional sites that have been archaeologically investigated on the Savannah River side of Hutchinson Island were also found to be constructed with wood species that supported a Canadian Maritime Provinces origin. In 1987 the remains of a two-masted vessel, thought to be a brig or schooner were excavated and documented by OSM Archaeological Consultants, Inc (Figure 108). Wood samples from the hull revealed that major original elements of the structure were yellow birch. A number of southern woods associated with repairs and sheathing indicated that the ship was repaired in the southeastern United States. A date during the second quarter of the 19th century was postulated and it was thought that the vessel was likely engaged in the antebellum cotton trade. Evidence of fire and the lack of fasteners, fittings and other material of value suggested that the hull had been salvaged and burned (Agranat 1988:67-69).

A second derelict was excavated and documented by Tidewater Atlantic Research, Inc., in 1993. That derelict was also a small two masted vessel (Figure 109). Artifacts associated with the ship, fasteners and design details suggested a late 18th century or first quarter of the 19th century date for construction. Wood samples from significant elements of the surviving structure were identified as white oak, red oak, birch, yellow poplar, ash, white pine and eastern hemlock. Some southern hard pine was used in the bilge ceiling. Those woods suggest a construction location along the eastern coast of Maine or one of the more southern Canadian Maritime Provinces such as Nova Scotia or Prince Edward Island. Like the vessel excavated and

documented by OSM Archaeological Consultants, the hull likely represents a brig or possibly a schooner that was engaged in the cotton or naval stores trade until becoming unseaworthy and abandoned at Savannah after salvage (Tidewater Atlantic Research 1996:103-114).

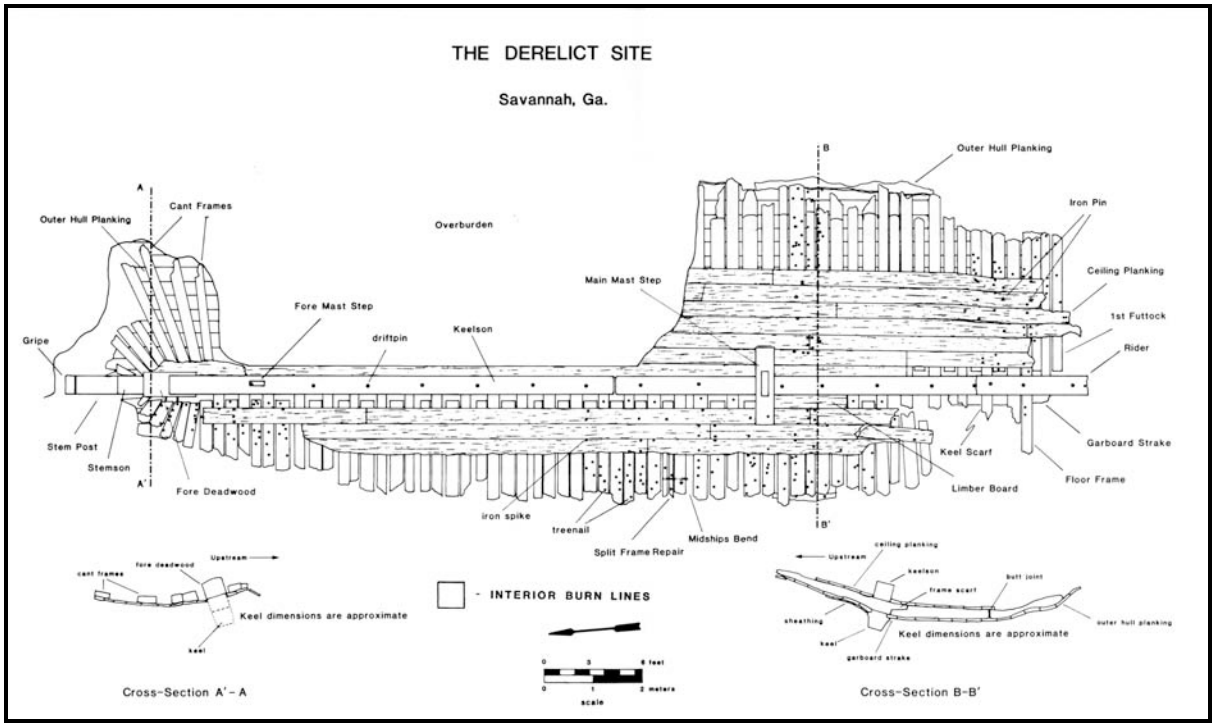

Figure 108. Plan of the derelict vessel excavated by OSM Archaeological Consultants, Inc., in 1987.

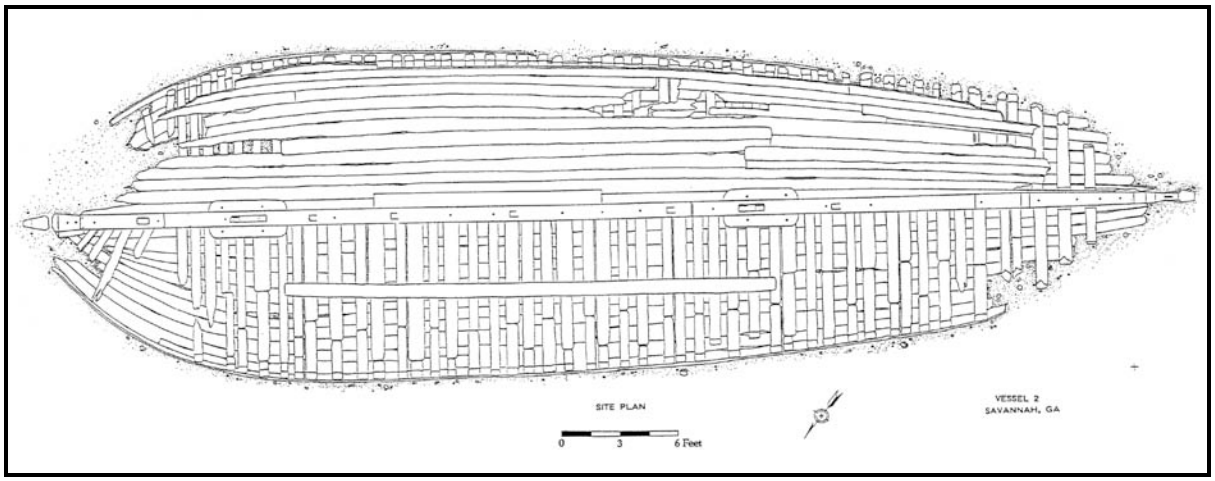

Figure 109. Plan of derelict vessel No. 2 excavated by Tidewater Atlantic Research, Inc., in 1993.

Conclusions and Recommendations

Based on both investigation at the site and historical research, the GA BR 17 vessel appears to the remains of a late nineteenth century barque. Wood used in construction of the vessel indicates that it was built in a yard on the eastern coast of Maine or the southern Canadian Maritime Provinces such as Nova Scotia or Prince Edward Island. In all likelihood the vessel was engaged in the post-Civil War lumber trade but was fitted to carry other cargos such as rice, salt, sugar, guano or phosphate. Unfortunately, research to date has failed to produce a ship-specific identification of the derelict.

The vessel was no doubt either condemned at Savannah as unseaworthy or was brought into port for salvage following an incident at sea. It appears that the ship was purchased for salvage and towed into Back River near the mouth of Planter's Canal for that purpose. The lack of upper hull and deck fittings, fasteners, rigging (Figure 110 and 111) sheathing (Figure 112) pumps or other equipment suggest that salvage was well underway when on 26 October 1893 the Savannah Morning News reported that a fire destroyed the "old wreck" near the Back River entrance to Planter's Cut.

Figure 110. Wire rope, apparently standing rigging removed and stowed when the vessel burned.

Figure 111. Wire rope on the port side of the hull cut to remove a deadeye.

Figure 112. Headless tacks illustrate the method of removing sheathing from the hull.

Cooley's store mentioned in the article likely belonged to Martin Cooley of Cooley and Brown that carried out an unsuccessful attempt to salvage the Austrian Bark Undine (Wood Undine 1893). In the 1880 census records Martin Cooley (Covley) was identified as a grocer (US Census, Chatham County 1890). That association would appear to reinforce the hypothesis that the GA BR 17 vessel was towed into Back River for storage and/or salvage.

The GA BR 17 hull remains are those of a vessel associated with Savannah's late 19th century maritime commerce. They appear to reflect post-Civil war shipbuilding in Maine or possibly the Canadian Maritime Provinces. The surviving remains represent only about 20% of the original structure. Excavation and documentation of the surviving structure preserves a detailed record of design and construction features of the lower hull. That record can be considered to effectively mitigate any potential impacts of damage to the surviving structure caused by proposed construction of a replacement Highway 17 Bridge over Back River.

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