

South Carolina Shipyards: Labour, Logistics, Lumber and Ladies

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Abstract Southern shipyards, like Hobcaw and Mars Bluff, were established at locations chosen primarily for convenient access to transportation networks, building materials, clientele and labour. The historical record reveals a home front role played by local plantation owners and slaves as shipyard labour. Women served as project fundraisers, shipyard dilettantes, shipwright's wives and possibly slave mistresses with a paucity of material culture to confirm their presence in the archaeological record. Archaeological investigations on land and underwater yield evidence of artefacts associated with diet, shipbuilding, warfare and ethnicity.

Keywords Shipyards · South Carolina · Slaves · Women · Confederate

Introduction

The Mars Bluff Confederate shipyard, an inland facility established by Secretary of the Navy Stephen B. Mallory in 1862 to provide more security from Union attacks, was also a venue for social activities in the Marion community. Military men met local women and assisted with shipyard tasks at a time when labour was in short supply. An article by W.F. Clayton published on the front page of in the *Marion Star* bluntly describes the social opportunities presented by the yard:

The Navy Yard was a kind of Pic Nic. What the wild waves say is a picnic ground for the Young girls and older men from Marion and Bennettsville, which made it very pleasant for the ship officers. The yard was under the command of Lieut. Edward J. Means of South Carolina. Dead.
(*Marion Star*, Wednesday, January 29, 1913)

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Apart from settings for social shenanigans, southern shipyards served as manufacturing facilities with convenient access to transportation networks, building materials and labour. Other considerations were the proximity of clientele for shipbuilding and repair contracts and a wealthy community, including women, to raise funds and invest in the shipyard operation. This paper explores the role of shipyards as an archaeological and historical resource using the port of Charleston Hobcaw Creek Revolutionary War naval yard and the inland Mars Bluff Confederate yard as case studies. Primary documents such as private and naval correspondence, probate records, newspaper advertisements, deeds and plats are used as the basis for the study, supplemented by the results of 2009 underwater and terrestrial archaeological investigations conducted by the Program of Maritime Studies at East Carolina University (ECU) and the Maritime Research Division of the South Carolina Institute of Archaeology and Anthropology (SCIAA) at the University of South Carolina.

This study builds upon research questions articulated by William Still in his formative work *Confederate Shipbuilding* (1965), Ford (2007: 125–137) who stresses the archaeological community's neglect of these ephemeral North American shipyard sites, and Michael Stammer's (1999: 253–264) call for more attention to archaeological work on shipyards as representing crossroads in transactions between land and water. Stammers suggests shipyards can show evidence of the construction process of shipbuilding, the materials deployed, and information about a workforce and how they transmitted ideas into tangible form. William Still argues that Confederate shipyards were "simple affairs". They were small working yards of limited means, reliant on local labour and transportation of goods, especially munitions, from dispersed facilities. What archaeological footprint could a yard like this possibly leave in the archaeological record?

To date, most landscape analysis in the south has been devoted to plantation sites (Smith 1999; Orser 1988; Vlach 1993; Yemen and Methany 1996). There is one unpublished exception—the Hobcaw shipyard (Morby 2000). In both the Mars Bluff and Hobcaw shipyard case studies, choice of site, location and layout of the yard are key elements in understanding the operation of the shipyard. While Ford (2007) attempts to quantitatively predict location—historical records like naval recommendations, advertisements for land, and comments of customers provide keener insights into perceptions about suitable locations and the trade-offs of their choices.

Gender and ethnicity in southern shipyards is a refreshing area of focus for a historical study of a World War II shipyard in Savannah, Georgia (Cope 2009). The few published archaeological shipyard studies devote little attention to the background roles played by community women and African Americans in supporting the manufacturing industry. This is perhaps understandable because the archaeological record yields little material culture that definitively represents ethnicity and gender. In contrast, the historical record clearly shows their role in events that took place in these two respective yards. A recent article on women in Norwegian whetstone trade (Nymoene 2009) suggests that the integration of these gender vignettes may provide an important historical context and a neglected side story.

Hobcaw Shipyard: Sufficient Space to Heave Down Three Vessels

During the latter half of the eighteenth century Hobcaw Creek outside Charleston became the colony's largest shipbuilding centre (Figs. 1, 2). There were several yards on the creek, but the yard owned by Irish immigrant Paul Prichard, was ultimately selected as the ideal South Carolina Navy yard. The attractiveness of this specific location for naval shipbuilding, according to reporting officers, was sufficient space to heave down three large



Fig. 1 Locations of Hobcaw and Mars Bluff Shipyards in South Carolina, USA

Fig. 2 Slipways at Hobcaw Shipyard (38CH1049). Photo by Lynn Harris



vessels simultaneously, good depth of water, a fresh water spring close to the shore, and far enough away from the distractions of the Charleston where “the people belonging to the yard, as well as the Sailors belonging to the Vessels do frequently come to Town, get Drunk, and quiet the Service...” (Navy Commissioners to the Navy Board, 27 August, 1778, Salley 1912: 177–178). Other shipyards in proximity to this yard were Linn’s yard, a contemporary shipyard also on Hobcaw creek, and Fairbanks plantation/shipyard on Daniel Island (Zierden et al. 1986: 7–90).

As a slave trader, merchant and planter who owned and repaired vessels for the transatlantic trade, Henry Laurens represented the expectations and perceptions of a successful low country client. He was an admiring customer of Paul Pritchard and the pairs of shipwrights who owned the yard prior to him like Begbie and Manson, and Stewart and Rose. Laurens owned locally built plantation riverboats and ocean-going ships named

Baker, Wambaw, Henry, Heart of Oak, Flora, Vine, Montagu, Anne, and Broughton Packet Island. He believed that inland areas most suited to shipbuilding were those at the water's edge in proximity to abundant sources of live oak, pine, and cedar. Furthermore, there should be sufficient depth of water and "that Vessels may ride with great safety and very little danger in Hurricane seasons." Preferably the oak should grow "upon the Sea Side" rather than on fresh water. By this, he probably meant in the tidal zone of rivers alongside brackish water (Henry Laurens to Governor James Grant, Florida, 18 September, 1766 in Rogers and Chestnutt 5: 195; Henry Laurens to John Bryan, 1 September 1767, Rogers and Chestnutt 5: 291).

As a wealthy planter, Laurens was more likely than most to afford the most prestigious shipbuilders and to have the credit to invest in boats of perceived quality design and craftsmanship. He encouraged other planters and merchants to select shipbuilders of competence and merit to build colonial vessels. His correspondence emphasizes the need for more shipwrights of repute to immigrate to South Carolina. He sought both to promote ship building as a local industry and, like any good businessman, to have access to well-designed ships for his own use. Thus, he encouraged others to single out reputable craftsmen and to experiment with new designs. He was very complementary of Hobcaw shipwright John Rose and his ability and "perfect acquaintance of every minute article necessary for constructing a Good Vessel..." This included his familiarity with seasoned timber and planks and avoidance of "Sap, Knots, and wrents" (Henry Laurens to John Rose, 3 January 1774, Rogers and Chestnutt 9: 216) .

Live Oak, White Oak, Red Cedar and Yellow Pine

The shipwright business was especially lucrative compared to other artisan businesses in the city of Charleston. At the turn of the century the price of a hull was nine or ten pounds per ton, but by 1788 it amounted to twenty-three pounds, and at the close of the revolutionary period the builders of eastern Massachusetts and Philadelphia were underselling South Carolina shipwrights by five pounds per ton. Many merchants of Glasgow, Edinburgh, London and Philadelphia owned Carolina-built vessels because of their good workmanship and lasting timbers (Olsberg 1973: 189–299; Ship Registers 1730–1765, 1765–1774, South Carolina Department of Archives and History).

In the *South Carolina Gazette* advertisements for live oak and pine construction were often used as a sales pitch for the quality of construction. On May 24, 1754 a sale notice for a schooner that would carry 95–100 barrels of rice added that the vessel is "extraordinary well-built, live oak and red cedar timber, with two streaks of white oak plank under her bends, the rest yellow pine." Another equally popular, but less abundant, wood source was cedar. It was favoured especially for its qualities to resist the tenacious and destructive teredo ship worms. Both Carolina live oak and cedar apparently increased the life expectancy of ships. In general a wooden boat lasted 15 years. Carolina-built ships from local yards were known to have a life span of twenty to 3 years.

In addition, the quality of lumber and workmanship of ships built in the colony, both of which had previously been in doubt, were promoted as equal to the English merchant vessels. "We have in plenty a sort of wood called the live oak for timbers which seem admirably adapted to that use," wrote Governor James Glen to the Board of Trade in 1751. "Builders prefer it even to the best Oak that can be met with in the yards of England and we have great quantities of yellow pine for planking, nor are we in want of plenty of Masts and Naval Stores." (Salley 1947: 189–190).

While supporting the notion of shipbuilding in South Carolina, Henry Laurens revealed through his plantation correspondence that the quality of workmanship varied depending on how carefully a colonial shipwright was selected for the job. It was, he proclaimed, “not a trifling business” for a ship to be designed and built for one’s “own particular Trade and Exactly agreeable to a Draught.” (Henry Laurens to Reynolds, Getley and Co., in Bristol, 23 December 1773 in Rogers and Chestnutt 9: 205). He personally was interested in the best available shipwright to do his work, even if it meant paying more per ton than the common rate of six pounds sterling per ton.

Laurens insisted repeatedly that employing shipwrights of integrity and competence to design South Carolina vessels would give American-built vessels a better reputation and South Carolina ships “would acquire the Character & Credit which they truly merit.” He alluded to instances where American-built ships were downgraded and stereotyped by English shipwrights. These accusations referred to those built in New England and Philadelphia, not South Carolina. While discussing the cost of shipbuilding in South Carolina with William Fisher, a Philadelphia ship owner, he noted that, “the Difference in the Cost of our Carolina-built Vessels is not the great objection to building here. That is made up in the different qualities of the vessels when built or some people think so.” He added that a vessel built in Philadelphia “would not be worth half as much (the hull of her) as one built of our live oak and pine.” (Henry Laurens, Bath to James Laurens, 3 January, 1774 in Rogers and Chestnutt 9: 214–215).

Hobcaw Ships: *Liberty, Fair American, Oliver Cromwell, and Magna Carta*

Shipwrights and slaves at Hobcaw shipyard built and launched an impressive list of transatlantic vessels from Charleston’s shores. Two were the 300-Ton *Magna Carta* in 1770 and the *New Carolina Packet* in 1771, intended for the London trade. Names of other ships reflect growing revolutionary patriotic colonial sentiment: *Liberty, Fair American, and Oliver Cromwell*. Pritchard also received instructions from the naval commissioner to build “row galleys” for the state and to “lay in Spars, Oakum, Iron & other items you think Necessary for the Vessels belonging to this State, and for those Row Gallies” (Edward Blake to Paul Pritchard, October 31, 1776 and November 2, 1776, Salley 1912: 242). There seemed to be an assortment of adaptations to prepare plantation vessels for warfare in the shipyard. This included having a “large Flatt and have her altered, Sufficiently Strengthened and Completely fitted as a Galley to mount one Twenty-six pound cannon in the Bows and Two smaller Guns in the waist to fight them all on either side Occasionally, with stocks to Mount to Eight or Ten Swevel Guns and to row with as many Oars as possible to be fitted with Masts and Yards, to carry two Lateen Sails...” (Navy Board to Paul Pritchard, February 1779, Salley 1912: 242). The Navy yard became so busy modifying and equipping vessels that by that by March 1779 the Navy Board provided payment for Paul Pritchard to purchase three more shipyard slaves (Navy Board to Capt. Will Hall, March 1, 1779, Salley 1912: 253)

Shipyard Slaves and Immigrant Shipwrights

Prior to Pritchard ownership, the yard operated with slave labour. In the 1750s a partnership of Scottish immigrant shipwrights, Rose and Stewart envisioned the shipyard as a prime opportunity to increase their status as shipwrights and business men in the colony. In

1752 James Stewart wrote to his father from Hobcaw: “We came in here with about 600 lb Sterling, we put on our trousers And went to work by the day & raised slaves by degrees lived snug & until of late nobody knew what we were worth, and now we have experience & are known and respected by the first rank & wear Silk jackets and ruffles” (Dalguise Muniments, South Carolina Historical Society).

Shipyard slaves were hired initially, later purchased and trained in shipyard skills, rapidly escalating in worth as assets to shipyard production. Shipwrights were well aware of the increasing value of slaves with shipyard skills. Stewart embellished: “We propose to buy two Negroes to bring up to our business which will cost \$60...they say here when they talk of a Man’s being Rich he has so many Negroes ...if we had a Dozen Working Negroes we need work no more ourselves...if we can stop the stream for the first 2 years I shall be satisfied our Negroes will everyday be worth More and More to us...some carpenter Negroes are worth \$150 sterling” (Dalguise Muniments, South Carolina Historical Society).

During the Revolution, the South Carolina Navy purchased three-fourths of the yard “together with Negroes, Land, Timber...” and chose shipwright Paul Pritchard as the worthy superintendent for 77, 700 lb with fifteen slaves. In a recommendation about the use of the yard the Navy Commissioners claim that “Mr. Pritchard (who is to superintend) is a man of Property, an Experienced Ship Wright, *has long* had (break) Ship Yard, and understands the management of Negroes (break) procure Timber plank and other Materials for Ship Building with more Dispatch, and upon reasonable Terms as any person in the State.” (Navy Commissioners to the Navy Board, 27 August, 1778, Salley 1912: 177).

Extra carpenter slaves were hired from nearby shipyards and plantations as needed to meet the shipbuilding demand during the Revolutionary War. When state ships went into the yard for repair, the commissioners requested that Pritchard “give her all possible Dispatch by laying by any Private Work that may Interfere.” (Navy Commissioners, Josiah Smith to Paul Pritchard, 28 January 1779, Salley 1912: 234). Pritchard relied heavily on this shipyard slave labour. By February 1779, the Commissioners requested that Hobcaw shipwrights gather as many carpenters both white and black, of which here were around 120, from the city of Charleston (Navy Board to Edward Blake, February 1779, Salley 1912: 241) Twelve slaves and their tasks at Hobcaw are mentioned in his will bequeathing the yard to his son William: the following Negroes...Portius, Sam Moosa, Henry Junk, Caesar, Little David, Big David, Cyrus, Passage and Gray, ship Carpenters and Caulkers, Stafford and George, Blacksmith’s; my wenches Sue, Phyllis, and Chloe and my two house carpenters Sam and George. (Probate Court Records 24-C: 963). The yard continued to operate until 1831.

Wives and Wenches

Hobcaw’s early immigrant shipwrights were single men. Some married later, others did not. Although the opportunity for upward social mobility existed in the colonies, the initial impetus and financial support to make a new life overseas came from relatives and friends in Europe who recognized a potential family benefit of an aspiring, trained young artisan representing their group interests in the New World. Nevertheless, colonial patronage was a gamble in many respects. If the young artisan married unwisely and started a family in the colony, it might compromise his priorities to repay family loans for the shipyard or contribute to their joint wealth.

Small tensions grew within the relationship between the Stewart and Rose Hobcaw shipwrights, and appeared to escalate with Rose's marriage and his growing family. In October 1754, John Rose married his neighbour's daughter, Hester Bond, who was from a family considered to be Charleston gentry. In the colonial world this would be perceived as sensible choice, but clearly, she was not highly regarded by the Rose/Irvine family and considered a drain on the shipyard resources and even a source of trouble in the relationship between the two partners. Her father was a successful planter who owned around a hundred slaves on land near to Rose's on Hobcaw point.

By November 1755, George Ouchterlony, a European correspondent began to comment negatively on the relationship between the two partners and Stewart's disposition "to be of a stiff, dogged Temper which makes me less surprised that there was no right agreement with regard to Mr. Stewart's Estate." The London correspondent was referring to an ongoing disagreement between Rose and Stewart over how to delineate their partnership assets. Further correspondence indicates that Stewart, unknown to Rose, enquired about placing lands in a "joynt Tennacy" ensuring the longest surviving partner absolute rights, thus excluding the deceased partners heirs. On 24 June James Stewart "was found dead in the woods with his gun by him with a string to the treegar & Round his foot" Rose could not account for his death, claiming it was a suicide and that "he shot himself and I believe there is none upon earth cann act for it. (John Rose, Charleston, SC to Charles Irvine, Gothenburg, 3 July 1755, CIC/1755/27a, Irvine Papers).

Similarly to plantation settings there is a distinct possibility that shipwrights co-habited with female slaves. David Lynn, a bachelor who ran a shipyard across Hobcaw creek from Pritchard yard, bequeathed freedom to a favoured female slave. He wrote: in his will: I will and direct that my Wench named Cloe be free and discharged from slavery, immediately after my decease, and hereby give and bequeath to her, her said freedom, and also the sum of Fifty pounds sterling to be paid to her at such times in and such proportions as my Exeuors [sic] named shall think fit and proper (Probate Court Records, 16-A: 278).

The Shipyard Landscape: Slipways, Warehouses, Kilns and Food Refuse

Large shipyards, like Hobcaw, were also the setting for social events especially during ship launching ceremonies. Single women would most likely attend with their families and meet eligible shipwrights, especially those who had reputations as successful businessmen and connections in Europe, like John Rose and later the Pritchard family. The romance of the shipyard was epitomized in landscape features like the avenue or allee of oaks leading from the main house to the waterfront, also referred to by Catherine Pritchard, Paul's daughter as "Flirtation Walk". Couples strolled hand in hand up and down the avenue during gala events like ship launchings (Amer and Naylor 1996: 7). The southern tradition of an avenue was a popular plantation layout. It represented a living tunnel to the main house, a structure that was a symbol of power and wealth (Fig. 3).

Prichard family Probate records inventory the Hobcaw shipyard facilities which included all houses, outhouses, buildings, wharves, storehouses, orchards, gardens, marshes, trees, wells, water, water couriers, ways...etc. (Probate Court Record, June 20, 1778). A 1786 plat shows a complex consisting of the main Pritchard house, a stable, and a springhouse. The main house has a defined yard area connecting it to wharves. There are also a series of paths, ditches, gates and fences (McCrary Plats).

Underwater investigations yielded three slipways, a wharf, ballast rock and bricks eroding out of the bank (Fig. 2). Terrestrial shovel testing and excavations revealed



Fig. 3 Contemporary Artwork showing the Hobcaw Shipyard with Three Vessels Heaved Down (provided by Hernandez family)

features of work areas not represented on the plat—such as a supplies warehouse at the waterfront, blacksmithing areas on the western perimeter, firing kilns for tarring ship timbers and hulls on the eastern perimeter. Archaeological testing also revealed a location for pitch manufacture or storage on this eastern perimeter known as Feature 100. Artefacts found around Feature 100, included copper sheathing, tacks and lead nails, suggest work on ships at this area.

The focus of archaeological investigations and excavations in 1995 was a structure that consisted of the lower remains of three brick walls forming an approximately seven-meter square enclosure possibly a warehouse or supply shed. Within the enclosure excavators recovered artefacts including numerous pipe stems (most dating from 1750 to 1800+), ceramics and glass (dating from the eighteenth and nineteenth centuries), iron and copper fasteners, wrought iron and brass fasteners, wound and drawn glass beads, gunflints marbles, buckles, thimbles, buttons, a horse's bit, a 1720 Dutch trade token, wine glass stems, an adze, axe heads, a pair of dividers, a broken chain plate and large amounts of burnet faunal remains comprising cow (*Bos taurus*), pig (*Sus scrofa*), deer (*Odocoileus virginianus*), goat (*Capra hircus hircus*) bird (*Aves*), and fish (Amer and Naylor 1996: 9). Further testing in 2004 and 2005 included cut long bones suggesting that this was dietary refuse. Unworn molars and unfused bones reveal that the animals were young, further supporting the dietary role of these remains. Bird bones, including robins and crows, and water birds, like herons or egrets were found amongst the faunal remains (Harris and Rust 2004; Harris et al. 2005).

Southern plantation landscaping conveyed symbolic messages of power and status. Three distinct aspect of this landscape fashion was the visible area of cultivated land, the size of the plantation house and the display of slave ownership, especially along either side of the avenue (Brabec 2004: 10–11). To date, no slave cabins have been located along the Hobcaw oak avenue and it is surmised that unlike plantation model with many more slaves, they were housed elsewhere, more like European workers. They had with a considerably higher status than a plantation field hand, and could be sold and hired out for more money. Instead, the avenue led from the main house down to the waterfront ship-building area, the symbol of shipwright's wealth.

Material culture, particularly ceramics, correspond with the historical record showing an increase in both wealth and site occupation as the immigrant shipbuilders became established in the community around 1760s. The extreme paucity of colono ware, a colonial-era

pottery associated with plantation slaves reflects a different microcosm of slave shipyard culture. Their lifestyles probably contrasted to that of the vast slave communities on the Lowcountry plantations. The implications of the archaeological record are that slaves in the Hobcaw shipyard did not make much colono ware. Either the shipyard slaves did not have the time to do it, or because there were ample European ceramics available to them from vessels visiting the yard (Harris and Rust 2004; Harris et al. 2005).

Two categories of artefacts are possibly associated with shipyard slaves. These are glass tools and glass beads (Fig. 3). It is likely that glass was useful for cutting canvass, rigging lines, caulking and scoring timbers much in the way a pocket knife or utility knife is used today. Other sources of information about the African connection to these tools include documentation about the use of broken bottles by Africans during the Middle Passage to shave traditional designs in their hair. The practice of using broken glass as a razor was common in the Bahamas until the 1930s. In Louisiana, John Hulbert, a former tenant of Oakley plantation recalled that glass tools were used on a plantation to smooth axe and hoe handles. Glass beads were items possibly associated the women, but more likely with slave trade or Native American trade (Marcoux 2008).

Mars Bluff Shipyard: A Rental Property at Railroad Junction

In contrast to the Hobcaw shipyard which operated over a long period of time with a fairly distinct archaeological signature, the Confederate yard at Mars Bluff was a short term operation and a “simple affair”. It was strategically located at the intersection of the Wilmington and the Manchester Railroad. Communications were prevalent between offices of the Confederate navy in Richmond with installations throughout the south. Those stations included Selma in Alabama; Charlotte and Fayetteville in North Carolina; and Columbia in South Carolina (Wilmington and Manchester Railroad Collection, Darlington Historical Society). Within these exchanges, it is clearly evident that the Confederacy was attempting to produce weapons and munitions up until the very end of the war (ORN 109: 55–57).

A report submitted by Admiral Dahlgren on November 2, 1864, detailed the strategic nature of northeastern South Carolina in relationship to overall Union operations. He stated the need to cut and control the railroads in the region, specifically the Northeastern as well as the “Wilmington, Columbia and Augusta Railroad” at Mars Bluff. He felt that control of the railroads could isolate and potentially neutralize resistance to Union forces. Controlling railroads would expedite the capture of Georgetown and the Pee Dee River, offering him the chance to destroy the CSS *Pee Dee* which was under construction in the shipyard (ORN 16 (1): 39–40).

On March 16, 1863 a land rental agreement for the purposes of established an inland naval yard was signed between the Confederacy, represented by First Lieutenant M. Dozier, Captain S. Thomson and the landowner Joseph Bird. The area rented by the Confederacy was known as “Bird’s Landing”. The land total is listed as ten acres and the agreement is valid for 1 year for the sum of 200 dollars. The purpose for renting the land was expressly stated as “for the purpose of building a gunboat or gunboats other craft erect buildings”. Within the timeframe of the Means letters from September 1864 through February 1865 the construction of three warships, a torpedo boat, steam tender as well as the CSS *Pee Dee*, took place at Mars Bluff. The Confederate yard comprised fourteen temporary structures including a saw mill, planning machines, accommodations for officers and men and stocks for building ships (Hartley 1983b). A spur line connected the yard to

the main line Bird also agreed to the Confederacy using the trees upon the land. The Confederacy agreed to remove all erected buildings from the land once the lease has expired (Marion County South Carolina Deed Book “Z”, 1863: 417–418).

Shipyard Logistics: Food, Clothes, Machinery and Munitions

Lt. Means served briefly at the Charleston Naval Station before being named the commander at Mars Bluff in 1864. He remained commander at Mars Bluff until the end of the war in 1865. As activities progressed in the naval yard, Lt. Means began to request more materials and supplies, including thousands of pounds of bolts, spikes, and many feet of log chains (Means, October 21, 1864: 18).

In addition to building materials being funnelled into the shipyard, he constantly attempted to procure adequate clothing, medical supplies and food stores for the men working at the yard, both white and black (Means, November 4, 1864: 30). The Lieutenant wrote to Confederate Navy Secretary Stephen Mallory repeatedly complaining about the need for food stores including beans, rice, flour, and pork to be more adequately distributed to the navy yard (Means, Nov. 8, 1864: 33). He stresses the importance of a certain Mr. Charles Haselden’s services at the shipyard as crucial to the efforts of supplying the station. In late November 1864, Lt. Means commented that Hasleden had been supplying meat from his family property. He asserted that if Capt. Hasleden was permitted to continue his services at the naval yard, there would be no problems in feeding the workers and men. Ironically after all of the commotion between Maj. Melton and Lt. Means over Charles Hasleden, by early 1865 Capt. Hasleden was reported as a deserter (Means, November 29, 1864: 45–46).

The shipyard was very dependent on members of the local community and surrounding plantations to provide very basic staples and labour. Lists of expenses for the yard itemize an assortment of goods and services and supplies with associated costs and names of suppliers. A breakdown of shipyard costs by category shows that shipyard supplies (window glass, anchors, horse fodder, wood, ledgers and paper, metal, tin and sheet zinc, sulkey and harness, fire bars, belting and scale, steam engine, saw mill and grist mill) comprised 45% of the total expenditure. Slaves, including those itemized as “Negroe Carpenters”, comprised 28% of the total expenditure. Other categories like animals (a horse, a sorrel horse and a buggy horse), tools (axes and circular saws), services (a watchman, hiring a mule team, hiring a horse, repair of harness, building a chimney, hauling goods), food (bacon, corn, pork and salt, beef, sweet potatoes) and marine tools, paints and preservatives (lead, zinc, linseed oil, paint and brushes, turpentine, cotton, white lead) all comprised less than 15% (Figs. 3, 4, 5, 6, 7, 8). The highest expenditures on the list were for a steam engine, a saw engine and a grist mill costing \$5,500, iron for \$4,506 and hardware for \$3,837. Most of the shipyard slaves were hired was from Colonel Alston for a total of \$3,142 (Supply List for *CSS Pee Dee*, Mars Bluff Shipyard Papers Collection).

Mars Bluff Shipyard Labour

The shipyard relied both on occasional labour from Confederate soldiers and on slaves hired or loaned from nearby plantations. During his time as commander at Mars Bluff, from September 1864 through the yards evacuation in February 1865, Lt. Means made many decisions regarding those employed at the shipyard and discussing at great length the



Fig. 4 Flirtation Walk under the Avenue of Oaks at Hobcaw Shipyard (ca. 1913) showing Pritchard Main House (provided by Hernandez family)



Fig. 5 A Glass Tool, Pipe Bowl and Colono Ware Sherd from Prichard's Shipyard. Photo by Lynn Harris

men employed at the shipyard, often debating with other Confederate officers his preferences about individual men assigned to duty at the shipyard. A detailed letter Lt. Means wrote to Major Melton focused on B. W. Jernigan Shoemaker. Within the text, the Lieutenant alluded to the desperate situation facing the Confederate States of America as its army faced intense pressure on two fronts, both in Georgia and Virginia. Lt. Means recognized the situation but still requested that Mr. Jernigan, an older man (40 years of age), remain at Mars Bluff. He was the only shoemaker available to produce shoes for the workforce stationed at Mars Bluff. In addition, he mentioned that the man in question worked for very low wages, a benefit to the Confederate Navy's bottom line (Means, Oct. 27, 1864: 26).

His communications also detail different personnel being assigned to the shipyard. In a letter sent on September 23rd Lt. Means stated that sixty Negroes were working at the



Fig. 6 Log Dog Eyes from Mars Bluff Shipyard Underwater Site. ECU Photo



Fig. 7 Caulking Tool from Mars Bluff Shipyard Underwater Site. ECU Photo

naval yard (Means, 1864: 9). The increasing difficulty and impoverishment on the latter stages of the war is reflected in missives about the slaves. He writes

There are hired to the Navy Yard several Negroes belonging to Col. B. Alston. The most of these are in want of shoes and some in want of clothing. I do not know where to apply or from whom to procure the needed articles and as all these necessities are so high I do not feel warranted in “going it blind”...if they (the slaves) do not get something soon they will suffer. Some of those in want of shoes are getting timber in the swamp where it is necessary they should have shoes. If the Shoemaker not detailed at the Yard is called into service of which there is a strong probability there will be no facility for supplying them (Means, November 4, 1864: 30).

Randy McAlister, great great grandson of Virgil (also known as Vige) Franks, claims that his grandfather worked as a shipyard freedman at Mars Bluff Plantation (Pers.



Fig. 8 Caulking Tool from Mars Bluff Shipyard Underwater Site. ECU Photo

Communication, May 2009; MS on file in Eller House). He highlighted the role of African American shipyard craftsmen working in the Confederate Naval Yard and of African American/Native American soldiers enlisted in the Confederate Army by sharing stories of his paternal and maternal ancestors with ECU students during lunchtime conversations at the summer 2009 project site. McAlister derived his information from oral testimonies given to him by his paternal grandfather. Franks was a skilled labourer serving as a carpenter, furniture maker and shoe cobbler for workers in the shipyard until the end of the war. He was also a saddler for the Confederate States Army. Prior to working at Mars Bluff, he worked in a local shop.

Louisa's Ladies

Women assisted in funding navy yard activities, invested in and identified strongly with the construction of the *CSS Pee Dee* Gunboat and the Confederate cause. A letter from Louisa Harlee Pierce nostalgically reminisces:

All our young men and many of the older ones were fighting in that war. When our men began to build a gunboat in the Pee Dee river, near Mars Bluff, we ladies knew they did not have the money to spare so a number of us offered to sell our jewelry, for gold dollars to help pay for the building. Some wealthy ladies gave diamonds and valuable things. But many others gave such as they had. But we did help build the boat and when it was named the “Pee Dee” we called it our boat
(Louisa Harlee Pierce to Louisa Selligen, ca 1930)

Louisa underlined words in her letter to emphasize their connection to the shipbuilding project. She elaborated on the dancing on the deck of the *CSS Pee Dee* and how the confined space required the party to move into the shipyard where the workers played their banjos. Clearly, there was a strong sentimental attachment to the vessel and its iconic role as a symbol of larger Confederate community.

Fund raising for the *CSS Pee Dee* gunboat was part of the social and political sphere of women in the war effort. Southern women created women's auxiliary organizations to raise money for a variety of Confederate army projects. During 1861 and 1862 the southern

auxiliaries, called the Ladies' Defense Association or the Women's Gunboat Fund, was established. The goal was to raise \$80,000 needed for gunboats. They initiated their fundraising efforts by creating and selling quilts. Newspapers encouraged these drives and listed contributions. Many donors preferred to be anonymous or identified themselves as being from a specific city. These women zealously raised money at church, fairs, bazaars, raffles and concerts.

Money was raised for three other boats: *the Charleston*, *the Fredericksburg*, and *the Georgia*, earning these boats the nicknames of "petticoat gunboats." The quilts sold by these women's auxiliaries were made in elaborate style of appliqué. Although the enthusiasm of this project was high at the onset, it began to wane a year or so later when the war limited supplies and naval success seemed unlikely. Fundraising efforts turned focus towards medical supplies and hospitals for soldiers (Massey and Berlin 1994: 37).

Archaeological Record: *CSS Pee Dee* and Shipyard Signature

CSS Pee Dee was officially commissioned in 1865 being built to 170 feet in length, 26 feet in beam, with a depth of 10 feet and a maximum speed of 10 knots. The vessel was intended to accommodate compliment of ninety-one, with a single rifled 7-inch gun, a single rifled 6.4-inch gun, and one single 9-inch smoothbore cannon. It had two engines brought by a blockade runner from England in 1862 (Townsend 1959: 68). The gun carriages were built in Charlotte, North Carolina, and the Howitzer and Dahlgren 7-inch/IX-inch calibre guns were forged in Selma, Alabama. When the news of the approaching Union troops reached the Confederate shipyard, they scuttled the ordnance and sank the vessel downstream of the shipyard.

Underwater investigations by the ECU/SCIAA team included the discovery and documentation of some of the ordnance believed to be associated with the scuttled gunboat. The two tubes inspected were a IX-inch Dahlgren smoothbore and a 6.4-inch Brooke rifle. The two guns are quite different. One represents an updated, but traditional smoothbore naval gun, the other is the latest type of rifled heavy artillery designed to puncture ironclad vessels coming into service as part of the Civil War arms race. The IX-inch Dahlgren is the typical broadside smoothbore the Union Navy utilized during the Civil War. Phase II archaeological operations included the recovery of five 6.4-inch, two 7-inch Brooke shells, and three friction primers to ignite a cannon's main charge (Figs. 9, 10, 11). The three primers are virtually identical, but differ from the typical artillery primer types used by army or navy artillery. As such, they represent either a Confederate variation, a foreign import run through the blockade, or a Confederate copy of a foreign import (Babits et al. 2009: 69–84).

There was little to no archaeological signature of the shipyard on land, probably because of the short term and temporary nature of the establishment. It is likely that building materials were recycled into the impoverished rural community. This is substantiated by post war reports by Naval Ensign Sturgis Center, USN. The shovel test pits primarily yielded an older Native American occupation and remnants of the shipyard railway line. According to a newspaper article, Lieutenant Means occupied the house belonging to one of the Birds. This agreement was built upon the assurance that when the house was not used by the Confederates, it would revert to the possession of the landowners. The Federal Government refused to recognize this agreement and sold the building at a public auction. It was bought by a man named Goddard who tore the house down and removed all the cypress lumber. Furthermore the article stated "the council had determined to destroy ship



Fig. 9 Three Friction Primers from Mars Bluff Underwater Site. ECU Photo

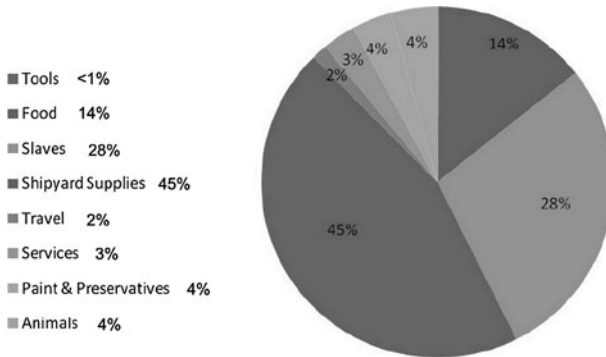


Fig. 10 Mars Bluff Naval Yard Supply Expenditures. ECU Graph

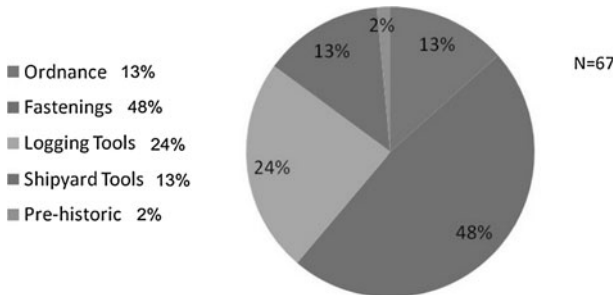


Fig. 11 Percentages of artefact types documented on Shoreline Baselines. ECU Graph

and yard...the guns were spiked and thrown overboard where the ship was moored. The ship was then taken below the bridge, auger holes bored in her bottom and fired.” (*Marion Star*, Wednesday, January 29, 1913).

Despite the paucity of the archaeological record, several land and waterscape features are suggestive of shipyard operations. These include an elevated land for a train spur that corresponds with historic property maps, dock pilings in the waterfront area, a stone dyke or breakwater across the river to provide a flood barrier for docked vessels, a sand mining area on an adjacent property that may have been used as the firing and tar kiln area for timber treatment, and a depression or pond at the waterfront that may have served as a shipbuilding dry dock. Upon completion of the construction operation, the dock would have been converted to a pond and connected to the river by a channel dug out to facilitate floating the vessel into river (Fig. 12).

ECU archaeology students and faculty conducted controlled, systematic underwater surveys (zero to 3–5 cm visibility with 2–5 knots of current) along a series of baselines set up along the riverbank in proximity to the scuttled *CSS Pee Dee* ordnance. Five test excavation units (1 × 1 m) were established along a baseline. Dog eyes were the most numerous artefacts. Two different types of dogs were present. One type appears older and was hand forged. The second is a simple form with the end curling back to form the loop or eye (Fig. 6). It likely the dogs were used to connect lumber together to float downstream to supply the Confederate shipyard. Files, fastening hardware like bolts, pulleys, and caulking tools are the most representative shipyard tools recovered during the project (Figs. 7, 8). Handbooks on shipbuilding in the early 1900s describe the technical skill of caulking. Caulkers used several sizes and shaped caulking tools to seal plank seams and joints of vessels. A good caulker had the ability to run caulking lines in a continuation all over the ship to create a single, unbroken watertight seal. A handbook also suggests that “perfection of caulking was tested by inspecting the groove formed by the tool. The groove should be a proper width and be deep, not just a slight mark.” (MacBride 1918: 48) The authors also elaborated that the lap joints on the strakes of the starboard side of the ship were left-handed work, a skill that required special practice. Caulking jobs were inspected in dark places by using a light to examine the seams (MacBride 1918: 46–50).

Caulking in shipyards was one of the job specializations for free blacks in urban southern shipbuilding areas. Baltimore, for example, was a city where free blacks (25,680 in 1860) were most numerous and industrial workplace patronage was particularly



Fig. 12 Aerial view of Mars Bluff Landscape showing possible locations for Sand Mine/Kilns and Dyke Docks

prevalent within the ship caulking trade. It was the eighth most common black occupation. In 1860, African Americans accounted for three-fourths of the caulkers in the city. They established a Caulkers Association, a black Trade Union that promoted and maintained their presence in the caulking trade. They even enforced agreements by striking and sabotaging boats in non-participating shipyards.

Caulkers were paid \$1.75 a day and relied on elite patronage for employment, yet were expected to aid wealthy patrons when circumstance required assistance. Between the 1840s and 1850s white urban workers protested black dominance in specific trades, like caulking. This set in motion a series of protests in other urban shipbuilding centres like New York, Philadelphia, Mobile and Charleston (Towers 2004: 48–49).

Conclusion

The historical and the archaeological records of the yards, one Revolutionary War the other Civil War, present vignettes of intricately interwoven military, social and labour histories. The ships built in both yards were political icons. The Hobcaw vessel names reflect new New World patriotic sentiments built by immigrant shipwrights. The *CSS Pee Dee* gunboat was a Confederate symbol. It was built inland as a community project where women and hired African Americans played a central role. The present day historic marker at Mars Bluff dedicated to the scuttled gunboat proclaiming “...no nation rose so white and fair” is testament to the invisible contribution of slaves to southern war efforts as ship carpenters, caulkers, shoemakers, saddle makers and Confederate soldiers (Fig. 13).

These side stories add another perspective to the traditional focus on the military commanders and personnel of confederate shipyards. Similarly to plantations, a skilled shipyard workforce comprised of slave artisans as an important economic ingredient was firmly rooted in the colonial era. Women like Hester Bond the wife of shipwright John Rose, financed and supported shipyards whether through marriage and family connections to the local community, or by Confederate women a century later fundraising for the “Petticoat Gunboats.”



Fig. 13 Highway Monument to the *CSS Pee Dee*. ECU/SCIAA Photo

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References

- Amer C, Naylor C (1996) Investigations of South Carolina's largest Colonial Shipyard, conference on Underwater Archaeology South Carolina's Largest Colonial Shipyard. In: MacCandles A (ed) Mount pleasant archaeological heritage. Conference proceedings, pp 33–39
- Babits L, Harris L, Edmonds A, Caudell N (2009) Prehistoric pottery, munitions, and caulking tools: archaeological and historical investigations at Mars Bluff Confederate Shipyard (38MA22/91) on the Great Pee Dee River. Unpublished Technical Report, Program in Maritime Studies, East Carolina University, Greenville
- Brabec E (2004) Landscape change: the influence of external cultural forces. In: 5th International workshop on sustainable landuse planning, Wageningen
- Cope T (2009) On the swing shift: building liberty ships in Savannah. Naval Institute Press, Annapolis
- Dalguise Muniments Shipbuilding File Collection 30-13-30, South Carolina Historical Society
- Ford B (2007) Down by the Water's Edge: modelling shipyard locations in Maryland, USA. *Int J Naut Archaeol* 36(1):125–137
- Harris L, Rust T (2004) Archaeological investigations at the Hobcaw Shipyard Site, south eastern archaeology and history. Unpublished Technical Report submitted to the State Historic Preservation Office, Charleston
- Harris L, Rust T, Beck M (2005) Archaeological excavations at the Hobcaw Shipyard Site, south eastern archaeology and history. Unpublished Technical Report submitted to the State Historic Preservation Office, Charleston
- Hartley MO (1983a) Proposal to Mr. Clive Cussler with enclosed hypothetical plans for *C.S.S. Macon* class vessel. Manuscript on file, South Carolina Institute of Archaeology and Anthropology, University of South Carolina, Columbia
- Hartley MO (1983b) The Mars Bluff Naval Shipyard: an archaeological evaluation. UARS Council, Columbia, SC. Manuscript on file, South Carolina Institute of Archaeology and Anthropology, University of South Carolina, Columbia
- Houmes T, Houmes GA (1986) Bubbling spring. The Edward Kriegsmann Pritchard Family History. A direct line study. Professional Research Publishing Company, Charleston
- Irvine Papers, Ford Bell Library, University of Minnesota
- James Stewart Correspondence, Glasgow University Library Special Collection (MS GEN 1647/1b/18 (18); SRO GD G38/2/7/86/96)
- Louisa Harllee Pierce to Louisa Selligen, ca 1930, Caroliniana Library, University of South Carolina
- MacBride J (1918) A handbook of practical shipbuilding with a glossary of terms. Van Nostrand, New York
- Marcoux B (2008) Chronology from glass beads: The English period in the southeast, ca. A.D. 1607–1783. Annual Meeting of the Southeastern Archaeological Conference, Charlotte
- Marion County, Court of Common Pleas, Case 195
- Marion County Census Records of 1870 and 1880
- Marion County Records, Official Deed to the Believed Mars Bluff Shipyard Site, Marion County Court-house, South Carolina
- Marion Star Newspaper (1913)
- Mars Bluff Shipyard, Darlington Historical Society Collections, Darlington
- Massey M, Berlin J (1994) Women in the civil war. University of Nebraska Press, Nebraska
- McCrary Plats Collection, Charleston County Public Library
- Mans Papers, Deed Book "Z", 1863: 417–418, Marion County
- Mercer H (2000) Ancient carpenters' tools: illustrated and explained, together with the implements of the lumberman, joiner and cabinet-maker in use in the eighteenth century. Dover Publications, Mineola
- Miscellaneous Correspondences (1864–1865) Louisiana State University, Baton Rouge

- Morby S (2000) Pritchard's Shipyard: a landscape analysis of South Carolina's largest Colonial and Antebellum Shipyard. Masters Thesis, University of South Carolina
- Nymoer P (2009) Whetstone typology: Or the first shipwreck of Turid Fiskarbekk and marine archaeologist who had to think again. *J Marit Archaeol* 4:165–180
- Office of Naval Records (ORN) Department of the Navy, Naval Records Collection. Record Group 45 and 109. National Archives and Records Administration, Washington
- Olsberg N (1973) Ship Registers in the South Carolina Archives, 1734–1780. *S C Hist General Mag* 74:189–299
- Orser C (1988) Toward a theory of power for historical archaeology: plantation and space. In: Leone M, Potter PB (eds) *Recovery of meaning: historical archaeology in the United States*. Smithsonian Institution Press, Washington, pp 313–344
- Probate Records, Charleston County Wills and Deeds, Volume 9, 16, 24 and 50
- Rogers G, Chestnutt D (eds) (1981) *The papers of Henry Laurens*, vol 5 and 9. University of South Carolina Press, Columbia
- Salley A (1912) *Journal of the Commissioners of the Navy of South Carolina*, October 9, 1778–March 1, 1779. Historical Commission of South Carolina, Columbia
- Salley A (1913) *Journal of the Commissioners of the Navy of South Carolina*, July 22, 1779–March 1, 1779. Historical Commission of South Carolina, Columbia
- Ship Registers, 1730–1765, 1765–1774. South Carolina Department of Archives and History, Columbia
- Smith, S. (1999) *The plantations of colonial South Carolina: transmission and transformation in provincial culture*. Dissertation, Columbia University
- South Carolina Gazette*, April 27, 1738. March 12, 1744; June 10, 1745; December 2, 1732
- Stammers M (1999) Slipways and steam chests: the archaeology of 18th and 19th century Wooden Merchant Shipyards in the United Kingdom. *Int J Naut Archaeol* 28(3):253–264
- Still W (1965) Facilities for the construction of war vessels in the confederacy. *J South Hist* 31(3):285–304
- Still W (1969) *Confederate shipbuilding*. University of Georgia Press, Athens
- Still W (1985) *Iron afloat*. University of South Carolina Press, Columbia
- Still W (1997) *The confederate navy: the ships, men and organization, 1861–1865*. Conway Maritime Press, London
- Towers F (2004) *The urban south and the coming of the civil war*. University of Virginia Press, Virginia
- Townsend L (1959) *The Confederate Gunboat, CSS Pee Dee*. *S C Hist Mag* LX(2):66–73
- Vlach J (1993) *Back of the big house. The architecture of plantation slavery*. University of North Carolina Press, Chapel Hill
- Wilmington and Manchester Railroad Collection, (Miscellaneous), Darlington Historical Society Collections. Darlington
- Yemen R, Methany K (1996) *Landscape archaeology: reading and interpreting the American landscape*. University of Tennessee Press, Knoxville
- Zierden M, Drucker L, Calhoun J (1986) *Home Upriver: life on Daniel's Island*, Archaeological Report. South Carolina Department of Highways and Public Transportation, Berkeley County