

2014

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### Recommended Citation

Meide, Chuck (2014) "'Cast Away off the Bar": The Archaeological Investigation of British Period Shipwrecks in St. Augustine," *Florida Historical Quarterly*. Vol. 93: No. 3, Article 6.

Available at: <https://stars.library.ucf.edu/fhq/vol93/iss3/6>

## **"Cast Away off the Bar": The Archaeological Investigation of British Period Shipwrecks in St. Augustine**

*by* Chuck Meide

**A**lthough the first underwater archaeological investigations in St. Augustine waters were conducted in the late 1970s, the first extensive, research-oriented archaeological survey seeking to discover and study historic shipwreck sites in the area took place in 1995.<sup>1</sup> This project used a marine magnetometer deployed from a research vessel to search an area encompassing the estimated location of the historic inlet to St. Augustine, a notorious but unavoidable hazard for shipping to and from the colonial capital.<sup>2</sup> This survey was conducted by a non-profit research

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1 Chuck Meide, "Thirty Years of Maritime Archaeology in America's Oldest Port," paper presented at the second annual Northeast Florida Symposium on Maritime Archaeology, March 12-15 (2008). These first underwater surveys were directed by FSU professor George R. Fischer at the Castillo de San Marcos in 1978 and Fort Matanzas in 1979.

2 Until the early 1940s, when jetties construction, dredging, and continuing maintenance operations by the U.S. Army Corps of Engineers fixed the St. Augustine Inlet in place, the entry channel, the bar at its mouth, and the maritime landscape itself changed constantly over time. Archaeological researchers have attempted to reconstruct various positions of the inlet using historic maps to estimate areas that may contain shipwreck remains. Judging from the 1589 Boazio map, the inlet was at that time close to its present-day position, but by the eighteenth century it had drifted about two miles to



organization known as Southern Oceans Archaeological Research (SOAR), and led to the discovery of a number of shipwrecks, including the oldest yet found in Northeast Florida, the British transport *Industry*, lost in 1764.<sup>3</sup>

Realizing archaeology's potential contribution to public interpretation of St. Augustine's maritime history, the St. Augustine Lighthouse & Museum began to provide funding for SOAR's ongoing research excavations at the *Industry* site in 1997. Two years later, the St. Augustine Lighthouse & Museum established its own non-profit research organization, the Lighthouse Archaeological Maritime Program (LAMP). LAMP archaeologists conducted further excavations at the *Industry* site in the summers of 1999 and 2000, and have continued their archaeological research in St. Augustine waters to this day. In 2009 LAMP conducted another survey in the area of the relict inlet which led to the discovery of a second British-period shipwreck.<sup>4</sup> Known as the Storm Wreck, this vessel has not been identified by name, but it has been confirmed to be one of sixteen refugee ships lost in December 1782 while attempting to cross the bar.<sup>5</sup> These vessels were members of the last fleet to evacuate British soldiers and Loyalist civilians from Charleston at the end of the Revolutionary War. LAMP has spent five summer field seasons excavating the Storm Wreck and has recovered thousands of individual artifacts which are currently

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the south. See Chuck Meide, P. Brendan Burke, Olivia McDaniel, Samuel P. Turner, Eden Andes, Hunter Brendel, Starr Cox, and Brian McNamara, "First Coast Maritime Archaeology Project 2011-2012: Report on Archaeological Investigations," (St. Augustine: Lighthouse Archaeological Maritime Program, 2014), 5-8.

3 Marianne Franklin and John William Morris III, "The St. Augustine Shipwreck Survey. Phase One," (Pensacola: Southern Oceans Archaeological Research, Inc., 1996); Marianne Franklin, "Blood and Water: The Archaeological Excavation and Historical Analysis of the Wreck of the *Industry*, a North-American Transport Sloop Chartered by the British Army at the End of the Seven Years' War: British Colonial Navigation and Trade to Supply Spanish Florida in the Eighteenth Century" (PhD diss., Texas A&M University, 2005).

4 Samuel P. Turner and Kendra Kennedy, "LAMP 2009 Remote Sensing Survey," in *ACUA Underwater Archaeology Proceedings 2010*, ed. Christopher Horrell and Melanie Damour (Amelia Island, FL: Advisory Council on Underwater Archaeology, 2010): 11-16.

5 While it was initially believed that storm conditions probably contributed to the mass wrecking event, subsequent analysis of a naval escort ship's log indicates the weather consisted of moderate or fresh breezes during the period of the incident. The fault therefore lay with the infamously dangerous inlet and sandbar, and a greater number of ships attempting to cross, perhaps pressured by the threat of rebel privateers, than there were available pilots.

undergoing analysis and conservation at the Lighthouse & Museum for eventual display.

These two shipwrecks are particularly interesting for researchers of British East Florida as they neatly bracket the British Period, with the *Industry* having wrecked the year after Florida was ceded to Britain and the Storm Wreck taking place the year the Spanish regained control of the province. Both shipwrecks feature well-preserved assemblages of material culture—particularly the Storm Wreck which has produced a wide range of artifacts in remarkable condition—and each represents a time capsule that provides unique perspectives into colonial activities and lifeways during Florida's British Period.

### St. Augustine as a British Port

From the time that Britain first acquired Spanish Florida and divided it into two colonies in 1763, colonial authorities were concerned with building their new possessions into industrious and lucrative territories. This endeavor relied not only on land grants to promote immigration and commercial enterprise but also on the development of new ports and the improvement of those in existence to support trade and communication. This latter goal entailed harbor, navigational aid, and coastal defense improvements along with detailed hydrographic surveys of the inlet and approaches to St. Augustine and other ports.

The maritime landscape of St. Augustine, East Florida's capital and principal port, provided a challenge to the expansion of trade. The constantly shifting sands at the mouth of the inlet limited the long-term accuracy of published sailing directions or pilot books and only small vessels could safely enter the harbor due to its shallow channels. St. Augustine had a very notorious sandbar at the mouth of the inlet—"unquestionably the most dangerous"—which was described in detail with dire warnings to mariners by visitors such as Bernard Romans and Johann Schoepf.<sup>6</sup>

Schoepf in particular provided a vivid account of the dangerous inlet and its potential for shipwrecks. He wrote that

6 Bernard Romans, *A Concise Natural History of East and West Florida* (Gretna, LA: Pelican Publishing Company, 1998), 239; Johann David Schoepf, *Travels in the Confederation (1783-1784)*, 2 vols. (Philadelphia: William J. Campbell, 1911), 2: 226-229, 248-249. For more context on Schoepf's account, originally published in 1788, see Charles Tingley, "Over the Swash and Out Again," *El Escribano* 45 (2008): 87-122.



of all southern ports, St. Augustine had the shallowest and most exposed inlet, which was navigated with trepidation by captains, crews, and passengers alike. He estimated that a visitor could not walk 100 paces on the beach without coming across the remains of a wrecked ship, and that every two weeks to a month another vessel was shipwrecked.<sup>7</sup> It was not uncommon for both arriving and departing vessels to be forced to wait up to two weeks for the necessary conditions of wind and tide in order to cross the bar, delays that were an impediment to profitable maritime commerce.<sup>8</sup>

Despite the inconvenience and outright danger of the port's entrance, trade did prosper at St. Augustine. At least six years of port records, spanning 1764 to 1769, have survived and provide insight into the beginning and initial expansion of maritime commerce in British St. Augustine.<sup>9</sup> Trade was carried out primarily in small, coastal vessels, which is not surprising because of the shallow waters of the inlet. Fifty-eight percent of all voyages from St. Augustine between November 1764 and February 1766 were made by vessels between 20 and 25 tons, mostly sloops and schooners, and only two voyages involved ships of 50 tons, the largest seen in that time span.<sup>10</sup> St. Augustine's most important trading partner was the port of Charleston, South Carolina, while Savannah, Georgia, was the second most important. This was hardly surprising, since there was already a well-established trading relationship between these ports and St. Augustine that had begun under Spanish rule.<sup>11</sup> While most commerce was limited to Georgia and the Carolinas, ships from as far away as Philadelphia, New York, Bermuda, Antigua, St. Kitts, the Canary Islands, and Cork in Ireland engaged in the St. Augustine trade. Imports were primarily manufactured goods (such as furniture, soap, tools, and hardware) and foodstuffs (including pork, poultry, cheese, oil, wine, and rum). The most important export was both sweet and sour oranges, though other

7 Schoepf, *Travels*, 2: 227, 249.

8 Samuel P. Turner, "Maritime Insights from St. Augustine's British Period Documentary Records," *El Escribano* 47 (2010): 6; Schoepf, *Travels*, 2: 227, 248.

9 Naval Office Shipping Lists for East Florida, British National Archives (hereafter BNA), CO 5/553, 5/557, T 1/443, 1/454. These papers were discovered by LAMP researchers who have transcribed and conducted preliminary analysis of the import and export records; see Turner, "Maritime Insights."

10 Turner, "Maritime Insights," 10. As trade developed it seems larger ships began to participate; the largest ship to appear in the port records, by 1767, was 130 tons.

11 Joyce Elizabeth Harman, *Trade and Privateering in Spanish Florida, 1732-1763* (St. Augustine, FL: St. Augustine Historical Society, 1969), 5-6, 46.



exports included cattle hides, deer skins, oysters, hogs, lumber, and live oak knees. These records display a trade imbalance during the early years of British St. Augustine; nearly half the departing vessels left in ballast, indicating more goods came into the port than left it. Surprisingly, indigo, often touted as one of East Florida's most important agricultural products, makes no appearance whatsoever in the export records, suggesting that it took more than six years to establish this industry in the colony.<sup>12</sup>

Unfortunately the port records for the remainder of St. Augustine's British period, 1770-1784, are either not extant or not yet discovered, but it is logical to assume that St. Augustine's maritime trade continued to expand, at least until the outbreak of the Revolution when rebel privateers at sea and incursions on land severely disrupted the local economy. Yet the exact scope and nature of this maritime trade through the end of the British period remains speculative. One promising avenue of research that could help fill this gap is the archaeology of sunken shipwrecks.

### **Establishing the New Colony and the Loss of the Industry**

The Seven Years' War ended with the signing of the Peace of Paris in February 1763. Florida, which had been Spanish territory for the two preceding centuries, was ceded to Britain in exchange for Havana, which had been captured the previous August. British authorities established a garrison in St. Augustine as soon as the treaty allowed. On July 20, 1763, Captain John Hedges, with four companies of the 1st Regiment—the "Royal Scots"—who had occupied Havana, navigated the inlet with the aid of a Spanish pilot and took possession of the Castillo de San Marcos (which the British would call Fort St. Marks). Ten days later, Hedges relinquished command to Major Francis Ogilvie, who arrived with the 9th Regiment of Foot. Men of the 1st were either incorporated into the 9th or allowed to muster out of the army and settle in the new colony. Ogilvie was in charge of both military and civil affairs in the new colony until he was relieved by the newly-appointed Governor James Grant a year later in August 1764.<sup>13</sup>

Among his first priorities was to establish and man garrisons not only at the capital but at other former Spanish fortifications throughout East Florida. He only had 273 troops for the entire

<sup>12</sup> Turner, "Maritime Insights," 13-14.

<sup>13</sup> Daniel L. Schafer, "St. Augustine's British Years 1763-1784," *El Escribano* 38 (2001): 9-12.



province with which to man the forts at St. Augustine, Picolata, Mose ("Mossa"), Matanzas, and Apalachee. Artillery, ammunition, and other supplies were scarce or non-existent; the departing Spaniards had stripped their former possession nearly clean of every portable object before their evacuation. This exodus began in earnest in August, when ships sailed from St. Augustine every day carrying Spanish colonists, free African Americans, Indians, and all of the possessions they could carry. The final ship departed for Havana on January 21, 1764.<sup>14</sup> While Ogilvie's oversight of the evacuation prevented embittered Spaniards from setting fire to their buildings or orange groves, leaving the city's basic infrastructure intact, the colonial capital and British garrisons in the hinterland soon lacked food and essential supplies.

The *Industry* was one of four sloops hired between April 4 and June 22, 1764 as transports by the British Army to bring supplies from New York to St. Augustine.<sup>15</sup> It was commanded by Captain Daniel Lawrence, who had commercial and family connections in St. Augustine and had sailed the *Industry* safely from there as recently as the previous December.<sup>16</sup> Yet on May 6, 1764, loaded with critical supplies for the nascent colony, Captain Lawrence lost his ship on St. Augustine's notorious bar.<sup>17</sup>

According to various correspondence sent before and after its loss, the *Industry* was carrying "tools for the use of the garrison of St. Augustine," "Provisions, Artillery, and subsistence money," "Artificers tools," and "stores."<sup>18</sup> While "very little" was saved, not

14 Schafer, "St. Augustine's British Years," 10, 12-13; Sherry Johnson, "Casualties of Peace: Tracing the Historic Roots of the Cuban Diaspora 1763-1800," *Colonial Latin America Historical Review* 10:1 (Winter 2001): 91-125.

15 Gage Papers, Reel 2, 140G, P.K. Yonge Library of Florida History (hereafter PKY), University of Florida, Gainesville, Florida. The Gage Papers contain the correspondences of General Thomas Gage, Commander of the British Army in New York, between 1763 and 1765. Archived at the William L. Clements Library at the University of Michigan, a copy of this collection was available to SOAR and LAMP researchers on microfilm held at the PKY.

16 Captain Lawrence and the *Industry* had been hired to carry evacuating Spanish subjects from St. Augustine to Cuba, having departed with 58 passengers on 23 December 1763. See Robert L. Gold, *Borderland Empires in Transition* (Carbondale, IL: Southern Illinois University Press, 1969), 72, and Franklin, "Blood and Water," 92, 185. Franklin has conducted genealogical research which shows a familial link between the Lawrence family and that of the notorious St. Augustine merchant and real estate speculator Jesse Fish; Franklin, "Blood and Water," 176-187.

17 "Major Francis Ogilvie to Gage, May 13, 1764," Gage Papers, Reel 1, Vol. 18, 6.

18 "Gage to Ogilvie, April 5, 1764," Gage Papers, Reel 1, Vol. 16, 3; "Gage to Ogilvie, May 6, 1764," Gage Papers, Reel 1, Vol. 18, 1; "Ogilvie to Gage, May 13, 1764," Gage Papers, Reel 1, Vol. 18, 6; "Gage to Captain John Harries, June 20, 1764," Gage Papers, Reel 1, Vol. 20, 2.



all was lost in the shipwreck.<sup>19</sup> Ogilvie sent out all available boats to assist the stranded vessel, and was able to secure "Six Boxes of Money, some Flower [sic] and Carpenter's tools." He posted a guard to prevent illicit salvage but because "the Wreck was greatly scattered along the Coast" it was impossible to station enough soldiers to prevent local inhabitants from collecting shipwrecked materials that legally belonged to the crown. Ogilvie lamented the character of these scoundrels, complaining that the population of East Florida had largely fled from other colonies to avoid prosecution for debts and other crimes. He also made one of the earliest complaints about insurance fraud in Florida, noting that the colony would be ruined if steps were not taken to prevent the deliberate loss of vessels insured above their actual value.<sup>20</sup>

The loss of the *Industry's* cargo was a frustrating blow for the officials in East Florida, but the story was not over yet. As soon as more tools and weapons could be assembled, a second chartered sloop, the *Anne*, was loaded in New York. *Anne* departed for St. Augustine in July, but never arrived. Missing for months, the official report finally determined that it had been shipwrecked off Cape Lookout in North Carolina in September 1764.<sup>21</sup>

### The Excavation of the *Industry*, 1997-2000

The shipwreck *Industry* was discovered in 1997 by SOAR archaeologists diving on a magnetic target identified during the 1995 geophysical survey.<sup>22</sup> The site is located in about 20 ft. (6 m) of water less than 1/8 mile (1.5 km) from shore, southeast of the Lighthouse. During the course of the four-year excavation, an area spanning approximately 65 by 20 ft. (20 m by 6 m) was investigated, with identified wreckage spanning an area of around 26 by 20 ft. (8 m by 6 m). Cultural material was typically buried under around 3 ft. (0.91 m) of sand, and visibility was poor, usually ranging between total blackness and around 3 ft. (0.91 m). At the time of its discovery, no cultural material was exposed on the seafloor except for the fluke of a buried anchor. Subsequent excavation revealed a row of eight tightly-packed iron cannon, arranged end-to-end as cargo rather

19 "Gage to Harries, June 3, 1764," Gage Papers, Reel 1, Vol. 19, 2.

20 "Ogilvie to Gage, May 13, 1764," Gage Papers, Reel 1, Vol. 18, 6.

21 Franklin, "Blood and Water," 119.

22 John William Morris III, Marianne Franklin, and Norine Carroll, "The St. Augustine Maritime Survey, Survey Report No. 2," (Pensacola, FL: SOAR, 1998), 36-42.



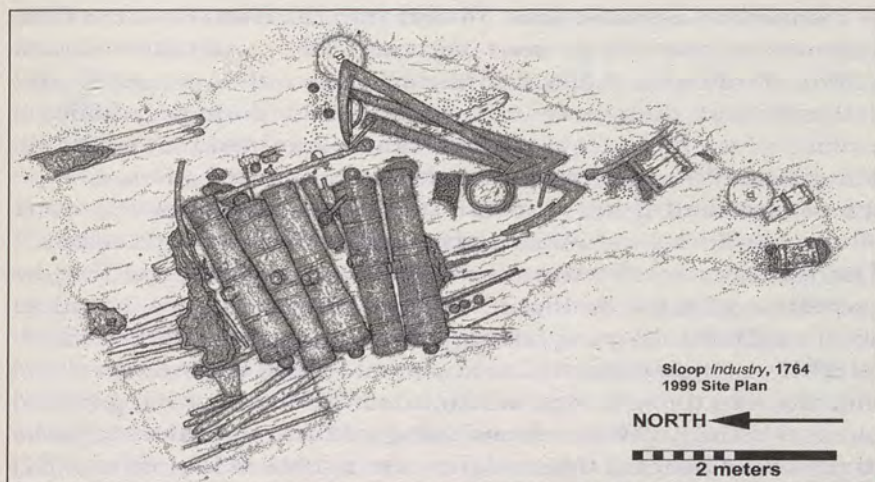


Figure 1. Archaeological site plan of the *Industry* wreck site. This view depicts the site as it appeared in July 1999, after the removal of three additional cannon, which are not included here. Drawing by John William Morris III, courtesy of LAMP.

than on carriages as shipboard armament, along with three single-fluked anchors, two millstones, three cannonballs and a few pottery sherds (Figure 1). After this initial inspection the site was named the "Tube Site" and was assigned the site number 8SJ3478. During the following excavation season on June 2, 1998, archaeologists raised one of the cannon from the wreck site, which was cleaned, conserved and displayed at the St. Augustine Lighthouse & Museum.<sup>23</sup> Once cleaned of marine encrustation, the cannon was identified as a British six-pounder manufactured during the reign of King George II (1727-1760). This was the first definitive clue to the nationality and date of the shipwreck. Further archaeological evidence gathered over the final two excavation seasons, in conjunction with historical documents discovered in the Gage Papers, led to the identification of the wreck as that of the sloop *Industry*.<sup>24</sup>

23 John William Morris III, Marianne Franklin, Norine Carroll, Kelly Bumpass, and Andrea P. White, "The St. Augustine Maritime Survey: 1998 Report on the Tube Site 8SJ3478," (Pensacola, FL: SOAR, 1998).

24 "Gage to Ogilvie, April 5, 1764," Gage Papers, Reel 1, Vol. 16, 3; "Gage to Ogilvie, May 6, 1764," Gage Papers, Reel 1, Vol. 18, 1; "Ogilvie to Gage, May 13, 1764," Gage Papers, Reel 1, Vol. 18, 6; "Gage to Harries, June 3, 1764," Gage Papers, Reel 1, Vol. 19, 2; "Gage to Harries, June 20, 1764," Gage Papers, Reel 1, Vol. 20, 2.

Sometime between April 15 and July 15, 1999, the site of the *Industry* was looted by persons unknown. The perpetrators blasted a 20-ft. (6 m) wide crater into the seafloor with a propeller-wash deflector and then stole two cannon, and perhaps additional artifacts whose presence was not previously known to archaeologists. This illegal disturbance exposed an unprecedented amount of the site at once and resulted in the subsequent emergency recovery of more artifacts than initially planned for the 1999 field season.<sup>25</sup> The final season of excavation took place in 2000 and saw the excavation of a 6.6 by 16.4 ft. (2 m by 5 m) long trench and an additional 6.6 ft. (2 m) square unit, on opposite sides of the cannon pile.<sup>26</sup> It was hoped that these excavations would expose articulated hull remains, though none were located. Extensive probing carried out in this and previous seasons, using a 12 ft. long hydraulic probe to penetrate beneath the sand, was also unable to locate any intact hull remains. Researchers concluded that the observed wreckage constituted a "pocket" of stowed cargo that remained intact after the vessel broke apart. The pocket likely occurred due to the weight of the cannon and anchors that were probably lashed down to the timbers beneath, which may have served as a temporary cargo platform or been part of the orlop (lowermost) deck. Any original sections of hull may have been swept away after the vessel broke up (as described by Ogilvie) or could possibly be buried so deeply that they remained out of the probe's (and archaeologists') reach.

### Artifacts from the *Industry*

Over 1,000 individual artifacts or objects were recovered during the four years of excavation on the *Industry*.<sup>27</sup> More than

25 John William Morris, III, "Site 8SJ3478 The Tube Site 1999 Field Season Report," (St. Augustine, FL: LAMP, 2000), 4-7, 9-13.

26 John William Morris III and Jason Burns, "The Lighthouse Archaeological Maritime Program's 2000 Field Season Report: The Continuing Investigations of St. Augustine's Underwater Archaeology and Maritime History," (St. Augustine, FL: LAMP, 2001).

27 Franklin reports that 65 specimens were recovered between 1997 and 1999, usually comprised of multiple artifacts grouped or encrusted together, and that these were separated in the laboratory to make a total of 785 individual artifacts, over 500 of which were musket balls. In addition, Morris reports that 23 additional specimens were recovered in 2000, comprising as many as 263 individual artifacts from the 2000 excavation, for a total of 1,048. Many of these individual objects were so friable they could not be saved in the conservation laboratory, and there are currently 704 artifacts from the *Industry* collection housed at the St. Augustine Lighthouse & Museum. See Franklin, "Blood and Water," 83, 96, Appendix C; Morris and Burns, "2000 Field Season Report," Appendix C.



half of these were lead musket balls, which comprised the bulk of the collection by count. The artifact assemblage was conserved at laboratories at Texas A&M University and LAMP, and is currently on display and curated at the St. Augustine Lighthouse & Museum on long-term loan from the State of Florida.

One of the most prominent artifact categories on the wreck is military arms. Eight six-pounder cannon were present on the site and, closely arranged end to end, they clearly represented stowed cargo. The cannon that was raised and conserved by archaeologists, a military piece, featured a number of diagnostic markings including the British Broad Arrow (denoting government property), the crest of George II (1727-1760), its weight in hundredweights (17-2-2, or 1,962 pounds), and the letter 'A' on the right trunnion denoting its manufacture at the Ashburnham foundry in Sussex. The number '10' was also incised adjacent to the crest; while similar numbers in this position have been seen on other British naval guns, their significance remains unknown.<sup>28</sup> In addition to the cannon, one swivel gun was found positioned between two of the cannon (Figure 2), which would have fired a  $\frac{3}{4}$  pound ball. A partially degraded wooden box full of this sized cast iron shot was found nearby. Due to its placement amid the stowed cannon, the swivel gun likely was cargo rather than shipboard armament. Unlike the cannon, the swivel gun bears no markings, which is more typical of a civilian piece rather than a military weapon, though it may represent a poor quality gun quickly cast and sold to the Board of Ordnance during the Seven Years' War for arming transports, packets, or storeships. These were produced crudely and in great numbers to meet wartime demands.<sup>29</sup>

Other military hardware recovered includes nine cannonballs, all intended for the six-pounder cannon, and a large number of lead shot or musket balls.<sup>30</sup> All of the musket balls were suitably sized for the Brown Bess musket, the ubiquitous 18th-century British infantry weapon. In addition, a single gunflint was discovered.<sup>31</sup> It was believed by archaeologists to be French due to its rounded

28 Various scholars speculate that these numbers may represent inventory marks, Board of Ordnance testing marks, or a piece number used for placement within shipboard batteries; see Franklin, "Blood and Water," 99; Russell K. Skowronek and George R. Fischer, *HMS Fowey Lost and Found* (Gainesville: University Press of Florida, 2009), 126, 128.

29 Artillery expert Ruth Rhynas Brown offered this interpretation which is cited in Franklin, "Blood and Water," 105.

30 A total of 833 individual 0.69 caliber musket balls were recovered, along with just twelve 0.63 caliber shot.

31 Morris and Burns, "2000 Field Season Report," 15.

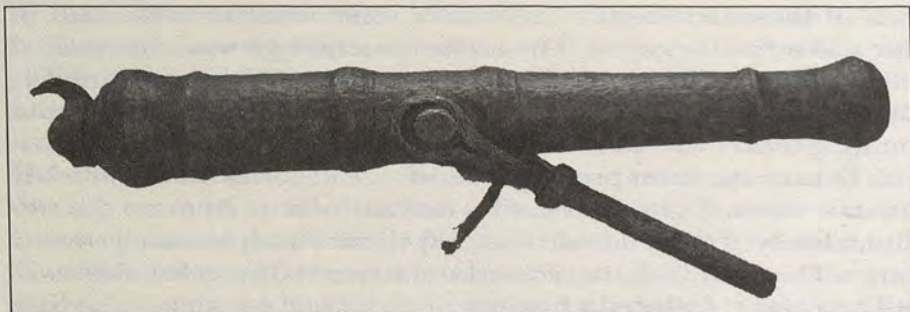


Figure 2. The cast-iron 3/4-pounder swivel gun recovered from the *Industry* shipwreck. The entire yoke has survived though the tiller is mostly deteriorated. It measures 86 cm or 33.5 inches in overall length Photo courtesy of LAMP.

back, and thus likely represents captured munitions from the Seven Years' War.

The munitions found on the shipwreck were typically found in British forts on colonial frontiers and are consistent with specifications in the Gage papers. Just over a month before the *Industry's* loss, Ogilvie wrote Gage requesting ordnance desperately needed for the advanced posts of East Florida, indicating that Forts Matanzas and Mose needed six or four pounder cannon and Fort Picolata needed four swivel guns. A later letter from Gage to Captain Harries stationed at Apalachee on the Gulf coast suggests that the cannon lost with the *Industry* were six-pounders, the same caliber as those on the shipwreck site.<sup>32</sup>

A wide variety of tools were also found amid the wreckage.<sup>33</sup> Some were individual specialized tools, such as a trowel for smoothing mortar or a lathing or turning gouge, for removing wood turned in a lathe. Other tools were packed in bulk. They include shovels; some fourteen shovel blades, both rounded and square, were packed for shipping. None had been fitted with wooden handles, as wood was plentiful in the Floridas. One additional shovel was perhaps an onboard tool, as it had a sharpened blade and a portion of its attached handle survived. Also found without handles was a bundle of files, wrapped in cloth probably made of flax. The nine files and single blank were fashioned of steel,

32 "Ogilvie to Gage, March 25, 1764," Gage Papers; "Gage to Captain John Harries, June 20, 1764," Gage Papers, Reel 1, Vol. 20, 2.

33 Morris and Burns, "2000 Field Season Report," 11, 25-26; Franklin, "Blood and Water," 120-133, 192.



most likely in Sheffield, England, for shipment to the colonies. Three carpenter's handsaws also survived, packed together. While the steel blades survived in a fragmentary state, the brass-riveted wooden handles were well-preserved, with two completely intact.

One of the most remarkable tool finds were three wooden boxes packed with axe heads.<sup>34</sup> One was broken open and missing six axe heads, but the other two remained sealed and intact, each revealing 20 axe heads when opened in the laboratory. On the lid of one of these boxes was written in dark ink "No. 5 Illinois Ax's 20". A similar inscription, not as legible, was on the other box. The axes were wrought-iron and designed as felling axes. Illinois Country, also known as Upper Louisiana, was ceded to the British by the French after the close of the Seven Years' War, and these axes may have been originally intended for that frontier territory.

Other tools recovered included knife blades (probably drawknives), a whetstone, and the wooden handles for two hand tools whose bodies did not survive. A total of six millstones were also encountered. These were large, round stones with square holes in their centers, with at least one that was cut or dressed for milling. Three of the stones were marked with their weight and also with letters of unknown significance.<sup>35</sup> Numerous pieces of iron barstock were also observed on the wreck site, and would have been intended for a blacksmith's workshop.

Many artifacts related to food consumption were also recovered.<sup>36</sup> These typically were individual finds, and so are more likely to represent personal items or implements for shipboard subsistence than bulk supplies for East Florida garrisons. The largest such item is a cast-iron, pot-bellied, three-legged cauldron, which may have been used in the ship's galley. An iron serving fork, pewter plate or charger fragment, and several broken pieces of ceramics and bottles were also found. The partially crushed remains of a copper teapot with its lid serve as a reminder that the British practice of taking tea endured at sea and on the frontier. Actual food remains include the bone of a chicken, quail, or pheasant, broken to extract marrow, and the butchered ulna of a cow. A few fish bones recovered could represent food remains or else could have been introduced to the site naturally after wrecking, though

34 Franklin, "Blood and Water," 110-119.

35 Morris and Burns, "2000 Field Season Report," 10; Franklin, "Blood and Water," 136-139.

36 Morris and Burns, "2000 Field Season Report," 16-18, 22-23; Franklin, "Blood and Water," 139-148.



there was also a lead fishing weight collected from the wreck, suggesting that crew or passengers supplemented their shipboard diets with fresh fish.

A few personal items were also identified, all related to clothing. These include 16 brass straight pins, a brass shoe buckle, and three buttons.<sup>37</sup> The straight pins were used to hold garments during tailoring or for daily use as an alternative for buttons.<sup>38</sup> Two of the buttons were crafted of silver while the third is pewter. These were presumed to be civilian buttons, since most military uniform buttons featured regimental numbers by this time. Silver buttons suggest an individual of some wealth; perhaps these were from Captain Lawrence's wardrobe, or a merchant on board.

There were also three anchors found on the site, which were recorded but left in place.<sup>39</sup> Like the cannon, these were tightly arranged end to end and therefore were stowed in the hold and not working ship's equipment ready to be deployed. Furthermore, all three are single-fluked anchors, which means they were mooring anchors. Mooring anchors typically had one fluke only so that a ship moored in a shallow anchorage would not set down on the upright fluke and punch a hole in its own hull at low tides.<sup>40</sup> The inclusion of three mooring anchors suggests that colonial authorities were establishing permanent moorings in the harbor at St. Augustine, or perhaps in front of Fort Matanzas to the south. These could have been intended for military vessels servicing the forts, or to foster commercial trade, or both.

### East Florida's Loyalist Influx and the loss of the Storm Wreck

While the loss of the *Industry* was a setback for the initial development of British East Florida, as the years went on under the stewardship of Governor Grant, interim Governor John Moultrie, and Governor Patrick Tonyn, the colony did stabilize and begin to prosper, establishing an increasing number of business and agricultural enterprises and expanding systems of defense and

37 Morris and Burns, "2000 Field Season Report," 18-19; Franklin, "Blood and Water," 149-153.

38 Starr Cox, "Personal Items Recovered from the Storm Wreck, a Late Eighteenth Century Shipwreck off the Coast of St. Augustine, Florida," in *ACUA Underwater Archaeology Proceedings 2012*, ed. Brian Jordan and Troy Nowak (Baltimore, MD: Advisory Council on Underwater Archaeology, 2013), 46.

39 Morris, "Tube Site 1999 Field Season Report," 24.

40 Betty Nelson Curryer, *Anchors: An Illustrated History* (London: Chatham Publishing, 1999) 94, 135-137.



maritime trade.<sup>41</sup> The outbreak of the Revolutionary War would dramatically change the economic and social dynamics of the colony, however. When open hostilities broke out between Britain and the thirteen colonies to the north in 1775, Florida remained loyal to the King, and the colony soon became a haven for Loyalists displaced by rebellion.<sup>42</sup> As the war proceeded, the number of Loyalist refugees migrating to East Florida steadily increased, expanding the white population of St. Augustine from its pre-war figure of 1,000 to over 4,500 by late June 1782.<sup>43</sup>

After the fall of Yorktown in October 1781, as rearguard actions replaced decisive battles, treaty negotiations gained prominence for the remainder of the war. Rumors proliferated that Britain was planning to end hostilities and abandon its colonies and loyal subjects to the rebels. In March 1782 these rumors were confirmed in Savannah when public notice was given that an agent was available to meet with refugees willing to accept Tonyn's offer and settle in East Florida.<sup>44</sup> Throughout the latter half of 1782, both southern Loyalists and colonial authorities were preoccupied by the logistical challenges of evacuation.

As there were not enough ships available for the clearing of more than one major port at a time, Savannah—seen as the most vulnerable to rebel attack—was the first to be evacuated. Beginning on July 11, 1782, using all available military transports in North America and additional ships hired by Georgia's Lieutenant Governor, thousands of troops, civilians, and slaves set sail. Wilbur Siebert calculates that some 5,148 individuals arrived in St. Augustine from Savannah by July 18, doubling the white population of East Florida and increasing the black population by one fourth or more.<sup>45</sup>

41 See the articles by Schwartz and Smith in this volume.

42 Roger Clark Smith, "The Fourteenth Colony: Florida and the American Revolution," (PhD diss., University of Florida, 2011), 262; Linda K. Williams, "East Florida as a Loyalist Haven," *Florida Historical Quarterly* 54, no. 4 (April 1976), 465.

43 Robert Stansbury Lambert, *South Carolina Loyalists in the American Revolution* (Clemson, SC: Clemson University Digital Press, 2010), 187; Smith, "Fourteenth Colony," 262, 271.

44 Lambert, *South Carolina Loyalists*, 178.

45 "General Sir Guy Carleton to Lord Shelburne, August 15, 1782," BNA, CO 5/106, ff. 166-169; David Syrett, *Shipping and the American War 1775-83: A Study of British Transport Organization* (London: Athlone Press, 1970), 236-237; Wilbur H. Siebert, *Loyalists in East Florida, 1774 to 1785: The Most Important Documents Pertaining Thereto Edited with an Accompanying Narrative*, 2 vols. (Deland: Florida State Historical Society, 1929), 1: 105-107, 109. Siebert's breakdown



The evacuation of Savannah opened the floodgates, resulting in a demographic explosion in St. Augustine, which had previously been the smallest colonial capital in North America. East Florida, already known as "an asylum for refugees," was the closest safe refuge for southern Loyalists.<sup>46</sup> Many from the Carolinas and Georgia, especially planters, preferred Florida to Canada because of its comparable climate, which was more suitable for the slave-based economic system under which they had prospered.<sup>47</sup> It was also a much shorter move, and many refugees probably saw Florida's proximity as an opportunity to re-possess their former properties should the war take a turn in their favor or if the fledgling republic dissolved shortly after its birth, as was generally anticipated by many Loyalists.<sup>48</sup>

Charleston was the next city to be evacuated.<sup>49</sup> With its greater population, authorities estimated that Charleston would take three times the tonnage to evacuate as was needed in Savannah.<sup>50</sup> By mid-August more than 4,200 people had registered for the evacuation, including nearly 2,500 women and children, along with some 7,200 slaves.<sup>51</sup> The volume of humanity, possessions, and supplies to be moved forced the evacuation of Charleston to take place in two distinct stages. Enough ships were assembled for the first evacuation fleet by the end of September, though delays kept the ships in port until the second week of October. Among those departing for East Florida was St. Augustine's new military commander, Lt. Colonel Archibald McArthur, along with several provincial regiments and many Loyalist families, including some "substantial" planters and merchants along with many others less affluent and without slaves.

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of the Savannah evacuation is: 1,042 Loyalists (503 men, 269 women, and 270 children), 1,956 slaves, at least 500 loyal militiamen, 350 Choctaw and Creek Indians, and 1,300 regular troops.

46 American Manuscripts Commission (hereafter Am. Mss. Comm.), *Report on American Manuscripts in the Royal Institution of Great Britain*, 4 vols. (Dublin, Ireland: His Majesty's Stationery Office, 1904, 1906, 1907, 1909), 2: 527.

47 Smith, "Fourteenth Colony," 279; Carolyn Watterson Troxler, "Loyalist Refugees and the British Evacuation of East Florida, 1783-1785," *Florida Historical Quarterly* 60, no.1 (July 1981), 21.

48 Lambert, *South Carolina Loyalists*, 186; Smith, "Fourteenth Colony," 279; J. Leitch Wright, "Lord Dunmore's Loyalist Asylum in the Floridas," *Florida Historical Quarterly* 49, no. 4 (April 1971), 377.

49 Joseph W. Barnwell, "The Evacuation of Charleston by the British in 1782," *South Carolina Historical and Genealogical Magazine* 11, no.1 (January 1910): 1-26.

50 "Carleton to Shelburne, August 15, 1782," BNA, CO 5/106, ff. 166.

51 Lambert, *South Carolina Loyalists*, 182.



Enough provisions were sent with this fleet to feed 1,000 refugees and 2,000 of their slaves.<sup>52</sup>

An eyewitness description from a British officer provides insight into the hardships facing the Loyalists escaping Charleston:

To provide in some measure for these poor wretches, the commanders of the garrisons (though contrary to their orders) protracted the evacuations as long as they possibly could without offending the Ministry. Transports were procured, and several hundreds with their personal property went to St. Augustine, in Florida, the Governor of which granted each family a tract of land upon which they sat down and began the world anew. . . . There were old grey-headed men and women, husbands and wives with large families of little children, women with infants at their breasts, poor widows whose husbands had lost their lives in the service of their King and country, with half a dozen half-starved bantlings taggling at their skirts, taking leave of their friends. Here you saw people who had lived all their days in affluence (though not in luxury) leaving their real estates, their houses, stores, ships, and improvements, and hurrying on board the transports with what little household goods they had been able to save. In every street were to be seen men, women, and children wringing their hands, lamenting the situation of those who were about leaving the country, and the more dreadful situation of such who were either unable to leave or were determined, rather than run the risk of starving in distant lands, to throw themselves upon, and trust to, the mercy of their persecutors, their inveterate enemies, the rebels of America.<sup>53</sup>

After a fleet of nine ships bound for Halifax with troops, munitions, and about 500 refugees set sail on the first of November, Charleston's final evacuation fleet was gathered and ready to depart by the middle of December. A total of 111 transports left Charleston, crossing the bar on 18 December 1782.<sup>54</sup> This vast fleet

52 Am. Mss. Comm., *Report*, 3: 220; Siebert, *Loyalists in East Florida*, 1: 114, 124, 133-136; Lambert, *South Carolina Loyalists*, 182.

53 Thomas Jones, *History of New York During the Revolutionary War*, 2 vols. (New York: New York Historical Society, 1879), 2: 235-236. See also Barnwell, "Evacuation of Charleston," 1-5.

54 "List of Transports appointed to receive the Garrison at Charles Town, 19 November 1782," BNA, CO 5/108, ff. 38-41; "Abstract of the distribution of

was divided into five groups each headed for a different destination: 48 ships were bound for New York with supplies and troops, 20 ships were bound for England with refugees, government officials, and military officers, five ships were bound for St. Lucia with troops and baggage, black cavalry horses, the "Frame of a Fort," and 200 Black Pioneers (assembled from free blacks considered too "obnoxious" to remain without facing reprisal), 29 ships were bound for Jamaica with 1,260 refugees (591 men, 291 women, and 378 children), 2,613 slaves (a total of 3,873 souls), merchandise, and provisions, and eight ships registering a total of 1,387 tons were bound for St. Augustine with refugees and their effects.<sup>55</sup>

It appears that there were actually many more ships than the eight listed leaving Charleston for St. Augustine. This was the last fleet to leave and anyone else with a ship intending to depart would choose to sail with the main fleet to share the protection of the Royal Navy escort. The St. Augustine squadron was accompanied by the 24-gun frigate HMS *Bellisarius* and a number of smaller armed galleys including the *Rattlesnake* and *Viper*. The number of additional civilian vessels (not hired transports) making the voyage with the official convoy is difficult to determine. The captain's log of *Bellisarius* noted 120 ships in the convoy headed south (the combined flotillas bound for St. Augustine, St. Lucia, and Jamaica) suggesting that as many as 72 additional vessels were sailing with the transport vessels and their naval escorts.<sup>56</sup> Also, the accounts of the shipwrecks at the St. Augustine bar, detailed below, indicate that twice as many ships wrecked at St. Augustine as were supposedly in the fleet bound for St. Augustine.

Regardless of the exact number of ships that were sailing from Charleston to St. Augustine, when the fleet arrived, on or around

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Transports, Army & Navy Victuallers, and Oat Vessels appointed to receive the Garrison of Charles Town, Stores, Inhabitants, &c, &c, 3 January 1783," BNA, CO 5/108, f. 76; Lambert, *South Carolina Loyalists*, 183.

55 The individual tonnages and identities of the ships departing for East Florida, along with numbers of refugees, slaves, troops, and the nature and amount of cargo, remain unknown. The "List of Transports" dated November 19, 1782, a month before the evacuation, makes no mention of a Florida-bound fleet. The "Abstract of the distribution of Transports" dated January 3, 1783, a fortnight after the fleet departed, does list a total of 8 Florida-bound ships under convoy of HMS *Bellisarius*, but all of the preceding pages of this document, which should have listed these ships individually along with the numbers of refugees and slaves on each, appear to be missing from the BNA.

56 "Logg [sic] Book on Board His Majesty Ship *Belisarius*, Richard Graves Esq. Commanding, from August 30, 1782 to Oct 1783," BNA, ADM (Admiralty Records) 52/2161, Book 3, entry dated 19 December 1782.



December 31, 1782, it met with disaster. The earliest account of this shipwreck event was written by Elizabeth Lichtenstein Johnston, in a letter to her husband, a British soldier, on January 3, 1783, just three days after the disastrous event. Johnston was a Loyalist refugee who had only just arrived in St. Augustine. She noted that sixteen small vessels from the last fleet out of Charleston were lost on and around the St. Augustine bar, and that six to eight were cast ashore on the beach.<sup>57</sup> The next account of the wrecking is in a letter from McArthur to General Sir Guy Carleton, the commander-in-chief in New York. McArthur provides us with the date of the disaster, detailing that the refugee convoy escorted by *Bellisarius* arrived on December 31, and lost the galley *Rattlesnake*, two provision ships, and six private vessels when attempting to cross the bar. He goes on to mention that four lives from the private vessels were lost, the 18-pounder cannon and rigging from the galley were successfully salvaged, and the cash (probably soldiers' pay) arrived safely. McArthur mentions a total of only nine wrecked vessels, not sixteen, but he likely felt the need to only report the loss of military-owned and hired vessels (the "private vessels" he notes probably refer to hired transports) to his superior and omitted mention of the loss of additional civilian ships accompanying the convoy by their own choice.<sup>58</sup> Johnston's assertion that there were sixteen ships lost was independently corroborated by Johann Schoepf when he visited St. Augustine just over a year later. His memoirs, published decades before Johnston's letter was made public in her own memoirs, state that no less than sixteen vessels carrying refugees and their possessions were stranded and beaten to pieces.<sup>59</sup>

One discrepancy between these accounts is the number of lives lost. Schoepf states that "many persons" perished, while McArthur notes only four lives were lost. Johnston does not mention any loss of life, but does lament the suffering of an acquaintance, who lost "the greatest part" of his property.<sup>60</sup> It seems likely that Schoepf's account, written over a year later with a lurid account of the danger of the bar, exaggerated the loss of life. Even if relatively few lives

57 Elizabeth Lichtenstein Johnston, *Recollections of a Georgia Loyalist*, (New York: M. F. Mansfield & Company, 1901), 210. It is unclear from Johnston's letter if she meant there were six to eight vessels on the beach in addition to the sixteen lost on the bar, or if there were a total of sixteen wrecked on both bar and beach, though the former scenario seems more likely.

58 "McArthur to Carleton, January 9, 1783," BNA, PRO 30/55/60/6728, 1.

59 Schoepf, *Travels*, 2: 227-228.

60 *Ibid.*, 2: 228; "McArthur to Carleton, January 9, 1783," BNA, PRO 30/55/60/6728, 1; Johnston, *Recollections*, 210.



were lost in these shipwrecks, multitudes of hapless refugees found themselves cast ashore in a horrendously overcrowded St. Augustine, destitute after the loss of all their possessions.

Those possessions were dispersed by wind, waves, and currents as the ships broke apart in the surf. What remained, from one wreck at least, settled into the sandy bottom and would lie forgotten for more than two centuries, preserved with the scattered remains of one of these refugee vessels, now known as the Storm Wreck.

### **The Excavation of the Storm Wreck, 2009-2014**

The historic shipwreck site known as the "Storm Wreck," discovered in 2009, has been subjected to scientific archaeological excavation by LAMP researchers every summer since then.<sup>61</sup> The shipwreck site is located about a mile (1.6 km) offshore St. Augustine and within 500 yards (450 m) of the *Industry* wreck, in about 25 to 30 feet (7.6 to 9.1 m) of water. In the 1780s, this location would have been in or immediately adjacent to the inlet, and would have been in less than nine feet (2.7 m) of water at high tide.<sup>62</sup> The physical nature of the site can be described as a dense scatter of cultural material, extending across an area of at least 40 by 36 ft. (12 m by 11 m) and typically buried under at least 1 to 2 ft. (30 to 60 cm) of sand (Figure 3). The site has been divided into a series of one meter square gridded units for systematic control during excavation. Divers use handheld, water-powered dredges to remove sand from within one unit at a time, exposing buried artifacts which are then documented before being brought to the surface. Conditions on the bottom, like those at the *Industry* site, are often difficult for divers, usually featuring heavy surge and extremely poor or non-existent visibility. Despite this adverse environment, in five summers of fieldwork archaeologists have successfully excavated 409 square ft. (38 square meters) of

61 Chuck Meide, "Investigation of the Storm Wreck, a Late 18th Century Shipwreck Off the Coast of St. Augustine, Florida: Results of the First Two Excavation Seasons, 2010-2011," in *ACUA Underwater Archaeology Proceedings 2012*, ed. Brian Jordan and Troy Nowak (Baltimore, MD: Advisory Council on Underwater Archaeology, 2013), 17-25; Chuck Meide, Samuel P. Turner, P. Brendan Burke, and Starr Cox, "First Coast Maritime Archaeology Project 2010: Report on Archaeological Investigations," (St. Augustine, FL: Lighthouse Archaeological Maritime Program, 2011), 104-190; Meide, Burke, McDaniel, Turner, Andes, Brendel, Cox, and McNamara, "First Coast Maritime Archaeology Project 2011-2012," 143-322.

62 Schoepf, *Travels*, 2: 227, reported the inlet as being no deeper than 8 to 9 feet at high tide.



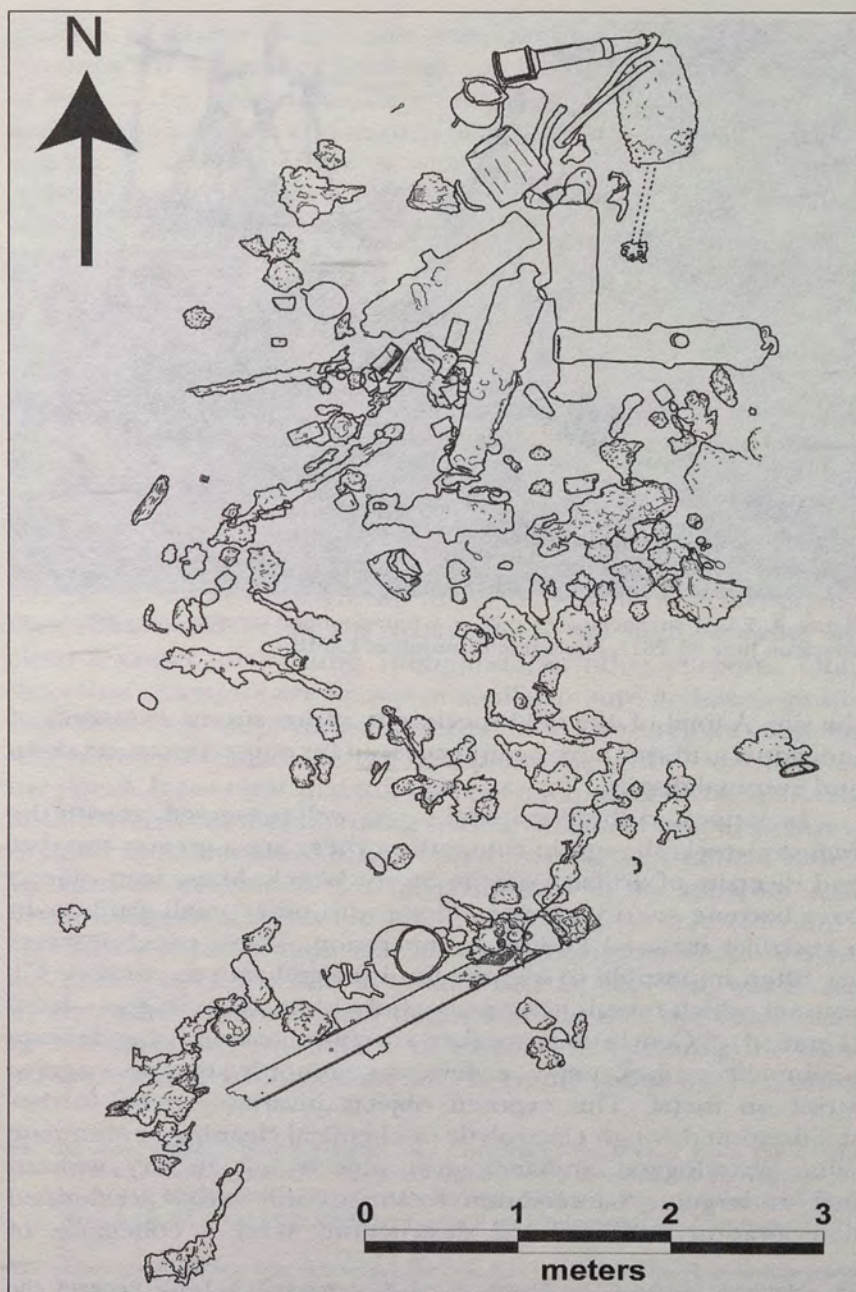


Figure 3. Site plan of the Storm Wreck, 2010-2013 excavation seasons. A few isolated artifacts have also been discovered to the west of this area and are not depicted here. Drawn by Chuck Meide and Olivia McDaniel, digitized by Tim Jackson. Courtesy of LAMP.



Figure 4. LAMP archaeologists raising a four-pounder cannon from the Storm Wreck on June 28, 2011. Photograph courtesy of LAMP.

the site. A total of 429 field specimens, representing thousands of individual artifacts, have been recovered for conservation, analysis, and eventual display.

In general, cultural material is very well preserved, as with the *Industry* wreck, though in comparison there are a greater number and diversity of artifacts on the Storm Wreck. Many iron objects have become encrusted, often along with other small artifacts, in a rock-like material known as concretion. These conglomerates are often impossible to identify until imaged with an x-ray or CT scanner, which reveals items preserved within, often in great detail (Figure 4).<sup>63</sup> Concretions are then carefully cleaned using delicate pneumatic scribes, pen-like devices commonly used to engrave script on metal. The exposed objects invariably need further stabilization through electrolytic or chemical cleaning to eliminate salts. Waterlogged archaeological objects left to dry without first undergoing conservation treatment will suffer accelerated deterioration and eventual destruction. With a collection of

63 Matthew Hanks, "The Storm Wreck Concretions: A Look Beneath the Surface," *ACUA Underwater Archaeology Proceedings 2012*, ed. Brian Jordan and Troy Nowak (Baltimore, MD: Advisory Council on Underwater Archaeology, 2013), 32-37.



artifacts as sizable as this one, stabilization treatment will likely continue for years after fieldwork has been finished. At the time of this writing, preparations are underway for a sixth field season and the conservation and analysis of artifacts recovered in previous seasons is well underway. A wide range of eighteenth-century material culture has been studied, providing a unique perspective into the final voyage of this vessel and the lives of the Loyalist refugees on board.

### Insight into the Loss of the Storm Wreck

Like the *Industry*, the Storm Wreck is located within the confines of the eighteenth-century inlet, suggesting that, like so many other vessels, this one ran aground on the notorious sandbar while attempting to enter the port. Some of the artifacts studied have provided a better understanding of the moments immediately after the ship ran aground. The most notable example was a heavy deck pump.<sup>64</sup> This large, cylindrical device made of lead, would have been situated upright on the deck, with its attached piping extending down below the waterline. It was used to bring up clean seawater for washing, firefighting, or other purposes. Only two other examples are known of similar pumps archaeologically recovered from shipwrecks.<sup>65</sup> After recovery, researchers observed very obvious cut marks in the lead plumbing and on the body of the pump. It was clear that this piece of equipment was desperately hacked free from the ship using axes or cutlasses in order to throw its heavy bulk overboard in an effort to re-float the stranded vessel. Six cannon discovered nearby, positioned in an apparent spill pattern, suggest that they too were thrown overboard, and the ship's bell in the same location may also have been jettisoned. A brass tap, meant to be inserted in a water cask or beer keg, was found in the open position, which might indicate that the water casks were drained into the hold to be emptied by operating the bilge pumps, which probably would have been the fastest way to remove

64 Michael Jasper, "Ship's Fittings and Equipment Recovered from the Storm Wreck, a Late Eighteenth Century Shipwreck off the Coast of St. Augustine," in *ACUA Underwater Archaeology Proceedings 2012*, ed. Brian Jordan and Troy Nowak (Baltimore, MD: Advisory Council on Underwater Archaeology, 2013), 53-55.

65 They are from the Spanish vessel *San Jose*, lost in 1733 in the Florida Keys, and HMS *Swift* lost in 1770 in Patagonia. The Storm Wreck pump, however, looks more similar to a French example pictured in Jean Boudriot, *The Seventy-Four Gun Ship: A Practical Treatise on the Art of Naval Architecture*, 4 vols. (Annapolis, MD: Naval Institute Press, 1986), 2: 151-152.



the weight of the ship's water supply. An alternate explanation is that discipline broke down after running aground, and sailors or passengers drank the beer keg empty.

Collected artifacts believed to represent components of the ship itself, including a plank and timber along with a possible iron deck stanchion, suggest that the attempt to save the ship was unsuccessful. Numerous small finds, too tiny to have been jettisoned for weight reduction, also imply the ship was a total loss.<sup>66</sup>

### **Identification as Member of the Final Charleston Evacuation Fleet**

The first datable objects encountered on the shipwreck were lead pellets intended for use as birdshot or scatter shot. These were manufactured by a process first published in 1665 but were used throughout the colonial period. By the end of the 2010 field season a wider range of objects had been found that could be more narrowly dated to the eighteenth century. A number of these artifacts, including the base of a wine glass with a plain conical foot dating to ca. 1780-1805, implied that the wreck occurred in the final quarter of the 1700s.<sup>67</sup> Most artifacts appeared to be of British manufacture. By the end of the initial field season, archaeologists hypothesized that this wreck was one of the sixteen refugee ships carrying Loyalists from the final fleet to evacuate Charleston. When the ship's bell was discovered, it was anticipated that it might identify the ship by name and year of launching, but when cleaned of marine encrustation it unfortunately yielded no inscription of any kind.

Subsequently two cannon were recovered in hopes of finding diagnostic markings indicating date and nationality (Figure 5). While the four-pounder cannon, typical of civilian ordnance, did not feature such markings, the nine-pounder carronade bore the date 1780 on its right trunnion. In addition, the serial number on the opposite trunnion confirmed that it was cast at the Carron Iron Company in Falkirk, Scotland, and inventoried on 31 July 1780.<sup>68</sup>

66 Meide, Turner, Burke, and Cox, "First Coast Maritime Archaeology Project 2010," 131-132, 151-156, 160-163, 166-171; Meide, Burke, McDaniel, Turner, Andes, Brendel, Cox, and McNamara, "First Coast Maritime Archaeology Project 2011-2012," 182-192, 199-201, 218-221, 227-243, 249-268.

67 Meide, Turner, Burke, and Cox, "First Coast Maritime Archaeology Project 2010," 155-156; Ivor Noël Hume, *A Guide to Artifacts of Colonial America* (Philadelphia, PA: University of Philadelphia Press, 1969), 190-191.

68 "Carron Company Invoice Book, 1778-1781, Vol. 2," National Archives of Scotland, GD (Gifts and Deposits) 58/4/19/15, p. 229. The carronade was amid a shipment of guns shipped on the company ship *Carron* to London to be sold on consignment by an agent or merchant named Robert Sinclair.



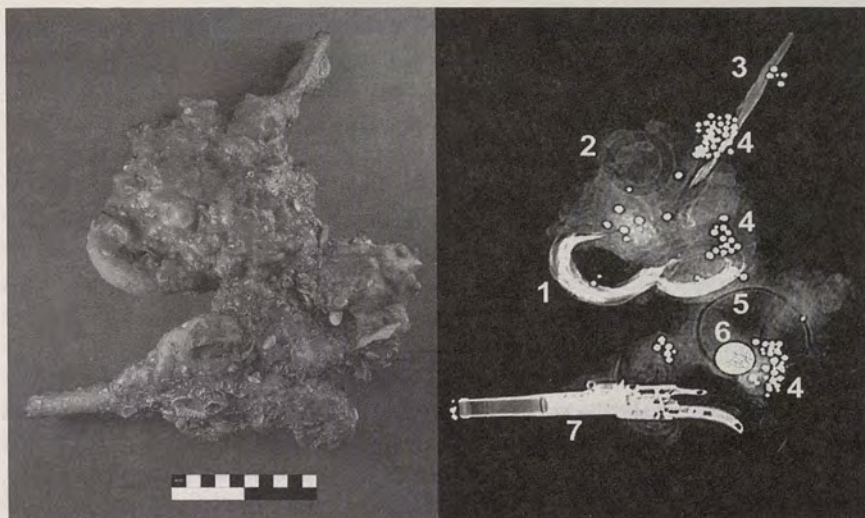


Figure 5. Example of a concretion, or conglomerate of encrusted objects, recovered from the Storm Wreck, as seen by the naked eye (left) and through x-ray imagery (right). The x-ray reveals 1. A rigging hook, 2. A ring of unknown function, 3. A large spike, 4. numerous lead shot (birdshot), 5. A rigging hank, 6. A coin, and 7. A Queen Anne's boxlock pistol, also known as a coat or pocket pistol due to its small size. Courtesy of LAMP.

It is at this time believed to be the second oldest dated carronade to have survived anywhere in the world.<sup>69</sup> The nine-pounder carronade was never adopted by the Royal Navy and was therefore intended for the civilian market. This was interpreted as further evidence that this ship was a merchantman, either working as a hired military transport or else evacuating independently of the government effort. In all, two carronades (nine-pounders) and four traditional cannon (four-pounders) have been encountered on the wreck, though only two guns (one of each type) have been raised. Six guns was the minimum mandated by government regulation for a hired transport, and carronades were allowed to replace long guns if desired.<sup>70</sup> This battery meets that requirement and represents the appropriate firepower for a small merchant vessel of the time.

69 Samuel P. Turner and Chuck Meide, "Artillery of the Storm Wreck," in *ACUA Underwater Archaeology Proceedings 2012*, ed. Brian Jordan and Troy Nowak (Baltimore, MD: Advisory Council on Underwater Archaeology, 2013), 28.

70 Syrett, *Shipping and the American War*, 115.

More convincing evidence as to the identity of the ship came in the form of two pewter military buttons.<sup>71</sup> The first displayed a crown motif over the letters "R P," indicating it came from a Royal Provincial unit, and that its owner was, by definition, a Loyalist. Archaeologists considered this strong circumstantial evidence that the ship was a Loyalist vessel. The second button was even more compelling. It was from a non-officer's uniform from the 71st Regiment of Foot. This Scottish regiment, known as Fraser's Highlanders, suffered heavy losses at the Battle of Cowpens and later at Yorktown, with many men captured. In December 1782 its remaining 189 soldiers departed Charleston on the final evacuation fleet.<sup>72</sup> Researchers are confident that this button links the Storm Wreck to the final evacuation of Charleston and, when considered with the full body of archaeological data analyzed to date, identifies the shipwreck beyond a reasonable doubt as one of the evacuation vessels lost at the St. Augustine bar on or around 31 December 1782.<sup>73</sup>

### Domestic or Household Objects

A significant component of the artifact collection represents household items, which is not surprising considering the passengers were abandoning their homes and taking with them the basic necessities required to start new lives. Many of these recovered artifacts are related to the preparation and consumption of food. Eight cast-iron cooking pots or cauldrons have been recovered, and fragments of what appeared to be two additional cauldrons were observed but not collected.<sup>74</sup> Similar to the *Industry*

71 Meide, Burke, McDaniel, Turner, Andes, Brendel, Cox, and McNamara, "First Coast Maritime Archaeology Project 2011-2012," 231-232.

72 "List of Transports appointed to receive the Garrison at Charles Town, November 19, 1782," BNA, CO 5/108, f. 38.

73 Some questions remain unanswered, however. The 71st Regiment left Charleston for Jamaica in the *Sally*, and arrived there on January 13, 1783. For a reason that remains unknown, at least one of the soldiers of the 71st did not arrive in Jamaica but was instead shipwrecked at St. Augustine. Researchers have speculated that perhaps one or more soldiers may have been assigned guard duty on other ships, or that a wounded soldier was sent on the shorter trip to St. Augustine to convalesce.

74 Annie Carter, "A Wreck of a Site: An Archaeological Examination of Cauldrons from the Storm Wreck, 8SJ5459" (Undergraduate thesis, New College of Florida, 2014); Brian McNamara, "Cooking with Fire: What Cookware and Tableware Can Tell Us About an Unidentified Eighteenth Century Shipwreck," in *ACUA Underwater Archaeology Proceedings 2012*, ed. Brian Jordan and Troy Nowak (Baltimore, MD: Advisory Council on Underwater Archaeology, 2013),



cauldron, these are round-bottomed, round-bellied, and narrow near the top before flaring out. Each also features opposing ears on the rim to accommodate a handle or bail, and three legs, so they could have been suspended over or set upon a fire. They vary in size, ranging from 6.7 to 15.7 inches (17 to 39.9 cm) in height. When cleaning the interior of the smallest cauldron, conservators discovered and carefully extracted the remains of its last prepared meal, a single, small, green pea.<sup>75</sup> Peas were one of the standard provisions provided to refugees by the colonial authorities, and its presence confirms that this cauldron was not a cargo item but one in use, probably by a single family. Other cookware items from the shipwreck include a set of nested copper pots with flat bottoms and straight sides, and a circular, wrought-iron gridiron, meant to stand in or hang over a fire for light cooking or food warming.<sup>76</sup>

A large, cast-iron tea kettle was also recovered. It is round-bodied and flat-bottomed with a spout, though its handle and lid are missing. It was most likely intended for use at the hearth to boil water, as opposed to in the parlor for serving. By the late 18th century, British colonial families of virtually all statuses were practicing the social ceremony of taking tea. Archaeologists have encountered porcelain teawares on farmstead sites across the Carolina backcountry, suggesting that by the 1750s this characteristically British tradition with its genteel materiality was practiced well outside the sophisticated urban center of Charleston.<sup>77</sup> It is interesting to speculate what meaning this common family ritual may have had in the aftermath of the evacuation. Perhaps maintaining the regular practice of teatime would provide at least a temporary sense of normalcy in an otherwise frightening and uncertain time.

Recovered tableware items include two pewter plates, one brass and thirteen pewter spoons, plus an additional pewter handle from either a spoon or a fork.<sup>78</sup> A lack of makers' marks on all the pewterware that have been cleaned thus far might indicate colonial

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39-41.

75 Meide, Burke, McDaniel, Turner, Andes, Brendel, Cox, and McNamara, "First Coast Maritime Archaeology Project 2011-2012," 244, 246.

76 Ibid, 246-250.

77 James Deetz, *In Small Things Forgotten: The Archaeology of Early American Life* (New York: Doubleday, 1977), 60; David Colin Crass, Bruce R. Penner, and Tammy R. Forehand, "Gentility and Material Culture on the Carolina Frontier," *Historical Archaeology* 33, no.3 (1999): 14-31.

78 Meide, Burke, McDaniel, Turner, Andes, Brendel, Cox, and McNamara, "First Coast Maritime Archaeology Project 2011-2012," 249-258, McNamara, "Cooking with Fire," 38, 41-42.



origins, outside the control of guilds that regulated the manufacture and sale of such goods in Europe. Several styles of spoons were recovered.<sup>79</sup> Of special interest are possible owners' marks on two of the spoons. While owners' initials have been observed on other contemporary spoons, in these cases an "X" was crudely scratched in the back of one handle, and an asterisk-like mark onto another. These have been interpreted as the personal marks of two owners who were probably illiterate. At least two knives have also been identified, one consisting of a wooden handle with fragmentary blade remains, and another which appears to be a folding knife. Glassware for the table includes the previously mentioned wine glass foot, the broken remains of a few bottles, probably for wine or spirits, and a leaded glass stopper with a decorated edge for a decanter.<sup>80</sup>

Not all domestic objects in the assemblage are associated with foodways. Clothing-related items include nine clothing or flat irons, a belt (or possibly strap) buckle and two shoe buckles, as many as fourteen buttons of various styles (not including the two aforementioned military buttons), at least twenty-nine brass straight pins, similar to those on the *Industry*, and what appears in an x-ray image to be a thimble.<sup>81</sup> The pewter face of a toy or false watch (*fausse montre*) was also found, with the encircling Roman numerals I – XII and a pair of immobile hands cast into its surface. It was either a toy or a cheaper alternative to a pocket watch.<sup>82</sup> Other household items include a brass drawer handle from a piece of furniture, a brass candlestick, a padlock, and a key that appears to have been meant for winding clockworks rather than for a lock. One final object of interest is a small, flat box fashioned of brass and

79 The various spoons featured rat-tail, shellback, and drop bowl attachments, and dog-nose and fiddleback style handles. The handles of several spoons were cut off, apparently deliberately, a practice which made it easier for sailors or travelers to keep their spoon in their pocket.

80 Meide, Burke, McDaniel, Turner, Andes, Brendel, Cox, and McNamara, "First Coast Maritime Archaeology Project 2011-2012," 264-265.

81 Cox, "Personal Items," 46-47; Meide, Burke, McDaniel, Turner, Andes, Brendel, Cox, and McNamara, "First Coast Maritime Archaeology Project 2011-2012," 227-239, 260-262.

82 Watches were a popular status symbol, and wearing two watches, the secondary of which was often a false watch, became fashionable in 1770s London and would have spread to the colonies thereafter. See Carolyn L. White, *American Artifacts of Personal Adornment, 1680-1820, A Guide to Identification and Interpretation* (Lanham, MD: AltaMira Press, 2005), 132. The design on this false watch face is most similar to those defined as Type 5 in the typology presented in Hazel Forsyth and Geoff Egan, *Toys, Trifles & Trinkets: Base Metal Miniatures from London 1200 to 1800* (London: Unicorn Press, 2005), 336-385.



partially obscured by concretion when discovered. X-ray analysis and subsequent cleaning revealed that it is a door lock, probably removed from an evacuated house. It is clear this specimen was removed from the door in which it had originally been installed, as its iron key was stored inside the lock housing, which would be inaccessible when attached to a door. Stripping homes of hardware before abandonment was a common practice, and many evacuees disassembled their entire homes and transported them for eventual reassembly. One documented example was William Curtis, who decided to "pull down" his recently built home in Charleston and take it with him to St. Augustine. His house and other effects were lost, however, when his ship wrecked on the St. Augustine bar.<sup>83</sup>

### Tools of the Trade

A variety of tools and equipment have been identified in the Storm Wreck artifact assemblage, giving some insight into the various occupations of people on board. Three hammers have been found, all hafted with wooden handles and therefore more likely to represent working tools than cargo items. Two of these appear to be common carpenter's hammers, with clawed heads. It cannot, however, be assumed they belonged to carpenters, as such hammers would have been used by a variety of colonists or could have been part of the ship's store. The third hammer, however, is a specialized variant. It is a cobbler's hammer, and would most likely have been part of a shoemaker's toolkit. There were also four axes, two of which have been cleaned of concretion in the laboratory. Two appear to be felling axes, used for cutting down trees and stripping branches, while the two deconcreted specimens are broad axes, used for dressing timber. Three of the axes are hafted, indicating they were working tools, not cargo as with the *Industry* axes, though one of the broad axes does not appear to have had a handle, which may have been removed for easier stowage.<sup>84</sup>

What may be a caulking iron was observed in an x-ray image of a concretion. It could have belonged to an evacuating shipbuilder or the ship's carpenter. Other maritime tools, both navigational instruments, include a small brass fitting from an octant and a pair of dividers. A similar mathematical device, a folding brass sector rule, may also have been used by the ship's navigators, though it

83 Lambert, *South Carolina Loyalists*, 183-184.

84 Meide, Burke, McDaniel, Turner, Andes, Brendel, Cox, and McNamara, "First Coast Maritime Archaeology Project 2011-2012," 262-264.

alternatively could have been carried by a soldier for use in aiming artillery or an evacuating surveyor.<sup>85</sup>

Five small lead weights for use with a balance pan scale might have belonged to a Charleston merchant hoping to re-establish his trade in St. Augustine. Some display markings which, upon further cleaning, may be identifiable as assize, owner's, or maker's marks, or possibly weight indicators. Another tool which has only been observed by x-ray is an iron hook with a short wooden handle.<sup>86</sup> This appears to be a baling hook, which as with all agricultural tools, would have been in short supply in East Florida given the vast numbers of incoming refugees intending to set up farms. Another tool intended for the farmstead was a livestock tether. This was a large, heavy, cylindrical weight, iron with a lead core, with a large ring at its top, which could be used to fetter horses or cattle.

One final class of vocational equipment includes the tools of the professional soldier, whose presence on board was first indicated by regimental buttons. Other military hardware from the shipwreck includes three virtually intact Brown Bess muskets. The first has been identified as a 1769 Short Land Pattern, which was produced between 1768 and 1777. X-ray imaging astonished archaeologists when it revealed the musket remained in the "half cock" position and was still loaded with a cartridge of buck and ball. Consisting of a .69 caliber ball along with three .32 caliber buckshot, this load was intended to increase the damage inflicted by a unit's volley of fire. The second musket has been identified as a 1756 Long Land Pattern, produced from 1756 to 1790. It was also in the half cock position but was loaded with birdshot or tiny lead pellets (not the standard military-issued buckshot). Other examples of these lead pellets have been found in great numbers scattered across the excavation area, presumably from a cask that broke open during or after the wrecking event. The third musket, a 1777 Short Land Pattern produced 1777-1782, was neither cocked nor loaded.<sup>87</sup> The fact that two out of three muskets were ready for

85 Meide, Turner, Burke, Cox, "First Coast Maritime Archaeology Project 2010," 163-165; Meide, Burke, McDaniel, Turner, Andes, Brendel, Cox, and McNamara, "First Coast Maritime Archaeology Project 2011-2012," 217-221; Ronald Pearsall, *Collecting and Restoring Scientific Instruments* (New York: Arco Publishing Company, 1974), 36-38.

86 Meide, Burke, McDaniel, Turner, Andes, Brendel, Cox, and McNamara, "First Coast Maritime Archaeology Project 2011-2012," 306, 309.

87 *Ibid.*, 182-192.



firing at a moment's notice underscores the imminent danger of rebel privateers even in the final days of the war.

### Artifacts as Markers of Social Status

In addition to enabling the observation of various professional occupations among the passengers on board, some artifacts allow perspectives into their social hierarchy. The departing refugees came not only from Charleston, among the wealthiest and most stylish of colonial cities, but also from across the Carolina backcountry and lowcountry, and included every socioeconomic level and family status.<sup>88</sup> The two spoons with personal marks mentioned previously suggest illiteracy, and could have belonged to a sailor, impoverished Loyalist, or possibly a slave. One item that probably indicates a wealthy owner is a Queen Anne's or pocket or coat pistol, so-named because it was small enough to be hidden in a coat pocket (Figure 4). A box-lock, breech-loading pistol, it was a very sophisticated weapon for its time and was both more accurate and more powerful than its muzzle-loading equivalents. By the late eighteenth century these guns were increasingly accessible to the general public, especially after 1780 when a plainer version developed, foregoing artistic elegance for mass production.<sup>89</sup> The example from Storm Wreck may be a transitional piece, as it features the slab-sided handle of the later type but appears in the x-ray image to feature a decorated handle, possibly even with inlaid silver wire.

The glass stopper also probably belonged to an elite passenger, as it would have been considerably more expensive than cork and was intended for fine glassware holding liqueur or possibly perfume. A single gold guinea coin, dated 1776 and bearing the likeness of George III, was also probably owned by a higher-status passenger. Two silver coins were also found, though they are highly degraded and their type and denomination remain unknown. The final coin encountered on the shipwreck is believed to be a George II halfpenny minted between 1740 and 1754, and is more representative of coinage used by the masses.<sup>90</sup>

88 Lambert, *South Carolina Loyalists*, 187.

89 John W. Burgoyne, *The Queen Anne Pistol, 1660-1780*, (Bloomfield, Canada: Museum Restoration Service, 2002), 52-55.

90 Meide, Burke, McDaniel, Turner, Andes, Brendel, Cox, and McNamara, "First Coast Maritime Archaeology Project 2011-2012," 240-242.

Two rectangular, Artois-style shoe buckles may also lend some insight into the social status of their owners. Buckles, particularly for upper-class persons, were worn like jewelry as a reflection of social status.<sup>91</sup> Neither of the Storm Wreck shoe buckles are jeweled or crafted of silver, which would have been the most extravagant and restricted to the gentry or wealthiest of merchants. The next most expensive buckle material was brass or copper, as with one of the two recovered specimens. These were sometimes tinned to emulate silver, which does not seem to be the case with this example, though it features some decoration with raised bands and beaded lines. The next cheapest material for buckles, only one step up from iron, was pewter.<sup>92</sup> The second shoe buckle is fashioned from pewter, but it is extravagantly decorated, featuring four raised bands separated by perpendicular ridges and four beaded bow-tie motifs garnished with tulip or shell designs. Its elaborately cast decorations imply that the owner, even if from a lower class, had upwardly mobile ambitions.

### Conclusion

Twenty years of maritime archaeology in the waters of our nation's oldest port have resulted in a unique archaeological perspective into Florida's British history. The two oldest and most significant shipwrecks that have been discovered and studied off St. Augustine, the *Industry* lost in May 1764 and the as yet unidentified Storm Wreck lost in December 1782, neatly bookend the entire British Period. These two ships were both lost trying to enter the infamous St. Augustine Inlet, coming to rest within 1500 feet of each other, and they both lay buried and forgotten beneath the murky seas before being discovered just over two and a quarter centuries later. Facing identical environmental conditions, the two shipwrecks both feature well-preserved remains and each constitutes a time capsule of material culture that has lent insight into both the dawn and sunset of Britain's occupation of Florida.

*Industry* was a merchant sloop operating out of colonial New York during and after the Seven Years' War. It made regular runs between New York, Charleston, and St. Augustine, and was hired by the British Army to transport supplies from New York to the newly-

91 Elżbieta Wróblewska, "Buckles from Shoes and Clothing," in Waldemar Ossowski, ed., *The General Carleton Shipwreck, 1785* (Gdańsk: Polish Maritime Museum, 2008), 210.

92 Noël Hume, *Guide to Artifacts*, 86.



acquired colony of East Florida. Its principal cargo was munitions and "Artificers tools," along with specie for troops' pay, which was successfully salvaged. The artifacts recovered from the shipwreck provide a deeper understanding of the supplies that were seen as necessary for maintaining a newly established colony on the frontier, and more generally of the British colonial system that operated on both regional and global scales. The eight cannon were cast to strict specifications at an English foundry for the Board of Ordnance, while the crudely cast and unmarked swivel gun, which may have originated in the colonies, suggests a compromise of standards made for wartime expediency. At least sixty American-style felling axes were probably wrought in New York and boxed for shipment to the Illinois Country, before being diverted to the Florida frontier. The drawknives appeared crudely made, likely in the colonies, while the files were probably English-built of quality steel, and at least one gunflint was originally from France. The mooring anchors represent the infrastructure desired to build the Floridas into industrious and profitable colonies. As an assemblage, these artifacts speak to the specific needs of a new colony and to lines of supply that spanned the Atlantic World in a way that is not decipherable in primary documents.

The Storm Wreck was a merchant vessel that participated in the final evacuation of Charleston at the close of the Revolutionary War. The ship was probably serving as a hired transport for the Army, like *Industry*, and carried at least some British troops, both regulars and provincials, along with civilians and their possessions seeking refuge in East Florida. The war had thrust the colony into a state of chaos as border raids and privateer attacks impacted commerce and supply lines while thousands upon thousands of Loyalist refugees flooded into St. Augustine and the surrounding countryside. "The collective story of the Loyalist refugees is filled with suffering and tragedy," writes Daniel Schafer, "and is often tempered by survival and recovery."<sup>93</sup> The multitude of artifacts from this shipwreck, greater in number and diversity than those from the *Industry*, bring this Loyalist story vividly to life. The artifacts found on the Storm Wreck represent people forced from their homes, departing with all the worldly possessions that they could manage to bring with them in order to try and make a new life for their families in the only refuge left for them. The assemblage reflects a wide range of colonial society, from soldier to shoemaker, and from enslaved

93 Schafer, "St. Augustine's British Years," 216.

laborer to landed gentry. The goods accompanying them include cookware to feed the family, teaware to maintain a semblance of stability, and craftsmen's and farming tools with which to build a new life.

Together, these two shipwrecks make a significant contribution towards our understanding of the British period of Florida's history, a period that in general has been underappreciated by historians and forgotten by most of the general public. With the analysis of the *Industry* largely complete, and even with that of the Storm Wreck just getting underway, the value of these archaeological perspectives on Florida's British Period are readily apparent. As conservation and analysis of the Storm Wreck assemblage continues, the study of these shipwrecks promises to bring into sharper focus this brief yet pivotal period of Florida history, and with the development of a planned Storm Wreck exhibit at the St. Augustine Lighthouse & Museum to complement the *Industry* display currently housed there, the stories of Florida's British colonists will be shared with millions of visitors from around the world.