

# The Blackbeard Shipwreck Project 1999



with a Note on  
Unloading a Cannon

Wayne R. Lusardi

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## Introduction

Shipwreck site 0003BUI [31CR314] was discovered off the coast of Beaufort, North Carolina in the fall of 1996 by the private research firm Intersal, Inc. Three field seasons have been conducted on the site from 1997 to 1999, and a preliminary analysis of the artifact assemblage has led researchers to tentatively identify the shipwreck as the pirate Blackbeard's flagship *Queen Anne's Revenge* (1718). This paper will discuss the most recent findings since those reported by Wilde-Ramsing (1998) and Lusardi (1999), and includes a note on the procedure used to unload a small cannon recovered from the site.

## 1999 Field Season

In June and October 1999, archaeologists from the State of North Carolina conducted a diver-positioned magnetometer survey of the Beaufort Inlet site. Numerous ferrous objects including another cannon were detected in the surrounding sediments. A large ballast-covered concretion located adjacent to the structural remains was recovered, and when opened in the laboratory, revealed two additional cannons (Figure 1). Miscellaneous small artifacts such as stoneware fragments, a pewter charger, ballast stones, and a wooden hull plank recently disturbed by hurricane conditions were recovered for conservation and analysis. Field and laboratory personnel also assisted with the production of a British Broadcasting corporation documentary featuring the project.



Figure 1: Two small cast-iron cannons during removal of concretion and associated ballast stones.

## The Artifacts

Although only a small number of artifacts were recovered from the site in 1999, many new discoveries have been made in the conservation laboratory while processing concretions removed from the wreck in previous years. Several classifications are represented in the assemblage including ship parts and equipment, arms, food preparation and storage items, and personal effects.

### *Ship Parts and Equipment*

Several hundred iron nails varying in length from one and one-half to four inches were removed from concretion attached to cannon C-4. The nails are square in section, flare or spoon slightly at the tip, and were probably contained in a box or keg that has since deteriorated. A perforated semi-circular lead pump sieve with three flanges was found in 1996, and a second sieve fragment was recovered in 1999. Both fragments resemble sieves found on *El Nuevo Constante*, wrecked off Louisiana in 1766 (Oertling 1996:31-33). Several hundred variously shaped and sized river cobbles have been collected from different areas of the site to identify patterns in loading and deposition of ballast. The stones consist primarily of basalt and gabbro, though andesite, granite, schist, quartz, conglomerates, and limestone were also identified by geologists (Miller et al 1999).

An outer hull plank eight and one-half inches in length was found to be disarticulated from the extant structure. The White Oak (*Quercus* sp.) plank was recovered and will be sectioned for dendro-chronological analysis and experimentation to determine the best means of preservation. Plans are underway to recover the entire hull structure during the upcoming field seasons because recent hurricanes have significantly eroded and threatened the wooden planks and frames.

### *Arms*

The French slaver *Concorde* was originally outfitted with fourteen to sixteen guns before Blackbeard captured and renamed the vessel *Queen Anne's Revenge*, and increased its complement to as many as forty cannons. All but three of the twenty-one cannons so far discovered on the site appear to be cast-iron six-pounders approximately eight feet in length. One of the two larger guns (C-3) recovered in 1997 features crudely chiseled number **17** and **3** running lengthwise along the first reinforce. The numbers represent the weight of the gun in old English hundred-weights [ $17(112) + 3(28) = 1988$  lb.]. A smaller cast iron cannon (C-4) recovered in 1998 measures six feet in length, and features the numbers **6-3-7** stamped laterally on the breech [ $6(112) + 3(28) = 763$  lb.]. The letter **P** for 'proof' also appears on the top of the first reinforce just behind the trunnions, and the touch-hole is stopped with a wooden peg.

One of the two small cannons (C-21) raised in 1999 measures three feet, ten inches in length and features the numbers **1-3-3** (Figure 2) stamped laterally on the breech [1(112) + 3(28) + 3 = 199 lb.].



**Figure 2: Weight marks on breech of cannon C-21.**

The second small cannon (C-19) is four feet, six inches in length. Its right trunnion was cast with the letters **IEC** representing the foundry of Jasper Ehrencreutz, operating in Sweden from 1695-1743 (Kennard 1986:70; Peterson 1973:156-157). The left trunnion is dated [1]713. After removal of the wooden tompions, the gun was found to contain a wad of cordage followed by three iron drift pins, a second wad, a solid round shot, a third wad, and the powder charge (Figure 3). Both of these smaller guns appear to be typical carriage-mounted cannons, not rail-mounted swivel guns.



**Figure 3: Contents of cannon C-19 included three iron drift pins, a solid round shot and three wads of cordage.**

Two hand grenades (diameter, three inches) were removed from concretion attached to a pewter charger recovered in 1998. The grenades consist of cast-iron spheres packed with gunpowder and pierced to accept a hollow wooden fuse (Figure 4). The fuse also contained powder and a paper match, and would have been lit and thrown at the enemy with devastating results (Marsden and Lyon



Figure 4: Two cast-iron hand grenades, one with a section removed to reveal the wooden fuse.

1977:16-19). Small arms from the Beaufort Inlet site include a brass blunderbuss barrel with London proof and view marks of the style dating to between 1672-1702 (Hawtrey Gyngell 1959:11), a brass side plate in the form of a sea serpent (Figure 5), and a brass butt plate. A small concretion found in June 1999 appears to be the remains of a small wooden box or container. A slat of wood still



Figure 5: Brass serpentine side plate from a blunderbuss or musket.

survives, on top of which is a pile of lead bird shot, three variously worked gunflints, three pieces of chert debitage, and a pewter spoon. The debitage suggests that the flints were produced on board the ship. A wide variety of small caliber cast- and Rupert-style lead round shot (0.02-0.75 cal.) was also recovered (Baird 1973:83-85). Although no edged weapons have yet been found, a rectangular whetstone and quarter section of a grinding stone exhibit considerable usage patterns along the edges. These were used to sharpen cutlasses, knives, boarding axes, or other edged weapons and tools.

### *Personal Effects*

Personal effects recovered from the shipwreck include a kaolin clay pipe stem fragment (length, three and one-half inches, bore diameter, 0.1 inch), an intact pipe bowl that has yet to be removed from concretion, a brass sail needle, gold dust, a wooden bead, and a gold-plated silver button or spangle (Figure 6). Three brass straight pins (length, one inch) were found within a concretion that



Figure 6: Personal effects including a gold nugget, three brass straight pins, and a gold-plated silver button or spangle.



also contained a fragment of stitched fabric. The pins feature straight shanks that taper to a point, and a head fashioned from a second piece of wire wrapped around the shank and flattened into a button. Straight pins and other sewing instruments are often found on archaeological sites and do not necessarily represent gender distinctions (Hill 1995:90; Noël Hume 1982:254).

#### *Food Preparation and Storage*

The base of a salt-glazed Rhenish stoneware jug was found in June 1999, and resembles several body sherds found in previous years. The ceramic assemblage also includes a Faience rim sherd, red earthenware oil jar fragments, cream-bodied olive jar sherds, and a single piece of hearth tile.

Three pewter charges (diameter, 22 inches), two smaller charges (diameter, 16 inches), and two pewter plates (diameter, 9 ½ inches) have so far been recovered. Two additional plates remain attached to one of the cannons on the wreck-site. Most of the plates and chargers feature hall marks on their upper rims or bases used to identify the maker and designed to give an official appearance to pewterware (Kerfoot 1924: 188-189). The mark of London pewtersmith George Hammond (used from 1693-1709) appears on both plates, and the mark and name of John Stiles appears on the bottom of one of the chargers; **JO. STILE** with sunken cartouche is located beneath a crowned Tudor rose (Figure 7). The word **LONDON** is stamped nearby, as is Stile's name again above a



Figure 7: Marks of London pewtersmith John Stiles on the base of a charger.

feathered crest bracketing a bird holding a snake. Three hallmarks (a rampant lion, eagle, and an unidentified mark) are also stamped on the base of the charger. Stiles produced pewterware in London from 1689 until at least 1730 (Cotterell 1985:315).

The partial remains of a pewter spoon were found in a concretion that appeared to consist of a wooden box in which gunflints and lead shot were also kept. Eighteenth-century rattail pewter spoons were cast in two-piece molds and were inexpensive and easy to mass produce (Moore 1987:10-16; Noël Hume 1982:183). The back of the handle or interior of the bowl was often stamped with the maker's mark. Unfortunately, this specimen is too fragmented to determine its origin.

Two dozen well-preserved animal bones have so far been found on the shipwreck. Most are legs, ribs, and skull fragments from immature pigs, and perhaps represent living animals kept by the pirates for food. Two cattle bones featuring cut marks also derive from foodstuffs (White 1999). The right ulna of a rat reflects an unwanted guest on the ship, and several bones from marine mammals may be intrusive.

## Conclusion

The majority of the artifacts recovered from the Beaufort Inlet shipwreck date the site to the first quarter of the eighteenth century. A bronze bell dated 1709, a cast-iron cannon dated 1713, ceramics and glassware that fit within chronological typologies, pewterware produced by craftsmen known to have worked in London from the 1690s to 1720s, a blunderbuss barrel that was proofed between 1672 and 1702, and surveying instruments that compare exactly with a treatise published by Stone (1723), combine to place the site in the appropriate time period.

The existing hull structure, rigging elements, quantity of ballast, and ground tackle suggest a ship of comparable size to *Queen Anne's Revenge*. Other vessels from this period known to have wrecked in the area have been ruled out because all were smaller, lightly armed vessels (Wilde-Ramsing 1998:58). The number and diversity of cannons so far recovered also correspond with historical accounts of Blackbeard increasing the vessel's armament. All of the guns recovered to date are different and may reflect the variety of sources Blackbeard used for the acquisition of arms. Although the identity of shipwreck 0003BUI cannot yet be positively established, circumstantial evidence continues to mount which strongly suggests the Beaufort Inlet site is indeed Blackbeard's flagship *Queen Anne's Revenge*.

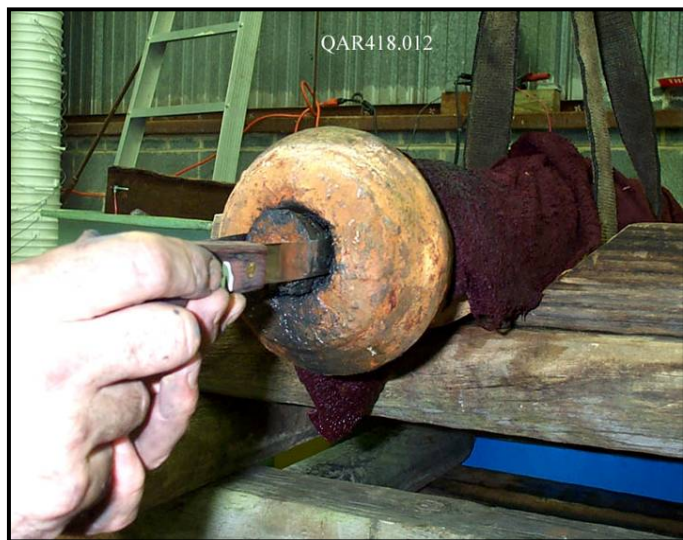
### *A Note on Unloading Cannon C-19*

Concretion surrounding cannons C-19 and C-21 was physically removed following documentation using a three pound hammer, chisel, and air scribe. The guns were separated and associated artifacts,

primarily consisting of ballast stones, a clap pipe bowl and stem sections, and some unidentifiable wood fragments, were removed prior to the start of the unloading process. Although very fragile and eroded flush with the ends of the muzzles, the tompons in both of the cannons were found to be intact (Figure 8). A surgical scalpel inserted between the wooden plug and metal barrel of C-19 effectively broke the concretion bonding the differing materials. Extraction of the now loosened tompons in one piece presented more of a challenge. The tompons (Diameter, one and one-eighth inches, depth, one and seven-eighth inches) was centrally pierced and the remains of a knotted cord were too friable to pull, so a series of scalpels were inserted around the circumference of the tompons, squeezed gently together, and withdrawn, thus removing the plug intact (Figure 9).



**Figure 8: Intact wooden tompons scalpels.**



**Figure 9: Removing the tompon using several removal from cannon muzzle.**

The interior of cannon C-19 appeared to be devoid of water, and crystals of an unidentified material had formed along the inside of the tube. These crystals were collected using a scalpel taped to a wooden pole, and are currently undergoing analysis. The first wad of cordage (length, four and one-half inches) was located approximately half way down the tube. Fortunately it had not adhered to the interior of the barrel, and was therefore easy to extract using a copper wire hooked at one end to gently pull the wad out of the barrel. The three iron drift pins (lengths, six and one-half to eight inches) were likewise removed with the copper wire hook. The middle wad (length, two and one-half inches) was slightly more difficult to remove, and necessitated insertion of a scalpel to break its bond with the metal walls of the gun. It was then extracted with the copper wire.

The solid iron round shot (diameter, two inches) was fixed in place by corrosion and could not easily be gripped with a wire hook. An eight inch section of two inch diameter PVC pipe was beveled on one end similar to a contemporary powder scoop, and then fastened to a wooden pole.

The scoop was cut in half lengthwise to allow flexibility of its diameter. This device was then inserted into the cannon, pressed until the PVC tube expanded around the leading half of the solid shot, and then withdrawn, effectively removing the cannon ball.

The third wad is considerably more fragmented than the first two, and to date only pieces have been removed using the wire hook, PVC scoop, and scalpel methods. It is unknown whether the powder charge is contained within a bag, or is loose behind the wad. The walls of the PVC scoop are not thin or sharp enough to break the bond between the wad and the bore, so another scoop of sheet metal is being fashioned and will be attempted in the near future. Fresh water has been introduced to the barrel to prevent premature drying of the interior of the gun before electrolysis, and to render the powder charge inert in the event that the metal tools create a spark.

Work on cannon C-21 has not yet begun. For more details and illustrations of the unloading process, see the project's web site located at [www.qaronline.org](http://www.qaronline.org).

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