Queen Anne's Revenge

Shipwreck Project

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Ceramic Assemblage Analysis from Shipwreck 31CR314 *Queen Anne's Revenge* Site

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Cover photo: Queen Anne coin weight for 1 guinea gold coin. Recovered from site Fall 2006

Introduction

The recovery of ceramic vessels from any underwater wreck site, along with serving or storage vessels made of pewter and wood, are typically associated with subsistence behaviors (e.g. food serving, preparation, storage and consumption activities) of the crew and passengers on board ships at sea. Ceramic containers may also be directly associated with health and hygiene (e.g. apothecary jars), religious rituals (communion plates or chalices), and commercial cargo (e.g. shipments of oil, wine, fruits, dried foods, or salted meats). Regardless of their intended function, ceramics did not always lend themselves to the rigors of ocean travel because of their brittleness or fragile nature. Analysis of the distribution of ceramic vessels and sherds from a shipwreck site can reveal provenience as well as functionality (whether as cargo or galley wares or items of personal stowage). Some vessels, perhaps by their thickness or shape, have been found to survive the drop to the seabed, the decomposition of the ship, and subsequent natural depositional factors (e.g. currents, sedimentation, and scouring actions), then to be later discovered by careful archaeological excavations. Ceramics recovered from a ship's material assemblage can yield important contextual and functional information in addition to crucial insight as to the chronology and origin of its wares. With these objectives and observations in mind, the following discussion is offered regarding the ceramic assemblage found on the shipwreck identified as the Queen's Anne Revenge (QAR) which historic records reveal went aground in Beaufort Inlet, North Carolina, in 1718 (Butler 2007).

As of 2006, excavations and laboratory work has recovered a total of 96 ceramics fragments or sherds from the shipwreck site. Based on an initial examination of paste, form, glaze and other diagnostic attributes, 72 of those 96 sherds have now been separated into 15 distinct ceramic vessels (to be described below). Thirteen of these vessels generally date to the period of the ship's loss on the sandbar, but two (one ginger beer bottle, and one molded base of a large cylindrical jar) have been identified as more recent (late nineteenth century) intrusions and are described elsewhere (see Wilde-Ramsing et al 2008). The remaining 24 sherds are too small or non-diagnostic to assign to a particular form or vessel group. Prior to this analysis, the QAR laboratory team recorded a detailed description of each individual sherd (including weight, size, Munsell color, provenience, treatment protocol and assignation). This primary information was necessary to begin a more detailed analysis, the results of which are presented below. This study focuses on the 13 vessels represented by the sherds that date to vessel's loss in the first quarter of the eighteenth century.

The following descriptive outline includes vessel number, catalog number, probable form, original function, paste composition, glaze type, sherd count and crossmends, origin or source of manufacture, and suggested temporal indicator based on manufacturing or contextual examples. The description will also provide provenience based on the shipwreck's five zones (stern, aft hold,

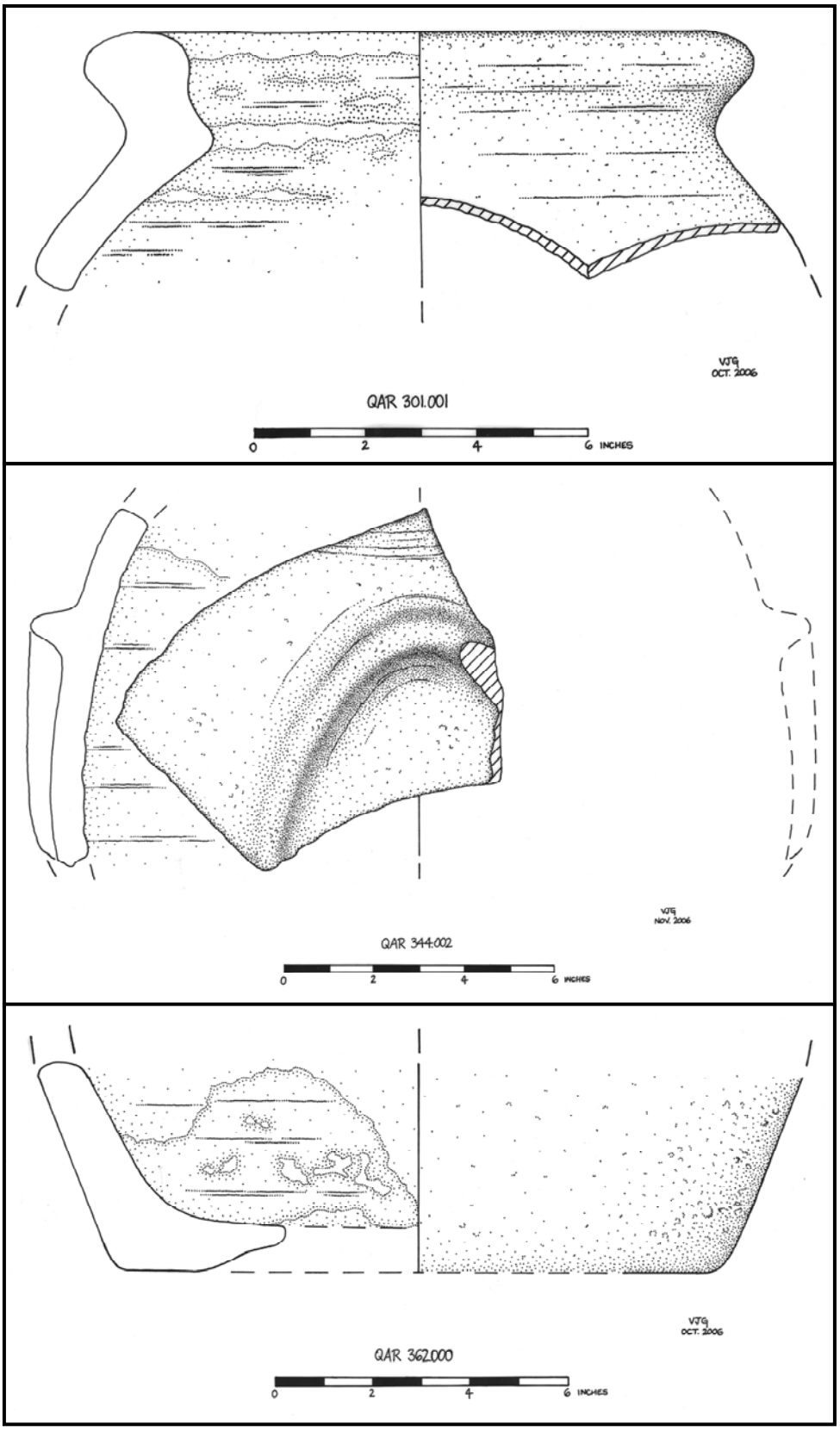
midship, forward hold, and bow) as designated by QAR archaeologists. Treatment of the sherds for conservation purposes will only be mentioned where relevant to the fabric or observations.

Liquids in the form of beverages (wine, beer, rum, or water), oils, or vinegars, could be stored in ceramic, glass, leather or wooden containers aboard ocean-going vessels. Likewise, solid or liquid foods could be stored in wooden, ceramic, or glass containers. Serving of liquids and foods could involve cups, bowls, plates, platters, glasses, trenchers, and pitchers made of various ceramic and non-ceramic materials (e.g. pewter tankard and platters, and coconut cups, gourd dippers, wooden bowls, etc), not all of which survives the harsh saline waters of the ocean. Typically, as one would expect on floating quarters, ceramics as containers for food and liquid storage, preparation and consumption can occur in the galley (or cooking hearth) area of the ship. Ceramic vessels may also be found concentrated in ship's storage space, the captain and officer's quarters and the ship's infirmary.

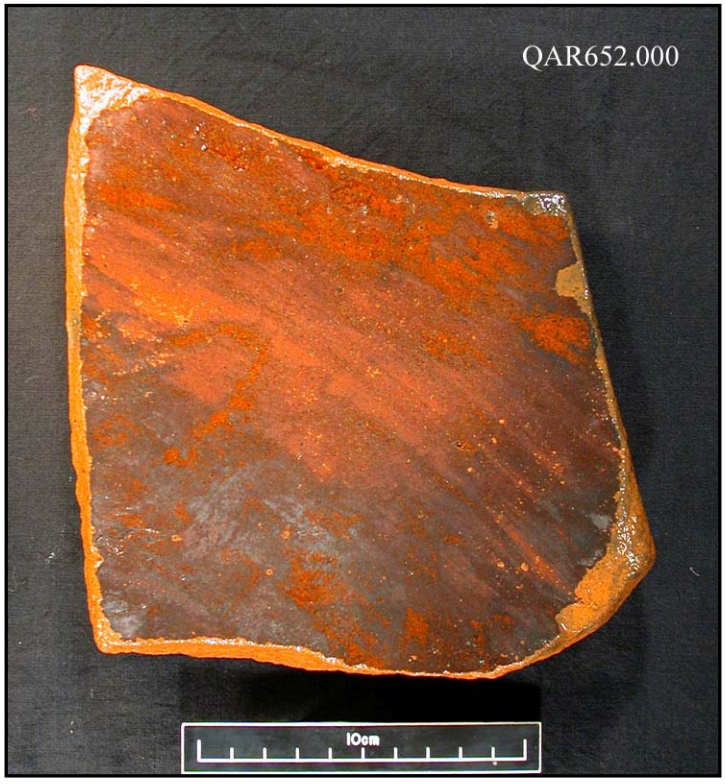
Vessel Descriptions

Vessel I

Sherd Count	34
Min. Vessel Count	One
Form	Large Oil Jar - ovoid shape with rounded, rolled rim and angular horseshoe-shaped lug handles (one of two) high on the shoulder area, with a non-footed, flat base. Overall projected shape would appear to be 23.6 in (60 cm) in height, maximum diameter (at shoulder) of about 16.5 in (42 cm), tapering to a base of 12.5 in (32 cm), with an estimated orifice of 12 in (30.5 cm).
Function	Originally for storage and shipment of oil or other liquid, but often these large jars were recycled and used for storage of dry and liquid goods, as well as preserved meats. Made in various regions of Italy, Spain, Portugal, France, and the Mediterranean, their abundance and popularity of use during the seventeenth, eighteenth and early nineteenth centuries, has lent them to be called "the cardboard boxes" of the colonial shipping industry. The recessed interior lip of Vessel I is suitable for seating a wooden or ceramic lid that might have been further sealed with paraffin for long-distance travel.
Composition	Wheel-turned coarse earthenware of a hard, red, slightly micaceaous paste.
Glaze	Interior is uniformly glazed with lead, brownish to dark greenish in color (result of reduction) and exterior is unglazed.
Crossmends	Eight to ten sherds crossmend of the 34 (including two rim portions)
Portion of ship	Sherds found scattered throughout Stern, Aft Hold, and Midship Zones meters making it difficult to determine its exact location on board the vessel.
Origin	The exact origin or manufacture for this large storage jar currently remains unknown and may eventually require petrologic or neutron activation analyses of the ceramic body and clay sources to be conclusively stated. Two possible sources for this earthenware jar are the Montelupo region of Italy (as distinguished by the very rounded rim, and unlike the flattened rims of Spanish origin), or the Bito region of France (as shown in the coarse wares found on the Fort Louisburg site, all of French make).
Temporal Indications	An article on the chronology of oil jars from various sources, which appears in Nautical Archaeology, No. 1, (1972:147-153) offers a date range of 1650s to 1730s for these behemoths found on other wrecks and land sites. Two whole examples were also examined for comparison that appear on the Exeter (England) City Council Time Trail web-page, having been found in this town. These two giant jars of unglazed red earthenware also exhibit the classic horseshoe-shaped (also called crescents) lug handles on opposite sides of the shoulder but in a more splayed arch; the rims are also flattened and sloped tightly away from the orifice; the base is considerably more tapered; and while the exterior appears unglazed, the interior treatment is not shown. Interestingly, these two jars also exhibit the white painted lines on the exterior which ceramicists believe were used as templates for raffia grass harnesses, woven around these jars to facilitate handling during transport. These two jars are attributed to the Montelupo region in Tuscany, Italy and given a date range of 1720 to 1750.
Artifact Number	QAR057.000, QAR103.001 (handle tip), QAR109.000, QAR203.000, QAR301.001 joins QAR1240.000 (rim portions), QAR325.004 joins QAR344.008, QAR326.002, QAR344.002, 344.008, QAR347.017, QAR348.001, QAR359.000, QAR362.000, QAR363.000, QAR387.023, QAR512.001, QAR652.000, QAR812.000, QAR815.000, QAR822.000, QAR1099.000, QAR1237.000, QAR1238.000, QAR1268.000, QAR1282.000, and QAR1330.000



Vessel I – Large Oil Jar



Vessel I – Large Oil Jar

Vessel II

Sherd Count	Eight
Min. Vessel Count	One
Form	Large jar form, thick-walled body fragments, non-diagnostic sherds.
Function	Storage of dry or liquid materials; possibly oil jar form or variant.
Composition	Paste is reddish to pink in color, homogeneous with few inclusions, coarse, wheel-turned earthenware.
Glaze	The interior exhibits a mottled green and yellow lead glaze, effect created by the use of powdered copper oxides, and reduction atmosphere during kiln firing. Exterior is unglazed.
Crossmends	Five sherds crossmend of the eight total.
Portion of ship	All sherds were recovered in the Mid-Ship region, which suggests its location near the galley, among the cook's wares used for food preparation, storage or serving.
Origin	Based on paste color (grades from light red to pinkish to white in color), shape, and distinctive mottled bright green and yellow lead glaze, this vessel is believed to originate from pottery-manufacturing centers located in the Saintonge region of southwestern France, or possibly the Loire Valley (also in France) where lead-glazed earthenware pots were common (see pitcher on Exeter Time Trail web page with similar glaze type; Hurst, et al. 1986:76-100, for Saintonge ware descriptions, forms and glazes; Waselkov 1999:32 for samples found in Old Mobile site, Alabama; Sullivan 1986:58 for wares from the Machault wreck; Brain et al. 1979:45-72 for French wares found at the Trudeau site in Louisiana; Niellon and Moussette 1981 for French wares found on habitation sites of Champlain, Quebec, and Barton 1981 for wares found at the Fortress of Louisbourg 1745.
Temporal Indications	A generalized date range of 1700s to 1750s is given by various sources for the production of Saintonge wares.
Artifact Number	QAR366.026, QAR418.122, QAR418.123, QAR366.025

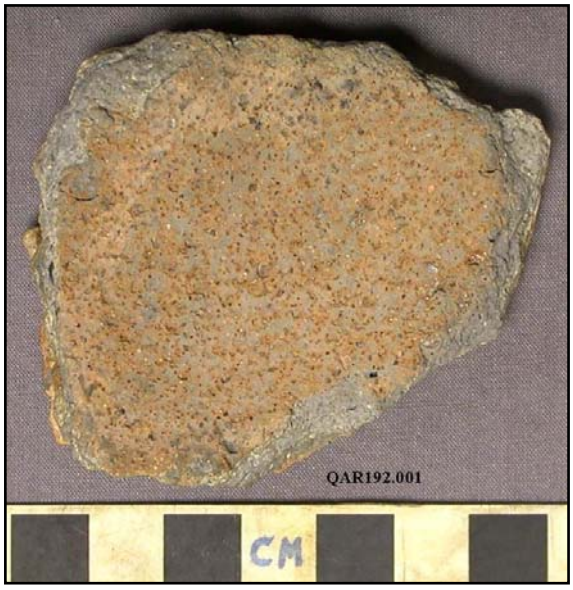
Vessel II – Large Jar

Vessel III

Sherd Count	One (small, coin-size)
Min. Vessel Count	One
Form	Possibly a shallow bowl form, smoothed on the concave interior and ridged or tooled on the exterior curve.
Function	Used for food preparation or serving
Composition	Paste is hard, red in color, of medium thickness; wheel-turned coarse earthenware
Glaze	Interior curve (of bowl) exhibits mottled/marbled slip trail of swirled white clay with a lead glaze tinted with copper oxides for a greenish, splotchy effect. The interior glaze is severely spalled (from weathering) and crazed to reveal the white clay slip trail beneath the lead. Some brownish tint is also present in the lead glaze on this small sherd. Lead glazes could be tinted by the use of iron oxides (for brown), copper oxides (for green) or antimony oxides (for yellow) to create the glaze and which would then give the underglazed white slip trails the corresponding color. The slip, applied by use of a slip cup, is swirled but not marbled. The exterior of this sherd is unglazed and exhibits three distinct "ridges" made with a tooling chip (while still on the wheel).
Crossmends	None
Portion of ship	This single sherd was recovered from the Bow Zone of the wreck and therefore may have served as an individual serving dish.
Origin	Two possible origins of manufacture for this sherd are posited, but more fragments of this unique vessel are needed to accurately determine its source. The first possibility is that the sherd represents a piece of North Italian Marbled Slipware that originates in the Pisa region and can date from the early 1600s to the mid-1600s. Examples have been recovered at early period sites in Virginia (e.g. Jamestown, Flowerdew Hundred, Pettus Plantation, and Jordan's Journey), as well as sites in England, Netherlands, and northern Europe (Hurst et al. 1986: 30-34). The second possible source of this slip-trail decorated lead-glazed sherd is from the southern region of France, perhaps the Rhone valley, where swirled and marbled slipware bowls and basins on red-bodied earthenwares were common during the early 1700s to 1750s. The French wares were not typically glazed on the exterior and also exhibited the tooling or ridges on the outside of the bowl (Brain et al. 1979:52).
Temporal Indications	Several examples found in the colonial sites of Virginia and Maryland (see Jamestown web page) with a date range of 1600 to 1625 plus, said to be rare by 1720s; the Museum of London on-line catalog provides a date range of 1601-1750; Hurst et al, in the Rotterdam Papers (1986:35) provides fabric and glaze descriptions and a date range of 1600-1650; and for southern France (Barton 1981:23-25) a range of 1700s -1750s. Hurst et al. show an example of a bowl with a marbled interior and unglazed exterior, Figure 14.28., page 35.
Artifact Number	QAR286.004

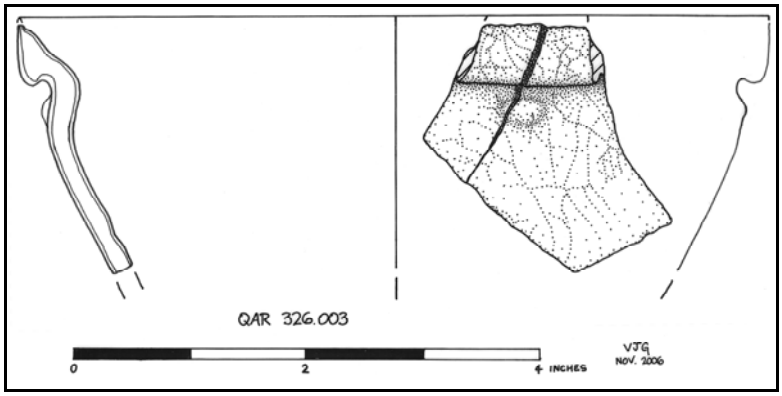
Vessel IV

Sherd Count	Six
Min. Vessel Count	One
Form	Medium-sized oil jar or storage vessel
Function	Used for the storage of dry or liquid foods
Composition	Overall the paste grades from a grayish core with reddish to pink gradients towards the interior and exterior curve of the sherd. The sherd represents a wheel-turned coarse earthenware with small inclusions of grit or gravel, grog, and crushed shell, possibly organics (voids) visible in the matrix.
Glaze	Unglazed on interior and exterior surfaces.
Crossmends	Two of six body sherds.
Portion of ship	Five sherds were found in the Stern Zone and one was recovered from the Aft Hold Zone.
Origin	Based on attributes of the paste, tempering, color, and form, this utilitarian ceramic vessel has been identified as an oil jar. Although the diagnostic rim and base are missing, the elongated and deeply grooved wall profiles, as well as the projected diameter, suggest a match to Goggin's Type A jar forms (1960). These jars, often found on terrestrial colonial period sites (Noel Hume 1969) as well as shipwrecks of this period (Marken 1994), have often been referred to as "the cardboard boxes" of the day because of their frequent use/occurrence and recycling properties amongst the consumers. Found in sites throughout the Caribbean and American colonies and Europe. When recovered rim and base fragments will provide more specific type assignments.
Temporal Indications	A date range of late 1600s to early 1800s.
Artifact Number	QAR192.001, QAR683.000, QAR925.000, QAR1142.000, QAR1172.000, QAR1244.000.



Vessel V

Sherd Count	Four
Min. Vessel Count	One
Form	These are fragments of an apothecary pot or ointment jar, represented by rim and body sherds. The rim exhibits a distinct rolled edge with a small projection to secure a string tie for a cloth or paper cover. The jar was cylindrical in shape, about 5 in (12.7 cm) diameter, but base is missing.
Function	This would have served as a storage container for ointments or unguents, or other medicinal substances.
Composition	It is a fine-grained, dark pink paste, coated on both sides with tin-enameled, opaque glaze.
Glaze	The opaque whitish, tin-enameled slip glaze coats the exterior and interior surfaces of the jar. The portion represented by these pieces appears unpainted. The opaque white glaze (created by the addition of tin or zinc oxides) was known as faience in France, majolica in Spain and Italy, and delft in Holland and England, all countries of known manufacture.
Crossmends	Four sherds mend together representing a single jar or galley or medicine pot as they were also called.
Portion of ship	The remains of this medicine pot, along with a pewter syringe, were found in the Stern portion of the wreck and may indicate a doctor's (or barber's) medical kit, or officer's personal gear.
Origin	Based on rim and body shape, and paste color (dark pinkish to red) this ointment pot is thought to be of French manufacture.
Temporal Indications	Similar pots were recovered from the Trudeau site in Louisiana (ca 1700-1750) (Brain 1979:35); and also have a broad temporal range of 1600s-1800s based on their occurrence on French and British colonial sites.
Artifact Number	QAR310.003, QAR326.003 (rim sherd)



Vessel VI

Sherd Count	One (small, fingernail size)
Min. Vessel Count	One
Form	The minute size of this sherd precludes any definitive form assignment, but could represent a small basin or bowl form (indeterminate). Based on the curvature of this small fragment, it could represent a rim/brim portion of a bowl.
Function	Likely used for food serving or preparation; or possibly an ointment pot or jar for medicinal use.
Composition	The paste is a fine white to cream in color, earthenware with an opaque white tin-enameled glaze on both sides. It differs in paste color than Vessel V, and also exhibits some decoration.
Glaze	The sherd is coated with tin-enamel slip glaze on the interior and exterior, but also exhibits a solid cobalt blue band on the interior. Faience if French, or Majolica (if Spanish/Italian), or Delft (if English or Holland).
Crossmends	none
Portion of ship	Forward Hold, placing it in the region to be considered amongst galley ware. Serving dishes made of such delicate wares were not likely for crewmembers, but may have been special dishes used by the captain or officers.
Origin	Based on paste color and blue hand-painted trim, this tiny sherd may either have originated in France (from the Normandy or Nevers region- based on blue banding) or Spain, but not enough of the vessel form or decoration is present to be definitive about a manufacturing source.
Temporal Indications	Without more specific diagnostic attributes, a broad range of tin-enameled soft-paste earthenwares is given as 1500s-1700s (Noel Hume 1969). Examples of these wares are recorded on many colonial period American sites, from Maryland to Florida and west into Alabama (at Old Mobile, see Waselkov 1999), Louisiana (see the Trudeau site, Brain 1979) and north into Canada.
Artifact Number	QAR418.042

Vessel VII

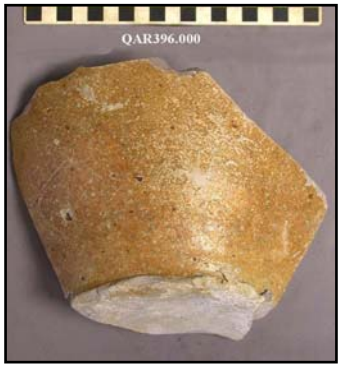
Sherd Count	One (small, fingernail size)
Min. Vessel Count	One
Form	Indeterminate, could be a jar or bowl form, slightly curved.
Function	Food serving or medicinal, if a jar form.
Composition	This minute fragment of soft-paste earthenware has a white to cream color paste on one side and a reddish stain on the other side, with a white and brown stain on concave surface. Considered a tin-enameled faience or majolica sherd.
Glaze	The glaze is an opaque white tin-enamel, which coats the interior and exterior surfaces; it also exhibits a hand-painted cobalt blue pattern (indistinguishable) on the convex surface.
Crossmends	None.
Portion of ship	Found in the Forward Hold (same as Vessel VI) near the Galley section of the ship, but could also have been served a medicinal purpose (drug jar or pot).
Origin	Based on the hand-painted cobalt decoration on convex surface, this fragment could represent wares made in the Italian region of Montelupo; or it could also be French. More of this vessel will be needed to accurately assess its origin.
Temporal Indications	These wares have a broad range of production from 1500s-1700s (Noel Hume 1969), (see Vessel VI).
Artifact Number	QAR418.094

Vessel VIII

Sherd Count	One
Min. Vessel Count	One
Form	This sherd is unmistakably a bowl or dish form, with a tooled and broad, flattened rim and curved body portion visible.
Function	These bowls were directly associated with the preparation and serving of food, namely stews, gruels, or soups.
Composition	The homogeneous red-orange paste is indicative of this type of earthenwares (Saintonge), which is also coated with a distinctive green lead glaze coating on the interior and exterior of the vessel.
Glaze	The lead glaze is a bright green, slightly streaked on the interior and exterior of this bowl/dish form. The green coloring is created by the addition of copper oxides added to the lead glaze prior to coating. As typical of Saintonge wares, this vessel was fired on its side in the kiln, which caused the glaze to run or streak the surface of the bowl. It is also stained from ferric concretions and still undergoing conservation treatment.
Crossmends	None
Portion of ship	Found in the Forward Hold Zone of the wreck, it is also likely associated with galley wares, and not a cargo item. Its function as an individual serving dish would also suggest presence in the cooking or eating areas of the ship.
Origin	This bowl was made in the Saintonge region of southwestern France, based upon the identification of its distinctive flattened rim with tooled edge and the overall green slip lead glaze.
Temporal Indications	The general date range of manufacture for these specific wares is 1700 to 1750. Identical examples of Saintonge bowls and dishes have been recovered from several French colonial sites in North America; at Old Mobile 1702-1760 (Waselkov 1999:32), the Trudeau site 1700-1750 (Brain et al 1979:57-58), Fort Michilimackinac 1715-1781 (Stone 1974:167); the Fortress of Louisbourg 1745 (Barton 1981) and Quebec (Niellon and Moussette 1981). Wares of this type have also been recovered from the wreck of the Machault, ca. 1760. Saintonge has now been applied to a general class of green lead glazed wares from southern France. Many vessel forms were made - bowls, basins, pitchers, mugs, etc. Hurst, et al. (1986:76-84) provides a detail description of these wares as they occur in utilitarian forms, e.g. bowls, dishes and jars.
Artifact Number	QAR495.002

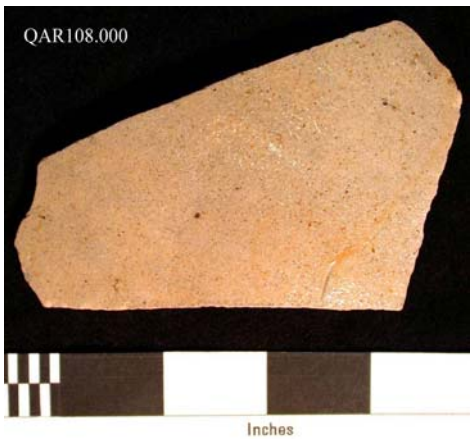
Vessel IX

Sherd Count	Three
Min. Vessel Count	One
Form	These sherds are part of an open-mouth, hollowware form, such as a jug or krug form. A krug has a slightly wider orifice than a jug, and can be used for drinking or storage of liquids.
Function	Used for the storage, serving, and drinking of liquids, mostly beverages, likely ales or wines.
Composition	The paste is a fine-grained, homogeneous dark gray color, and stoneware clay body.
Glaze	The exterior exhibits the distinct "orange peel" texture of salt glaze, over an iron-bearing or ferruginous slip. The interior appears unglazed, indicative of a smaller orifice container or jug in that salt-vapors during firing were restricted from entering and glazing the interior surfaces of the vessel. It may also have been saggered or covered in the kiln, which would also restrict the flow of salt-vapors to the interior of the jug.
Crossmends	All 3 sherds join together, of the same vessel
Portion of ship	One sherd was found in the Aft Hold Zone and two sherds were recovered from the Mid-ship Zone. Given that the fragments all crossmend, it is likely this liquid storage container was used in the galley area.
Origin	A visual and descriptive analysis of the paste color (dark gray) and texture (homogeneous) and the high quality of stoneware body and salt glaze, this vessel is attributed to German manufactory, perhaps the Siegburg, Langerwehe or Westerwald regions known for their light to dark gray, high quality types of jug and krugs. Hurst et al. (1986:176-184) provides excellent descriptors and diagnostic attributes for this ware type with illustrations of jugs, krugs and kannes (or tankards). Gaimster's text on German Stonewares, 1200-1900, provides illustrated examples and descriptions of German stoneware from these various regions (1997).
Temporal Indications	A broad range of production is given in the absence of more diagnostics attributes (neck, rim, handle, foot, etc), 1600s-1800s. Germany was a major exporter of stoneware jugs, bottles, and mugs to colonists and throughout Europe until well into the mid to late 1700s.
Artifact Number	QAR144.000, QAR396.000, QAR514.000



Vessel X

Sherd Count	Eight
Min. Vessel Count	One
Form	These sherds are from a jug form, with an unglazed interior and the terminus of a strap handle that exhibits a series of small indentations created by the potter's fingers. These indentions were functional to affix the handle to the jug body and could also have been ornamental.
Function	Jugs were typically used in the storage, and serving of liquids, as well as the drinking of beverages, most likely ales and wines.
Composition	The paste is light gray to whitish in color, and the texture is homogeneous fine-grained stoneware with a residual salt glazing on exterior only. This vessel appears to have been underfired.
Glaze	The exterior exhibits a classic "orange peel" or pitted exterior typical of salt-glazing, while the interior is unglazed; another indication that it was a jug form (as previously described for Vessel XI). The salt glaze on some sherds is residual in nature and could indicate the jug was underfired during manufacturing or it could result from post-recovery alterations from created by certain conservation treatments. This was apparent during analysis in that a few sherds failed the "tongue test". Put simply, the altered sherds stuck to the analyst's tongue when lightly touched to the paste edge. Stonewares, of denser clay and impermeable bodies do not stick to the tongue when applied, whereas, the more porous and lower-fired earthenwares always stick to the tongue when tested in this manner. So, despite their similarities in thickness, color and residual salt, a few of these sherds (or their fabric, whether full bodied stonewares or high fired earthenwares) are suspect at this time.
Crossmends	Two of eight (QAR192.002 and QAR325.005)
Portion of ship	Four sherds came from the Stern, three from the Aft Hold, and two tiny sherds from the Forward Hold. The scattered distribution of these wares, if indeed from the same jug, makes it difficult to determine its on-board use location.
Origin	Similar to Vessel XI, the origin of this jug form is based on the light gray, uniform paste of the sherds with residual exterior salt glazing and distinctive handle terminal treatment. The source is German, and likely the Siegburg region, or the Langerwehe area. Hurst et al (1986:185) exhibits a krug form with matching finger impression at the handle terminals, made in the Langerwehe region. Additional fragments are needed to more conclusively determine the origin of this jug.
Temporal Indications	Once again, in the absence of more definitive attributes, only a broad range of manufacturing can be assigned to the production of these German jugs, 1600s – 1800s.
Artifact Number	QAR108.000, QAR192.002, QAR324.000, QAR325.005, QAR343.003, QAR347.020, QAR350.031, QAR418.035, QAR445.017

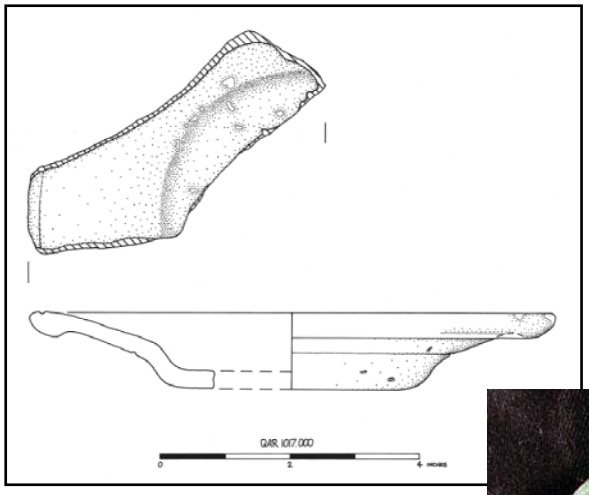


Vessel XI

Sherd Count	One
Min. Vessel Count	One
Form	This is a jug or krug form based on the presence and absence of salt-glazing residues.
Function	As a jug, it was used for the storage or serving of liquids, or as a drinking container (if a krug or kanne form).
Composition	The paste is light gray in color with a fine-grained stoneware body, and exterior salt glaze over runny brown slip.
Glaze	The "orange peel' pitted exterior surface is typical of salt-glaze and transparent over a runny iron bearing or ferruginous slip. The interior curved surface is unglazed as would be expected on a jug form, where salt vapors do not reach the cavity.
Crossmends	None
Portion of ship	This single sherd was recovered from the Bow Zone and some distance away from the other stoneware jug sherds. Its presence in the Bow suggests it may have once been associated with the ships' crew activities.
Origin	Similar in paste and glaze to the previous jugs fragments, this utilitarian container was also produced in Germany, in either the Siegburg or Rhineland areas.
Temporal Indications	Consequently, without additional visible attributes or until petrologic or element analysis can be done of the bodies and clay sources, only broad temporal of manufacture can be applied, 1600s-1800s. Several stoneware jugs with salt-glaze over a runny iron slip are noted in texts on the subject, such as Hurst et al. (1986) and Gaimster (1997), namely plate 14, which illustrates four large Bellarmine jugs of this type from German dating from 1590s to mid-1700s period. German stonewares are frequently found on colonial period sites throughout North America, the Caribbean, and other European ports of the 1500s-1800s as well as numerous shipwreck sites.
Artifact Number	QAR280.001

Vessel XIII

Sherd Count	One
Min. Vessel Count	One
Form	Small 8 in (20.32 cm) diameter plate, incised rim, wide brim, flat base
Function	Small 8-inch diameter plate, incised rim, wide brim, flat base
Composition	Buff to tan earthenware paste with small red-grog and fine-grain quartz tempering visible in cross-section
Glaze	Underside (bottom) unglazed, top or interior glazed with homogeneous deep green-colored lead glaze. The green coloring is created by the addition of copper oxides added to the lead glaze prior to coating. As typical of these plate forms, this vessel may have been fired in a plate sagger.
Crossmends	None
Portion of ship	Stern Zone, possibly associated with the officers' dining area.
Origin	This plate was made in the Saintonge region of southwestern France, based upon the identification of its distinctive flattened rim with tooled edge, shape, and overall green slip lead glaze.
Temporal Indications	The general date range of manufacture for these specific wares is 1700 to 1750. Identical examples of Saintonge plates and dishes have been recovered from several French colonial sites in North America; at Old Mobile 1702-1760 (Waselkov 1999:32), the Trudeau site 1700-1750 (Brain et al 1979:57-58), Fort Michilimackinac 1715-1781 (Stone 1974:167); the Fortress of Louisbourg 1745 (Barton 1981) and Quebec (Niellon and Moussette 1981). Saintonge has now been applied to a general class of green lead glazed wares from southern France. Many vessel forms were made - bowls, plates, basins, pitchers, mugs, etc. Hurst, et al. (1986:76-84) provides a detail description of these wares as they occur in utilitarian forms, e.g. bowls, plates, dishes and jars.
Artifact Number	QAR1017.000



Vessel XIV

Sherd Count	Five
Min. Vessel Count	One
Form	Large jug form, missing base and rim portions
Function	Used for storage and service of liquids
Composition	Paste is fine-grained stoneware clay, light gray to whitish in color with salt-glazed exterior; unglazed interior.
Glaze	Exterior salt-glazed is evenly distributed on surface, thick in some areas. Interior is unglazed and exhibits tightly turned finger ridges on upper shoulder as it constricts to the top.
Crossmends	Two handle pieces (QAR1113.000 and QAR686.000) join to body fragment (QAR686.000).
Portion of ship	Stern Zone possibly associated with the officers' dining area.
Origin	This jug form is identified as possible Siegburg (Germany) in origin based on the paste color, salt-glaze, general shape, and thick strap handle treatments (with 3 distinct finger imprints at basal end).
Temporal Indications	German stonewares are frequently found on colonial period sites throughout North America, the Caribbean, other European Ports of the 1500s-1800s as well as numerous shipwreck sites. Rim and basal fragments may further identify this jug form as to origin and date.
Artifact Number	QAR686.000, QAR1113.000, QAR1076.000, QAR1225.000, QAR1284.000

Summary and Conclusions

The presence of ceramic fragments from the *QAR* shipwreck site provide researchers indirect evidence of subsistence behaviors aboard the vessel among its crew and passengers, as well as evidence for commerce and trade during the early eighteenth century in the Atlantic ocean. Activities of food cooking, storage and serving, in addition to drinking of liquids, are reflected in the wares represented in this collection. A few ceramics may also indicate merchandise stored in cargo areas and targeted for commerce or perhaps at least one vessel may have served a medicinal purpose. Given the previous descriptions of these ware types, their chronology and sources; it is now possible based on this evidence to suggest the nationality of the ship and a generalized date for its final voyage.

Of the 13 vessel types described above, those that can be assigned to a specific manufacturing location appear to originate from the southwest portion of France, known as the Saintonge region (home of green lead-glazed earthenwares), and possibly two of the three faience or tin-enameled pots/plates from France as well. The large oil jar is also perhaps of French origin, though Tuscany (in Italy) is another strong candidate for production of this lead-glazed earthenware behemoth. Four vessels, all salt-glazed stonewares of light to dark gray bodies, were identified as being of German origin, which held the market cornered on production of these types of jugs and krugs during the 1500s to 1700s. One piece of lead glazed, marbled or swirled slipware was identified as either from the North Italian region of Pisa or possibly from the Rhone valley of France where marbled slipwares were also popular as serving dishes.

Vessel	Type	Date of Manufacture	Mean Date
I	Oil Jar	1650 - 1730	1690
II	Saintonge ware	1700 - 1750	1725
III	North Italian Marbled Slipware	1600 - 1730	1665
IV	Oil Jar	1650 - 1775	1713
V	Tin-enamel slipware	1600 - 1750	1675
VI	Tin-enamel slipware	1600 - 1750	1675
VII	Tin-enamel slipware	1600 - 1750	1675
VIII	Saintonge ware	1700 - 1750	1725
IX	German Stoneware	1600 - 1800	1700
X	German Stoneware	1600 - 1800	1700
XI	German Stoneware	1600 - 1800	1700
XIII	Saintonge ware	1700 - 1750	1725
XIV	German Stoneware	1600 - 1800	1700
Assemblage Total		1631 - 1764	1698

Table 1 Ceramic Manufacturing and Dates

The inter-continental trade among pottery-producing centers in the Iberian Peninsula (Spain and Portugal), Italy, France, German, England and the Netherlands, was often an ebb and flow enterprise given politics, pirates, and preferences of the consumers. The predominance of French earthenwares does lead credence to the identification of the shipwreck site as the privateer La Concorde, which later traveled the Atlantic as a merchant ship (slaver) and seven months prior to its loss served as the pirate ship, Queen Anne's Revenge. The ceramic assemblage also provides an approximate date of operation for the shipwreck based on the period of manufacture for various types. The presence of Saintonge wares, which began production around 1700, indicate the vessel post dates that time. The collective mean date of 1698 suggests that the period of operation was in the first quarter of the eighteenth century, which coincides with the period of service for Queen Anne's Revenge, ex. La Concorde.

The presence of ceramics from this shipwreck site also testifies to the multidimensional aspects of this artifact group. For analysts and archaeologists ceramics offer much valuable information. Because of their durability, they are often present on most archaeological sites, to the point of being ubiquitous at times. They are often well preserved, especially on terrestrial sites where wood, metal and organic artifacts either rust or rot away. Because historic ceramics were often produced in factory settings, manufacturing records are sometimes present to help assign chronological or temporal parameters to a particular ware type or source. And because ceramics are directly associated with floodways and subsistence behaviors of humans, they offer insight into the consumers, e.g. ethnicity, diets, preference, and trade or commerce. The fact that the remains of 13 distinct vessel types associated with this eighteenth-century shipwreck were found during excavations of only about 10% of the total site indicates that more are yet to be found as work continues. Indeed, several sherds of the same vessels will hopefully be recovered and add accuracy to the assessments already put forth from this analysis. Further analysis and the recommendation for petrological and/or neutron activation studies of the clay bodies and the sources will no doubt add a great deal of valuable information to this preliminary study of the ceramics from the *QAR* site.

The distribution of the sherds scattered across the wreck site provide some indications or confirmations of activity areas (Table 2). Vessels used for food preparation mostly come from the Midship and Forward Hold Zones; the galley was traditionally located in this general area. In contrast, ceramic containers related to storage, drinking and medicine appear more concentrated in the Midship to Stern Zones.

The distribution of shards from individual vessels can also play an important role in observations focused on natural site formation processes. The scatter of larger, heavier vessels, such as the oil jar, indicate that some vessels were broken and dispersed over relatively large areas either at the time of sinking or during long-term decomposition of the ship due to currents.

Vessel Number	Vessel Function	Shipwreck Area				
		Stern	Aft	Midship	Fore	Bow
I	Storage	x	x	x		
II	Storage			x		
IV	Storage	x	x			
III	Food Prep					x
VI	Food Prep		x	x	x	
VII	Food Prep				x	
VIII	Food Prep				x	
XIII	Food Prep	x				
IX	Drink		x	x		
XIII	Drink	x	x			
XIII	Drink					x
XIV	Drink	x				
XV	Medicine	x				

Table 2 Distribution of Ceramic Vessels

Overall the ceramic assemblage provides a valuable aspect to the archaeological record. Because salvage at the time of the ship's loss was reportedly confined to the removal of appears to be restricted mostly to valuables and personnel effects, it likely that all or a significant majority of pieces remain on the site. With full recovery it will be possible to fully reconstruct each ceramic vessel, thus heightening their individual and collective contribution to the interpretation of this shipwreck as well as broader patterns in eighteenth-century manufacturing, trade, and consumption.

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