

Queen Anne's Revenge
Shipwreck Project



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Beads Recovered from Shipwreck 31CR314
Queen Anne's Revenge Site

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Introduction

Portable, desirable, and durable, beads find their way onto many archaeological sites. The complex artifact assemblage from the shipwreck believed to be *Queen Anne's Revenge (QAR)* includes five glass beads, three of them complete, one badly damaged and one in three pieces. The damaged beads were fragmented during conservation activities used to break down large concretions. Three beads originated in concretion recovered from the Stern portion of the vessel and two were found in a concretion from the bow. Whether they were among the ship occupants' personal effects, or lost from a hank, or part of some trade cargo, they are provocative reminders of *La Concorde's* life as a slave trader, but it may never be certain. Since more beads have now been seen, locked in concretions (as revealed through x-radiography, 687.000 and 786.000), the sample size will undoubtedly increase and future observations will become more definitive.

In general, glass beads as an artifact group are functionally related to personal items, and typically classified as ornamental. Small beads, in the size range of seed beads (2-4 mm) and pony beads (4-6 mm) were often sewn on articles of clothing or strung for personal adornment, such as necklaces or earrings. Most of the *QAR* beads are of the drawn-tube (also referred to in literature as a drawn-straw) type; during their manufacture, molten glass is pulled into a hollow tube, then cut to size and reheated or tumbled to smooth and round. One bead, originally thought to be made of wood, appears to be of powdered glass manufacture (387.011) that was fired in mold. Shapes from the *QAR* sample are best described as doughnut or oval. Kathleen Deagan notes that barrel-shaped beads were most common during the late seventeenth and early eighteenth centuries, while spherical shapes were typical before the mid-seventeenth century (1987:171). Beads QAR286.005, QAR345.024, and QAR904.001 are of simple construction, meaning one layer of glass. QAR347.002 is compound or composite bead, meaning that it has two layers of glass comprising its construction. Bead QAR 387.001 is uniformly granular in appearance with an oversized central hole.

Discussion

Glasshouses in Amsterdam as well as Italy were producing beads of all varieties for global trade and exportation for more than three centuries. Venice was the major bead production hub from the eleventh century forward, with export common throughout Europe by the fourteenth century, and into the New World by the fifteenth century (Deagan 1987:158). The Dutch industry began in Flanders by 1597. Often associated with trade activities, beads occur in a wide variety of contextual sites and ranges from the earliest contact period burials in North America to late nineteenth-century domestic sites. Though Dutch beads are found commonly on sites in the northeastern United States, several types apparently found their way into the Southeast during the seventeenth and eighteenth centuries (Deagan 1987:158-59). Beads manufactured from the powdered glass method were likely

made in West Africa, perhaps Ghana. These beads are simple in construction, typically opaque whitish tan to pale yellow in color with a large perforation. This technique relied on the reuse of imported European glass beads or bottles that were pounded into a fine powder, poured into a clay mold, and then fitted with cassava (manioc) stems or thin reeds. Once fired, the reeds burned away leaving the larger than normal central hole. After firing, these beads would sometimes be further shaped and smoothed by grinding, or left in their irregular shape with one or two flattened sides. Bianco, Decorse and Howson have recently reported the finding of such beads associated with two early eighteenth-century slave burials (#226 and #434) in New York's African Burial Ground (2006: 382-418), that provides useable comparative data for this type of bead.

The following analysis is provided to identify the specimens as to each type and use, and offer chronology and origin of manufacture (where possible). A coding format created for historic bead analysis combines information from Kidd and Kidd's (1970) typology, Brain's 1979 study of the Tunica site beads, Karklins' (1982) analysis format, Carnes' (1987) analysis of beads from various seventeenth-century Siouan sites located in the piedmont region of North Carolina, and finally, Bianco, DeCorse and Howson's 2006 analysis of the beads from the African Burial Ground in New York. Using this combined format, all beads were examined for manufacturing techniques, size, diaphaneity, and color (ideally, attempts were made to match colors published in Kidd and Kidd's color chart for consistency). Bead types were assessed as to construction (simple vs. compound) and any surface treatment (stripes or inlay, etc.). An attempt to determine color was made by dampening each bead and placing it under a consistent light source (e.g. a microscope) but was difficult in cases where patination was extreme.

The original opacity or translucency of the glass was problematic to determine if the bead was severely patinated. This quality is a critical attribute for color determination. For example, Carnes (1983:203; 1987:151) has pointed out that "true" black beads are opaque in diaphaneity, whereas translucent black beads actually appear as a dark burgundy or dark rose brown in color when held under illumination. This characteristic is due to manganese (or permanganate) being used as the colorant agent after 1700 (van der Sleen 1967:113). "White" beads also vary in shades and opacity due to the addition of tin oxide to the glass. Dense patination observed on some beads is also a result of the mineral agents added to the molten glass to produce certain desired colors, e.g. bright yellows or gold, and bright greens. Rapid decomposition of the glass has also been observed on glass beads with particular coloring agents.



Figure 1 Beads recovered from wreck site, not in concretion.

Individual Analysis

Specimen Number:	286.005
Provenience:	Concretion 286.000
Position on Ship:	Bow
Item:	Bead
Composition:	Glass
Method of Manufacture:	Drawn or Tube
Construction:	Simple, monochrome
Size:	Medium, 4-6 mm range
Diameter	6.0 mm
Length	4.0 mm
Bore Diameter	2.0 mm
Shape:	Circular

This bead has been identified as Kidd and Kidd's Type IIa19 (Brain's Type IIa2) and is composed of a single, monochrome color of light gold or yellow and is translucent in diaphaneity. It is strongly suspected that the coloring agent (antimony?) added to create the color yellow is a factor in the severe decomposition and patination of this glass bead. The Munsell color equivalent is in the range of 5Y 7/6, or yellow hue. Post-depositional staining is also noted on this specimen. The bead is partially broken to reveal the true interior color of yellow. The central hole remains plugged with concretion. Brain (1979) offers a date range of 1700-1890, with a mean date of 1763 for this bead

type. Five beads of this type were recovered during excavations at Occaneechi and date to the occupation range of 1680-1705 (Carnes 1987:151).

Specimen Number: 345.024
Provenience: E75N33
Position on Ship: Stern
Item: Bead
Composition: Glass
Method of Manufacture: Drawn or Tube
Construction: Simple, monochrome
Size: Medium, 4-6 mm range
 Diameter 6.0 mm
 Length 3.8 or 4 mm
 Bore Diameter 1.8 or 2 mm
Shape: Circular

Composed of three mendable fragments, this bead matches Kidd and Kidd's Type IIa7 except that it is a translucent "black" instead of an opaque black. The translucency results in a true color of dark burgundy/brownish when held under illumination. This bead also matches Brain's Type IIa5 variant for all black beads of this shape and manufacture. The Munsell equivalent for this color is 2.5YR 3/4 or dark reddish brown. Given that manganese was used during this period to color glass (naturally light green in color) black, the quality of translucency produces a burgundy/brown color. Karklins (1982:71) attributes the manufacture of this bead type to Amsterdam during the seventeenth and eighteenth centuries. Brain provides a comparative date range for Type IIa5 (1979:102) as 1700-1740, with a mean date of 1734. An order for 1,000 pounds of "black beads from Holland" appeared on a 1734 French trade list for Louisiana. At the late seventeenth-century site of Occaneechi (1680-1705), 189 black beads (opaque and translucent combined) were found in feature and burial contexts (Carnes 1987:151).

Specimen Number: 347.002
Provenience: Concretion 347.000
Position on Ship: Stern
Item: Bead
Composition: Glass
Method of Manufacture: Drawn or Tube
Construction: Compound (or composite of 2 colors)
Size: Large, 6-10 mm range
 Diameter 7.0 mm
 Length 8.0 mm
 Bore diameter 2.0 mm
Shape: Oval (doughnut)

This bead has been identified as a Kidd and Kidd Type IVa13 (Brain's Type IVA1) and is composed of an opaque core of light gray color, with an outer layer of translucent oyster white color.

The Munsell color variant for the outer portion of the bead is 5Y 8/2 or pale yellow hue, although staining from deposition is likely. The bead's outer layer exhibits a single crack (longitudinally), which may be a manufacturing flaw (due to rapid cooling after being heated and tumbled). Date range for this bead type (after Brain 1979 and others) is 1600-1890, with a mean date of 1754. According to these sources, this type of bead is found infrequently after 1767, and disappears after 1836. Carnes reports beads of this type from the village of Occaneechi in Orange County, North Carolina with occupation dates of 1680-1705 (1987).

Specimen Number: 387.011
Provenience: E76N43
Location on Ship: Stern
Item: Bead
Composition: Powdered Glass (previously identified as wooden)
Method of Manufacture: Fired powdered glass
Construction: Simple, monochrome
Size: Medium, 4-6 mm range
 Diameter 5.79 or 6 mm
 Length 3.23 or 3 mm
 Bore Diameter 2.87 or 3 mm (enlarged by manioc stem in mold)
Shape: Circular (doughnut), flattened on two sides

This bead is severely degraded and granular, and is flattened on two tangential portions of the sphere. The flattened surfaces appear to be equally granular and patinated. The overall color is a whitish tan to pale yellow. It is also cracked (longitudinally) and slightly “sprung” along its equator. Its overall dense patination led to its initial designation as a wooden bead; closer examination under a microscope revealed the granular nature of the powdered, fired glass of manufacturing. Bianco, DeCorse and Howson offer comparative examples from their 2006 study of beads found in the African Burial Ground in New York, specifically Burials 434 and 226, which yielded 9 beads total, and were given a date of early 1700s (their types #13 and #14, p.406). They indicate West Africa, or Ghana, as the likely source of these beads.

Specimen Number: 904.001
Provenience: E90N115
Location on Ship: Bow
Item: Bead
Composition: Leaded Glass
Method of Manufacture: Drawn or Tube
Construction: Simple, monochrome
Size: Medium, 4-6 mm range
 Diameter 5.2 or 6 mm
 Length 2.85 or 3 mm
 Bore Diameter 2.35 or 2 mm
Shape: Circular

This bead is very dark in appearance, possibly stained, and appears very opaque. Under magnification it is almost metallic gray in color, and exhibits microscopic air bubbles, a product of manufacturing. It is also exfoliating in places where the outer glass layer is sloughing. The bead was found during processing of sand samples from Unit 21 and was originally thought to be made of metal, but air bubbles revealed it is leaded glass. It has been given Kidd and Kidd's Type IIa7 designation, opaque black in color, with a date range of 1700-1740s.

Summary and Conclusions

Given the minute size and fragility of this class of Personal artifact, it is almost miraculous that any specimens were recovered from the wreck. It is only through careful, tedious laboratory processing that these beads have been unfused and identified. In general, the dates for these tube-drawn beads lend themselves to the range of late seventeenth to mid-eighteenth century in manufacture and may reflect some social concepts of personal ornamentation of the ship's crew or passengers or as related to cargo and the transshipment of African slaves. Some bead researchers working on terrestrial sites (Carnes 1987:152; Kent 1984:213; Polhemus 1984:1187) note that drawn beads are more common on sites dating after 1670. Fired powdered glass beads have now been found in African slave burials in America which date to the early 1700s, and which were likely made in Ghana (Bianco, DeCorse and Howson 2006:382). Also, it has been noted that mandrel or wire-wound beads (of which none have yet been found on QAR) increase in appearance and number on sites dating from the mid-to-late eighteenth century. Observations on Overhill Cherokee town sites confirm these temporal trends in bead distribution (Polhemus 1984) at a regional level.

On a final note, two shipwrecks from the early eighteenth century have reported glass beads. One, *Henrietta Marie*, an English slaver, was lost on New Ground Reef off the Florida Keys while returning to England in 1700. During excavations over 11,000 glass "seed" beads similar in description to those from the QAR site were recovered (Moore, personal communication 2005). *Speaker*, a pirate ship lost in a squall off the eastern coast of Mauritius, contained "a cache of trading beads." From this site archaeologists recovered large glass rosary beads of different colors and sizes known as 'rassade' or 'contrebrode' (Lizé 1984:126-127). Beads from both shipwrecks were associated with the African slave trade. More recently, Jerome Handler (2006) has pointed out some relevant cultural implications of beads found on shipwrecks associated with African slave trade. Based on evidence from period documents he states that beads recovered in New World sites were "not in the possession of African captives when they boarded the slave ships in Africa. But, rather, some of the beads found in these sites were acquired during the Middle Passage" perhaps through internal markets or by other means, as "reward-incentive" items. This implies that once stripped naked and bound and placed in the ships hold for the voyage, ships clerks, overseers and traders then provided

trinkets and other items to the slaves to assuage them. He cites records where slave men and boys were given the use of tobacco and pipes to enjoy after meals (or in place of them), while slave women and girls were given beads to make ornaments and occupy their time. Clearly the archaeological presence of both tobacco accoutrement and now the presence of glass beads, including one of African manufacture, at least suggest that this vessel was once associated with the transportation of slaves during its lifetime.

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