Queen Anne's Revenge

Laboratory Excavation Report, December 2002

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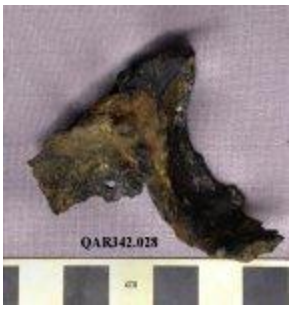
During December, 100 artifacts were treated at the Fort Fisher conservation laboratory representing the contents of 19 ferrous concretions. Nearly 20% of the artifacts were completely corroded iron objects and the resulting artifact molds in the concretions cast with epoxy resin. Molds requiring casting, prior to dehydration of the concretion, were cast with polysulfide resin, a polymer that cures despite the presence of water. The resulting casts are quite flexible and do not bond well with the corrosion product remaining in the mold. Efforts are underway to acquire an epoxy resin that is moisture tolerant during the cure and will produce a more rigid, archival quality cast.

Concretions containing lead shot were processed using hydrochloric acid to dissolve the calcium carbonate concretion material. The resulting sediment was screened to remove lead shot, glass, slate and organic materials.



The most unusual discovery of the month was the contents of concretion QAR342. Numerous bone fragments and one tooth were recovered in association (literally layered upon one another) with cast iron fragments corresponding to the thickness of a cast iron kettle. Though faunal analyses of the bone fragments are incomplete, visual comparisons of the bones suggest various species of animal. Several appear to be from a mammal about the size of a pig or goat while other fragments are very robust, suggesting a mammal the size of a cow. The tooth closely resembles a pig molar. No butchering marks are visually evident on the bones, though the larger long-bone fragments appear to have been broken, possibly to expose the nutritious marrow in a stew. Of the 20 previously recovered bones, identified through faunal analysis, nearly all have been identified as pig or cow.

Could QAR342 have contained remnants of the last supper prepared aboard the *Queen Anne's Revenge* prior to her running aground? The close spatial associations of the bones and kettle fragments within the concretion certainly suggest a relationship between these artifacts and support this possibility.

A cannon ball was also found within the concretion. Does this mean that the bones and iron fragments could have been collected for use as anti-personnel cannon ammunition? The relationship suggested by this association of artifacts within the relatively small concretion suggests this is also a possibility.

Could the group of artifacts found in QAR 342 be totally unrelated, having simply ended up in close proximity to one another and eventually associated within the same concretion by accident? In a dynamic underwater environment such as Beaufort Inlet, this possibility must always be considered.

This illustrates how important it is to look beyond the individual artifacts and examine groups of artifacts that are found in close proximity on the site. When concretion material forms around a group of artifacts, the association between the artifacts is preserved, frozen in time so to speak. It is important for lab technicians to document these associations through photographs and illustrations as they remove artifacts from the concretions. A record of the associations is then available for later analysis. Some associations reflect a common function or general proximity of artifacts on the ship, prior to the wreck. Others simply reflect natural site formation processes that cause artifacts to be distributed about the wreck site. By looking closely at spatial associations of artifacts on the shipwreck site, the significance of the cultural material can be interpreted far better than looking at the individual artifacts.