# *Queen Anne's Revenge* Shipwreck Project

## RESEARCH REPORT AND BULLETIN SERIES

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# Gunflints and Other Lithic Artifacts from 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

Seven lithic specimens recovered from the *Queen Anne's Revenge* shipwreck site (31CR314) were received. Three of these are tiny chips (QAR 409.004) far too small for meaningful analysis. These were set aside and not examined in detail. One specimen, QAR 409.003, consists of a small, heavily patinated and unifacially retouched flint flake. Although clearly an artifact, this piece has either been broken or so extensively retouched that its original function and/or shape cannot be determined. It too is not considered further in this report. Three specimens remain: a smaller ovate artifact (QAR 409.002), and two larger sub-rectangular pieces (QAR 409.001 and QAR 418.034). These will be discussed separately.


**Figure 1 QAR 409.002 possible gunflint**

**Specimen 409.002**

This tool is made on a flint flake, and the striking platform and bulb of percussion are present on one end of the artifact, where platform preparation can be observed. Unifacial retouch from the ventral side of the flake has produced a convex edge along one side of the flake. The opposite side is straight, or nearly so, and has received minor retouch from the ventral side. The tool is heavily patinated, but a fresh surface can be observed on the end of the flake. Here a chip has been removed, probably during the recovery of the specimen; color is N3 (Rock Color Chart, The Geological Society of America), and the flint is highly vitreous, with no grains visible under low-power (X4) magnification. In cross-section, the tool is triangular.

A patina covers both sides of the specimen, except where the chip has been removed. On the dorsal side, the patina is stained with a ferrous oxide--that stain occurs on the ventral side as well, but only in a few small spots.

When initially examined, it was thought this artifact was a gunflint. The convex side would represent the heel of the gunflint and the side opposite would be the edge, i.e. that portion of the flint that would strike the frizzen. Conceivably the ferrous oxide could be rust from the vise. The piece however was retrieved from a concretion that, at least to date, has yielded no metal gun parts. Because the stain overlies the patina, it must have been applied after the sinking of the ship and the ensuing patination of the flint--thus it likely was in contact with some metal in the concretion, but a gunflint vise would have been recognized and reported.

If then the ferrous oxide stain is ignored as a clue to the specimen's function, it is equally likely that it is a flint used with a strike-a-light, and the size and form of the piece are of no help in discriminating the two functional types. During the first half of the eighteenth century, gunflints were made on flakes; in cross-section, they have a wedge shape (see description of QAR 409.001 below). Such gunflints have been called Clactonian gunflints (Witthoft 1966), Dutch gunflints (White 1975), spall gunflints (Sappington 1978) or wedge gunflints (de Lotbiniere 1983). It was not until the latter part of the eighteenth century that the familiar square or rectangular gunflints, made from flint blades rather than flakes, were routinely produced. Unfortunately, at the same time of the spall gunflints and continuing through the eighteenth and most of the nineteenth century, flints made for use with a strike-a-light also were wedge-shaped and were produced on flakes (e.g. Skertchly 1984:36). Therefore, found without confirming context, early spall gunflints and flints from strike-a-lights are essentially identical.

The raw material from which this specimen was made may have come from northern Europe, i.e. Denmark or southern Sweden; alternatively the mines of Belgium also yield similar color. It is highly unlikely that it is made of English flint, at least from the flint mines of Brandon, and equally

unlikely that it is of French origin, from the workshops in the Loir-et-Cher region (home of the French gunflint industry).


**Figure 2 QAR 409.001 possible gunflint**

**Specimen 409.001**

This specimen is roughly rectangular in outline and wedge-shaped in cross-section. It was made on a flake of dark gray, highly vitreous flint, almost identical to the item described above. The dorsal side is patinated except for an area along one edge where steep retouch from the ventral side has created a straight edge. The ventral side bears some patination also, but only on about one-third of the face opposite the steep retouch.

If this is a gunflint, the steeply retouched edge likely is the heel, the side opposite the edge. In outline and cross-section, it conforms very closely to late seventeenth and early eighteenth-century gunflints illustrated by Witthoft (1966:Figs. 6,7). The differential distribution of the patination could be explicable due to protection of the heel by padded vise jaws, but again the context of the find did

not yield that gun part. Thus, the possibility remains that this item too is intended for use with a strike-a-light.

As a note applicable to both the specimens described above, I suggest that the context of the finds be given especially close attention. If the patination on the artifacts accrued after the sinking of the *Queen Anne's Revenge*, on both items the differential patination is suggestive of partial protection of the flint by the vise jaws of a flintlock mechanism. If traces of the vise jaws were not found, then an alternative explanation must involve incidental protection afforded by some other material in contact with the artifacts. Given such fortuitous protection, the items are equally likely to be gunflints (not mounted but retained as replacement flints) or strike-a-light flints.


**Figure 3 QAR 418.034 possible gunflint**

**Specimen 418.034**

This piece is the least equivocal of the possible gunflints. Triangular or wedge-shaped in cross-section, it is an excellent example of the spall gunflint. The raw material is a black flint with dark brown inclusions (N1 and 5YR3/4 respectively) of uncertain origin. Similar flint is known from Mildenhall, Suffolk, in England, not distant from the famous gunflint source of Brandon, but like material also occurs in glacial tills of Scandinavia and the Low Countries, and in the French Loire Valley.

The *Queen Anne's Revenge* specimen is heavily worn along its (irregular) edge, i.e. the portion of the flint that strikes the frizzen. In fact, its width of 1.1 inches exceeds its length of 1 inch, and length is the most important dimension for a gunflint. A flint only 1.1 inches long would barely protrude from the vise jaw of an eighteenth-century musket (Luedtke 1999:75), and thus its effectiveness would be severely compromised. In fact, the artifact in question may well have been discarded as too worn for use. Alternatively, it may have been used as a strike-a-light flint, or at least recycled for that purpose. As stated above, spall gunflints and strike-a-light flints are virtually identical (Skertchly 1984:36-37), and only archeological context can distinguish the two.

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