

Gunflints in Georgia and Adjacent Parts

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This study focused on aspects of gunflints, where gunflints are viewed as indirect indicators of weapons arsenals. By comparing weaponry over a variety of sites in one specific geographic region, some interesting patterns appear. An earlier version of this paper was presented in 2009 at the Southeastern Archaeological Conference in Mobile, Alabama. An Adobe (.pdf) version of audiovisuals shown in this presentation can be downloaded from the following link: [CLICK](#).

In an earlier 1992 study of gunflints in the southeastern U.S., I premised the gunflint analysis on Thomas Hamilton's seminal research. Hamilton stated that the width of the gunflint, or that measurement perpendicular to the gun barrel, was quite specific to the type of weapon with which it was used. The gunflint could be no wider than that allowed by the gun hardware, and, although these weapons were hand-made, by the eighteenth century, some degree of standardization in sizes had been achieved. Hamilton presents these width ranges:

- Pistols, or small trade guns-- flints <20 mm
- Trade guns-- flints from 20-28 mm
- Carbines, or fowlers-- flints from 28-34 mm
- Military muskets-- flints >34 mm

I surmised that if these size gradations are valid divisions, then a gunflint assemblage grouped by gunflint width should reflect the types of weapons that were present. I proceeded to search the literature and gather my own measurements for gunflints from a wide assortment of archaeological sites. Today's presentation is an expansion of the 1992 study. This study also attempts to use gunflint widths and associated weaponry as indicators of site chronology, geography, function, and ethnicity. I will discuss gunflints recovered from sites in Georgia, USA, straying slightly to include four sites immediately across the state line on the eastern and

western borders.

Obtaining statistically valid sample sizes of gunflints is important. The present analysis examines 691 flints from 21 sites. Nearly one-half (45%) of these flints came from one site--Fort Frederica. To recover a sizeable sample of flints generally requires extensive fieldwork. Several of the sites in this study were extensively excavated, yet the sample of flints is meager. Other parts of the data set are based on surface collections gathered under less optimal scientific conditions. The dataset includes Indian towns, Euro-American towns, fortifications, farmsteads, and one plantation. Cherokee village sites are not represented in this study. This is not because they are not important but is a result of the lack of available gunflint data.

The three sites in South Carolina, Fort Moore (1715-1766), Savano Town (1680-1719), and New Windsor (1737-1840), are located along the Savannah River. The earliest occupation was Savano Town, a Native American settlement. Fort Moore, a British military garrison established around 1715 is the next addition. Savano Town and Fort Moore predate the 1733 establishment of Georgia. New Windsor town was a community settled in the late 1730s by Swiss and other German speakers.

The next three sites included in this study share a common thread. Each contained early Georgia Ranger forts. These sites are Sansavilla Bluff (1734-1790), Fort Argyle (1734-1758), and Fort Mount Pleasant (1719-1758).

A note about Mount Pleasant -It was a Yuchi Indian town approximately 15 miles upstream on the Savannah River upstream from Ebenezer and Savannah. It was settled by Yuchi following the Yamasee War around 1720. By the 1740s the Yuchi had largely abandoned the site and it was used as a base for British traders and later as a military garrison lasting until 1758 when it was completely abandoned. The area where the gunflints were excavated contains all three components, and it was not possible to completely isolate them. Thus, this sample is dated between 1720 and 1758.

Fort St. Andrews (1736-1742) was a short-lived British Army fort on Cumberland Island. Until 2005 archaeologists and historians had declared, incorrectly, that Fort St. Andrews gone. Recent excavations and surface collections provide preliminary gunflint data for this military outpost.

Gunflints in Georgia

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Sunday, 27 November 2011 18:02 - Last Updated Wednesday, 31 January 2018 14:30

Fort Frederica (1736-1783) on St. Simons Island provides the largest sample of gunflints from a single site in this study. It was an important British town and military garrison on the southern frontier of Georgia. Fort Frederica was a fortified town.

Archaeological excavations were undertaken at Frederica in the 1940s and continued sporadically until the early 1980s. Despite the extent of these excavations, few detailed excavation reports were generated by this work and fewer still were published.

The Frederica sample consisted of 308 gunflints that were housed in three locations. The largest collection was at the Southeastern Archaeological Center, Tallahassee, Florida. Another collection was from archaeologist Joel Shiner's Trench, which was a trench that was dug immediately east of Frederica and was used to stash "deaccessioned" artifacts from Frederica's excavations in the 1960s. Shiner's trench, which stands as a shining example of how not to curate artifact collections, has been the subject of recent remedial study by the Glynn County School System and the National Park Service. Other collections from Frederica, such as those used in a gunflint study by Thomas Hamilton and Thomas Emery, and other collections at the Florida Museum of History were not examined in the present study.

New Ebenezer (1736-1820) was a town on the Savannah River about 40 miles from the Atlantic Ocean. It was populated by German speaking Lutherans. The town has domestic as well as military areas, but excavations thus far have focused predominantly on the domestic area. Many of the gunflints from New Ebenezer came from a cellar associated with a blacksmith, locksmith, and gunflint manufacturer and are tightly dated from the period 1750 through 1753. Others date to the American Revolution when Americans and British jockeyed for control of the town.

Fort Morris (1776-1782) was a Continental Army fort on the Sunbury River. It was situated immediately south of the town of Sunbury. It was attacked by Loyalists on January 9, 1779, who captured and then occupied the fort. The one-day bombardment left a mess, which included gunflints and other weaponry.

Fort Hawkins (1809-1821) was a U.S. Army fort and Federal Indian trade factory on the Ocmulgee River in central Georgia. Through its gates passed most of the military stores for the southern region. The fort was never attacked and it served as a headquarters complex. The soldiers at Fort Hawkins were regular Army, riflemen, and artillerymen.

Native American sites in western Georgia and Eastern Alabama seem to share common gunflint characteristics. The largest sample comes from Okfuskenena (Burnt Village) (ca. 1717-1793) on the Chattahoochee River. This town was burned in 1793, effectively providing a solid end date for its gunflint assemblage. Further downstream is Yuchi Town (1719-1835) in Russell County, Alabama, the "Mother Town" of the Yuchi. Upatoi Town (ca. 1790-1825) was an upland settlement consisting of dozens of scattered farmsteads. Excavations at the Lower Creek town of Upatoi in the central Chattahoochee River watershed yielded modest gunflint assemblages from four sites.

One plantation was included in this study. The North End of Ossabaw Island contains a cleverly named plantation, known as North End Plantation (1760-1840). Extensive excavations in the enslaved quarter provide us with a modest gunflint collection. Gunflint data from excavated plantations in Georgia was generally lacking but the Ossabaw example provides a glimpse of select enslaved African-American weaponry on a barrier island plantation. The slaves of Ossabaw owned tradeguns and carbines.

Size. Does size matter? In a word, yes. Width is particularly key. The weapon hardware dictates how wide a gunflint can be. Of course, one can insert a smaller flint than a weapon can accommodate, but that likely leads to a higher misfire rate. And misfires can be deadly, especially in human combat (or if one is facing a wounded bear).

The average gunflint width from the present sample was 28.4 mm. Again, Frederica had the highest average width (31 mm). At the other end of the spectrum are the Native American Upatoi sites with widths of 21.2-21.8 mm. In the mid-range are various sites like Mt. Pleasant, Ebenezer, and Okfuskenena.

Do gunflint assemblages, when width measurements are taken, reflect the weapons arsenal on a site? The answer is probably. Is there an absolute correspondence between gunflint width parameters and weapon type? The answer is probably not. More gunflint measurements are needed from a variety of military and domestic sites may enable archaeologists to identify statistically significant trends. Some of these trends are suggested by this study.

Pistol flints were the least common weapon flint, comprising 6 percent of the composite gunflint assemblages. The Upatoi sites had the highest relative percentage of pistol flints (43.8%).

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These sites contain no carbine or musket flints. Fort Hawkins followed a lagging second with 28 percent pistol flints. Fort Argyle had the third highest percentage of pistol flints (27.6%). Fort Frederica had only 1 percent pistol flints. Nine sites in the study had no pistol flints, which attest to their rarity.

Tradegun flints dominated the composite gunflint assemblage with 40.1 percent, although this lead was followed closely by carbine flints. Frederica had the lowest frequency of tradegun flints (22%). Sites with more than 40 percent tradegun flints included Fort Argyle, Fort Hawkins, Fort Moore, Fort Mt. Pleasant, Okfusenena, New Ebenezer, New Windsor, Ossabaw, Savano Town, and Upatoi Town. Clearly, aboriginal sites and Ranger forts were dominated by tradegun flints.

Carbine flints comprised 36.7 percent of the composite gunflint assemblage. Sites with more than 40 percent carbine flints included Sansavilla Bluff, Ft. St. Andrews, Fort Morris, and Fort Frederica. The Savannah River sites were below average with New Ebenezer at 27.3 percent and Mount Pleasant at 23.5 percent.

Musket flints made up 17.3 percent of the composite gunflint assemblage. Sites with more than 10 percent musket flints included Fort Frederica, Fort Morris and Fort St. Andrews. Fort Frederica had the most and the highest relative percentage of musket flints with 32.1 percent. Fort Hawkins, Fort Moore, Sansavilla Bluff, Upatoi, and Yuchi Town were among the sites that had no musket flints.

The high frequency of musket flints to other types at Frederica is a good indicator of the significant British Army force that was in residence. The absence of musket flints at Fort Argyle, a site that was exclusively military, may reflect the different weapons that were used by a Ranger troop. While muskets may have been suitable for traditional British warfare tactics when armies were pitted against armies on an open plain, the wooded conditions and guerrilla tactics of the frontier may have rendered muskets at a disadvantage with smaller, more maneuverable weapons.

Is there a simple explanation for these width variations? Nothing is simple. Let us examine the variations in gunflint width in the Georgia data for four criteria: time, space, site function, and ethnicity.

Time

The Georgia gunflints exhibit significant differences when viewed over time. The study sites were placed into two categories—Early, or Revolutionary War or earlier, and Late, or post-Revolutionary War. Muskets decrease over time. Pistols increase over time. Or, gunflints tend to get smaller over time.

The use of gunflints spans a period of more than 150 years, so this artifact class offers opportunities to study diachronic change. Gunflint technology changed over time. Flintlock technology replaced matchlocks by the end of the 17th century. Spalls were replaced by blades by the 1780s. Percussion cap technology leads to the end of flintlocks by the mid 1800s. While some flintlocks were still in use by Georgians in the Civil War, most were phased out by the 1840s.

Space

The Georgia gunflints exhibit significant differences when viewed geographically. The data were grouped into two categories-coastal and interior sites. Muskets were more common along the Georgia coast than in the interior. Tradeguns were more common in the interior.

Distance from raw material sources and production sites influences gunflint types. Expense in acquisition plays a role in presence/absence, and value placed on “exotic” flints. Access to ship ballast, which often included European flint cobbles, led to gunflint knapping workshops at several coastal, or near coastal sites. Native Americans applied their bifacial technology to the challenge of securing flints by making gunflints from North American chert, as evidenced at Mount Pleasant. In some situations, where no flints were available, olive green bottle glass was modified to serve this purpose. Glass gunflints, which are another paper topic in their own right, were recorded on both Euro-American and Native American sites in Georgia.

Site Function

The Georgia gunflints exhibit significant differences when grouped by site function. The sites were grouped into military or domestic sites. Military sites contain a higher percentage of muskets. Domestic sites have more pistols. Social factors determine weapons availability, which in turn is reflected by the gunflints discarded. Sites with military garrisons have prescribed arsenals. Some sites, such as Fort Argyle, may have had special weapons, such as carbines, because they were better suited for traveling through thick woods. Civilians likely had more consumer choices than soldiers.

Ethnicity

The Georgia gunflints exhibit significant differences when grouped by gross ethnic categories. Euro-American and Native American gunflint groups were compared. Euro-American sites have more muskets. Native American sites have more pistols. Presumably Euro-Americans had more choices in weaponry than did Native Americans. Native Americans' arsenals were affected by trader's inventories and enemy conquest.

Other factors, such as differential discard, catastrophic dispersal, mortuary practices, or intentional caching may contribute to the gunflint patterning. The context of the gunflint assemblages is important to their interpretation. Surface collections are useful, but carefully excavated data is preferred. Large samples are required for statistical validity and this usually translates to large excavations. Sometimes even large excavations result in low gunflint yields.

Gunflints are a paradox. They are a chipped stone tool, harkening back to the European Neolithic, quarried and knapped by skilled specialists. They are also vestiges of an early military industrial complex, state of the art military technology in the 18th and early 19th centuries. Trained as a prehistorian, I was lured to study gunflints because they represent an artifact that spans two worlds. As stone tools their attributes can be measured and their distributions in relation to quarry sources can be mapped. Because they are made from stone they are

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amenable to sourcing techniques and allow the archaeologist to measure their spatial distributions relative to a specific source. As consumer goods and products of a military complex, they offer clues about access to goods in various geographic regions and among divergent social groups. Gunflints, or the flint used to make a spark in flintlock weaponry, are ubiquitous on eighteenth century sites. Whether European colonial or Native American, they represent a common denominator for comparison of material culture between ethnically diverse groups.

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