

The Interconnection of Foodways: An Investigation of Artifacts and the Connections of Three Individual Groups Throughout the Life of *La Concorde/ Queen Anne's Revenge*

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Abstract:

Artifacts recovered archaeologically from *La Concorde/ Queen Anne's Revenge* (31CR314) represent three distinct social groups that lived, worked, and were enslaved aboard this vessel, the French *La Concorde* crew, enslaved Africans, and pirates. Each of these groups acquired, prepared, and ate their food in diverse ways, both on land and at sea. These relate to variables like culture, rank, and time period. This research will focus on the material culture representing foodways, like fragments of brick stoves, faunal remains, cauldrons, pewter sadware, stemware, and cutlery excavated from the wreckage site. It will also compare foodways artifacts to archaeological collections from other slave and pirate shipwrecks. This research initiative aims to add further information and analysis to understanding experiences aboard 18th-century pirate and slave vessels that sailed across the Atlantic. It will contribute towards other themes such as health, slave trade, 18th century piracy, and French maritime history.

The Interconnection of Foodways: An Investigation of Artifacts and the Connections of Three
Individual Groups Throughout the Life of *La Concorde/ Queen Anne's Revenge*

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Chapter 1: Introduction

Site 31CR314, situated in the North Carolina Beaufort Inlet known as *Queen Anne's Revenge*, has been a source of professional controversy since March 3rd of 1997. It started when the North Carolina governor, James B. Hunt, announced that the legendary Blackbeard's shipwreck had been rediscovered ([Wilde-Ramsing 2012: 110](#)). The site was discovered by treasure salvors, who quickly acted to alert the public of this find. Archaeologists working on the site never made a definitive claim that the site was Blackbeard's ship, but the press continued to identify it as such prior to a thorough scientific investigation. Fifteen years later, after extensive archaeological investigation and excavation, archaeologists Mark Wilde-Ramsing and Charles Ewen published a peer-reviewed article titled *Beyond Reasonable Doubt: A Case for Queen Anne's Revenge* presenting a plethora of archaeological and historical evidence strongly supporting the case for the identity of the vessel as Blackbeard's pirate ship ([Wilde-Ramsing 2012:110](#)).

Queen Anne's Revenge was added to the National Register of Historic Places in 2004 with a reference number of 04000148. It is listed as owned by the State of North Carolina and near Morehead City. According to previous Deputy State Underwater Archaeologist Mark Wilde-Ramsing and Charles R. Ewen's article ([2012](#)), the ship went through several stages in its life. The 300-ton ship began its life as a French privateer during the War of Spanish Succession of the early 18th century. The vessel's name at the time was *La Concorde de Nantes*. After the war, it was reestablished as a slave ship that sailed between Nantes and the West coast of Africa. The ship conducted three voyages between the colonies and Africa in the years 1713, 1715, and 1717.

The theoretical approach to be used in this thesis are Behavioral Archaeological Theory and Site formation process theory. Michael Brian Schiffer states in his book "Behavioral Archaeology", that there are four strategies in performing archeology with this theory in mind.

These four approaches are “using material culture from the past to answer specific descriptive and explanatory questions, general questions in present material culture in order to acquire laws useful for the study of the past, general questions in the study of the past material remains to derive behavioral laws of wide applicability that illuminate past as well as present behavior, study of present material objects in the ongoing cultural systems to describe and explain present human behavior” ([Schiffer 1995: 69-73](#)). The different functions of the artifact will also be discussed by using Schiffer’s theoretical approach of techno-functions, socio-functions, idio-functions, and emotive functions. The artifacts in the *Queen Anne’s Revenge* collection will be studied by focusing on the location of the units they were excavated from, the situation they were found in, how they correspond with each other, as well as the human behavior enacted upon the artifacts from each individual group. This will help answer the questions asked previously and give an understanding of how these individuals lived throughout their daily lives.

In the journal, *The Underwater Archaeology of Red Bay* ([Grenier, et al 2007](#)), they used the processual theoretical approach, behavioral archaeology, through site formation processes. They used this to understand shipboard activities on a 16th century Spanish Basque whaling ship. By using behavioral theory to study the pre-wrecked conditions of the ship, as well as the post-wreck site formation they were able to understand the correlation between the ship remains and the provenience of the artifact context to make a narrative of the daily life individuals faced during this period. The way they used this theory is how this thesis will address Site 31CR314.

Research Questions

This study seeks to examine the foodways of individuals aboard *Queen Anne’s Revenge*, the historical background during the vessel’s service as a slave trade ship named *La Concorde*, and the short but final period it was used as a pirate ship. Investigations into the manufacture,

distribution, and use of several food-oriented artifacts found on site will be conducted. Another goal for this thesis is to determine if the provenience of these archeological artifacts is meaningful in understanding foodways aboard the ship. This thesis will research and compare several other archaeological case studies where archaeologists recovered food items like those on the QAR site. With these objectives in mind several questions must be asked and answered.

Primary Question

1. What were the connecting foodways practiced during voyages by the *La Concorde* crew, enslaved Africans, and the pirates aboard *Queen Anne Revenge*?

Secondary Questions

1. How does material culture from site 31CR314 represent these foodways, like fragments of brick stoves, cauldrons, faunal remains, pewterware, and cutlery, and how does this contribute towards understanding these interconnecting foodways?

2. How do other cookware collections and published research from other sites like HMS *Invincible* (1744-1758), *Henrietta Marie* (1697-1700), *La Belle* (1684), *Whydah* (1715-1717) and the Mardi Gras shipwreck (Early 1800) in the Gulf of Mexico contribute towards understanding that of *La Concorde/Queen Anne's Revenge's* foodways?

3. Are there discernible differences between foodways and food ware of social groups that lived, worked, and were enslaved aboard this vessel – such as the *La Concorde* crew, enslaved Africans, and pirates?

3. How does the provenience of cookware on the site map and knowledge of other foodway artifacts in proximity to cookware enhance understanding of foodways aboard the ship?

Limitations

Several limitations for this thesis need to be addressed. First, this thesis was decided upon and shall be performed during the COVID-19 pandemic. This has made it necessary for this project to be formed from the limited accessibility that North Carolina agencies can provide. This is the case for the QAR conservation lab and East Carolina University. These projects are usually dependent on accessibility to artifacts, labs, and shipwreck sites. To accommodate the restrictions placed on the state and its citizens, this thesis will be centered on research accessible online and email communications with the principal investigator of site 31CR314, Kimberly Kenyon, however, as the years progressed, access to the artifacts became more available.

Other limitations to address are the research to be done in the French Naval Archives when I do not speak French and the incomplete excavation of the site. Due to using the site formation process in behavioral theory, some issues may arise with a lack of data. There also seems to be a lack of research when addressing foodways aboard pirate ships and the kitchen wares they used. Searching the online United Kingdom archival database may have more success than those in the USA.

Justification

By conducting this project, this thesis will contribute towards a scholarly discourse about early 18th-century foodways and cooking wares aboard pirate and slave ships. In addition, 1264 enslaved individuals traveled aboard the vessel during its time as a slave ship. This will add to the discourse of what these enslaved individuals aboard a French slaving vessel such as *La Concorde* may have faced during their crossing of the ocean. This thesis will also benefit the North Carolina Department of Natural and Cultural Resources by contributing meaningful research to the *Queen Anne's Revenge* shipwreck project. Understanding the provenience of artifacts and how they

correspond with each other will show light on shipboard systems of this time. A better understanding of these artifacts and their uses while the ship was still sailing will give voices to both those individuals who served willingly or were captives aboard *Queen Anne Revenge* and *La Concorde*. Archaeological studies on foodways artifacts and artifact distribution are crucial for understanding the dietary habits, subsistence strategies, and socio-cultural interactions of past societies. This study aims to investigate the artifact distributions and foodways artifacts from a 18th century shipwreck site, *Queen Anne's Revenge*, to gain insight into the foodways of the people who used these artifacts.

Importance of the study: The study of foodways artifacts and their distribution can provide information about the types of food consumed, how it was prepared, stored, and served, as well as the social and economic contexts in which food was consumed. By analyzing artifact distributions, it is possible to gain insight into the spatial organization of activities related to food production, processing, and consumption. For example, we can identify the locations of cooking and food storage areas, as well as the frequency and distribution of different artifact types, such as cooking pots, plates, bowls, spoons, and storage containers.

Expected outcomes: This study hopes to reveal the dietary habits and subsistence strategies of the people who used *Queen Anne's Revenge*, as well as their social and economic contexts. By identifying the spatial distribution of different artifact types, further insight into the organization of food production, processing, and consumption, as well as the social and economic factors that influenced these activities can be gained.

In conclusion, this study on foodways artifacts and artifact distribution is of great significance for understanding the dietary habits, subsistence strategies, and socio-cultural interactions of past societies. By using archaeological methods and Statistical analysis, insight into the spatial

organization of food-related activities, as well as the social and economic factors that influenced them can be revealed. The results of this study will contribute to the broader field of archaeology and provide valuable information for future research.

Chapter Outline

The rest of this thesis will be an in-depth discussion of what was previously stated in this introduction. Chapter two will discuss the history of not only *La Concorde/ Queen Anne's Revenge*, but also the three groups of individuals and their common foodway practices that sailed aboard the vessel, as well as the artifacts themselves and the history of how they served their purpose during this time. Chapter three will discuss the methods and theory applied to further answer the previously stated questions. Chapter four will discuss the artifacts pertinent to this thesis and their current conditions. Chapter five covers the histories and relevance of the sites used for comparative analysis of similar vessels, individual lifeways at their time of sail, and the artifacts found that may be relevant. Chapter 6 is the concluding chapter of this thesis and will cover the analysis and conclusions of this thesis by answering the thesis questions, whether that be negative or positive. This will in turn provide proper evidence that can benefit any future research into these topics.

Chapter 2: History

The History of La Concorde de Nantes/ Queen Anne's Revenge and its People

La Concorde de Nantes started its life as a privately owned privateering vessel acting in the interest of the French government in the War of Spanish Succession. The vessel was privately owned by a merchant from Nantes named Rene Montaudouin. The war lasted from 1701 to 1713 with the conflict between England and France allied with Spain, however, the war involved a majority of Western Europe and began when Leopold I, the King of Hungary, sent troops to Savoy to retrieve the rights to the Duchy of Milan. France wanted to be prepared for war but also wanted to try and negotiate peace before an actual war could begin. After Leopold I sent out his troops to Savoy, King Louis XIV sent troops to the Spanish-owned Netherlands as well as envoys to negotiate a way to keep the peace. This attempt failed and the war was underway. During the war, France's system of funding the "arms of the state" called Extraordinaire des Guerres, began to fail. In 1701, it became apparent under the management of a new secretary of state who also kept the position of *contrôleur général*, Michel Chamillart, there was no clear financial hierarchy within this system. With the overburden of the two positions and his failure to perform his guardianship of the system properly, the debts of the Extraordinaire des Guerres inflated giving France a worsening financial disadvantage throughout the war ([Rowlands 2012: 135](#)). By 1712, France saw many defeats on the battlefield and in the political world. The expenditure of the war along with supplies needed for said war was on its last leg. The gunpowder industry could no longer keep provisions and the government could barely scrape together the 1.23 million *livres* needed for troop wages assigned to the months of January through March ([Rowlands 2012: 174](#)). With these large losses in funding and workforce, King Louis XIV decided to begin peace negotiations. Thankfully, France was not the only military

power feeling the effects of this war and as such was not dismissed when talk of peace negotiations began. The Treaty of Utrecht was finally signed in April of 1713.

This same year, France began converting many of its ships into slaving vessels. With the war out of the way, France needed a way to get funds flowing again so they focused on restarting colonial investments. This meant a shift in focusing on the French transatlantic trade, the trading, selling, and bargaining of enslaved individuals. The route used for these voyages is now known as the French Atlantic Triangle. With the heightened demand for financial recovery, France in the 18th century saw 80% of its total slave trade participation during this time. ([Miller 2008: 13-22](#)).

La Concorde, Queen Anne's Revenge, and its End

With the conversion of the privately owned vessel *La Concorde de Nantes* to a slaving vessel, it began its first slaving voyage in April 1713. The 250-tonnage vessel left Nantes' port and headed for Judah, Africa with 62 crew members and 16 cannons. Once there, the crew obtained 418 enslaved individuals, then voyaged on to Martinique where they were traded. The vessel completed another slaving voyage in February 1715, this time retrieving 331 enslaved individuals from Judah to sell. By 1716, trade became open to the public if it was operated out of Rouen, Nantes, La Rochelle, and Bordeaux ([Miller 2008: 22](#)). *La Concorde* had its final voyage on March 24, 1717. With its Captain, Pierre Dosset, and over 70 men crewing the ship they traded for 516 enslaved individuals from the west coast of Africa. The port was in Juda, on the coast of Benin ([Watkins-Kenney 2022: 51](#)). While continuing the Atlantic triangle route towards Martinique in the Caribbean, the vessel was overtaken and apprehended by pirates. This event was made relatively easy for the pirates due to a sickness that ravished the ship.



Figure 2:1. Blackbeard Copperplate Engraving. Image is taken from “A general history of the robberies & murders of the most notorious pirates.” by Charles Johnson, Published in 1724.

Since leaving the African port, 16 crew members and 61 enslaved had died while 36 men were currently sick. This left only 21 healthy crew members to defend *La Concorde* when it was

approached by two pirate vessels, one of which was armed with 12 guns and equipped with 120 crewmen and the other armed with 8 guns and equipped with 30 men. The exchange was short, and the pirate crew led by the renowned Captain Blackbeard overtook the vessel. The French crew and the enslaved were then left on the island, Bequia, and given the smaller vessel, leaving with *La Concorde* and 14 members of the French crew ([Harris 2022: 54](#)).

Captain Blackbeard, also known as Edward Teach, renamed the vessel *Queen Anne's Revenge* marking the beginning of its short life as a pirate vessel. (There are many ways his name was spelled. For the purpose of this thesis, he will be addressed as "Teach"). Teach began to wreak havoc with the vessel for months traveling from the Caribbean to the Atlantic Coast of North America. *Queen Anne's Revenge* along with *Revenge*, *Adventure*, and a fourth unnamed sloop arrived off the coast of Charles Towne where they began to blockade and seize the many ships arriving and departing the port ([Moore 1997: 32](#)). Teach soon decided to leave the port and retreat toward safety. He and his other vessels headed toward Beaufort Inlet, known as Old Topsail Inlet. Both *Queen Anne's Revenge* and *Adventure* ran aground on a sandbar where they were looted of all deemed valuable and abandoned by Teach and his crew.

French Slave Trade History

Between 800 and 1900 CE an estimated 10 million Africans traveled across Africa as victims of slavery. Islamic law for enslavement did not depend on race, the color of skin, or any other reason besides the driving fact that the enslaved individuals were not Muslim ([Toler 2017: 9](#)). Merchants traded enslaved people across the continent of Africa, from the Indian Ocean to slave markets in the Persian Gulf, Western India, and the Red Sea. These markets were diverse with individuals from Africa, Central Asia, Eastern Europe, and Western Europe ([Toler 2017: 10](#)).

European involvement in Africa began in 1482 when interest in gold dust by trafficking from Sub-Saharan Africa began to rise. They began setting up trading posts in North Africa but did not stray beyond there because they were not allowed access to Timbuktu ([Toler 2017: 19](#)), however, major trading did not begin until Prince Henry of Portugal showed interest in finding a route through the sea to access the African Coast. Henry captured and colonized Madeira and the Azores and oversaw the establishment of wine, timber, and sugar as export commodities. In 1482, Portugal entered the slave trade when two of Henry's ships retrieved 12 Africans and transported them back to Portugal ([Toler 2017: 21](#)). This marked the beginning of the 300-year tragedy involving capturing, transporting, buying, and selling of about 14 million individuals (about twice the population of Arizona) seen as merchandise.

In March of 1642, French involvement in the slave trade began when King Louis XIII declared the colonization of Antilles, however, this is not when the transport of enslaved people into French territory began. In the 1630s two events happened that could arguably be the actual beginning of the French slave trade. First, the *letters patentes* were signed allowing trade in Africa. The other event was Cardinal Richelieu's official granting of monopoly over Senegal trade by groups in Dieppe and Rouen. Even though permissions were not signed until 1633, enslaved individuals were present on the Island of Saint-Christophe since 1626 ([Miller 2008: 19](#)). Interestingly, France's governing ideals on the slave trade varied. With a push from the church, it was believed that King Louis XIII saw that enslaving the people of Africa was the only way to save their souls. Otherwise, they would not be willing to listen to the word of God. This was used as the justification for slavery in France for years to come.

In 1664, Jean-Baptiste Colbert saw the establishment of the *Compagnie des Indes Occidentales* to control France's trade. The company oversaw transport of Africans to Antilles

and the Transatlantic Slave Trade, as well as the transportation of captives to the new world in 1664 and controlled slave trade in the Indian Ocean in 1735. This company had control over France's trade and was the governing power over all of France's colonies. It oversaw the establishment of plantation systems and sugar refining on the islands of established French Colonies. With these new sugar plantations came the demand for labor ([Miller 2008: 20](#)).

French Trade Routes

In 1635, France conquered Guadeloupe and Martinique. Next was Saint Louis, Senegal in 1659, and in 1677 Goree was brought under the control of France. These islands became prominent locations for French slave transport ([Miller 2008: 20](#)). In just 21 short years the natives of Guadeloupe no longer inhabited the island. It was now home to 15 thousand French-associated individuals, three thousands of whom were enslaved.

Trade in the Atlantic took the form of a triangle for French shipping and led to the "French Atlantic Triangle." This does not mean all trade vessels followed these routes. Still, they are the main routes French ships were restricted to because of the *Exclusif* that Jean-Baptiste Colbert established preventing trade with certain empires ([Miller 2008: 5](#)). Another limiter to French trade was the *Asiento de negros* treaty between Britain and Spain that insured British monopoly over the trading enslaved with Spanish colonies. The colonies were to prepare 4,800 enslaved individuals per year over 30 years. This means France could not interfere in trade with Spain.

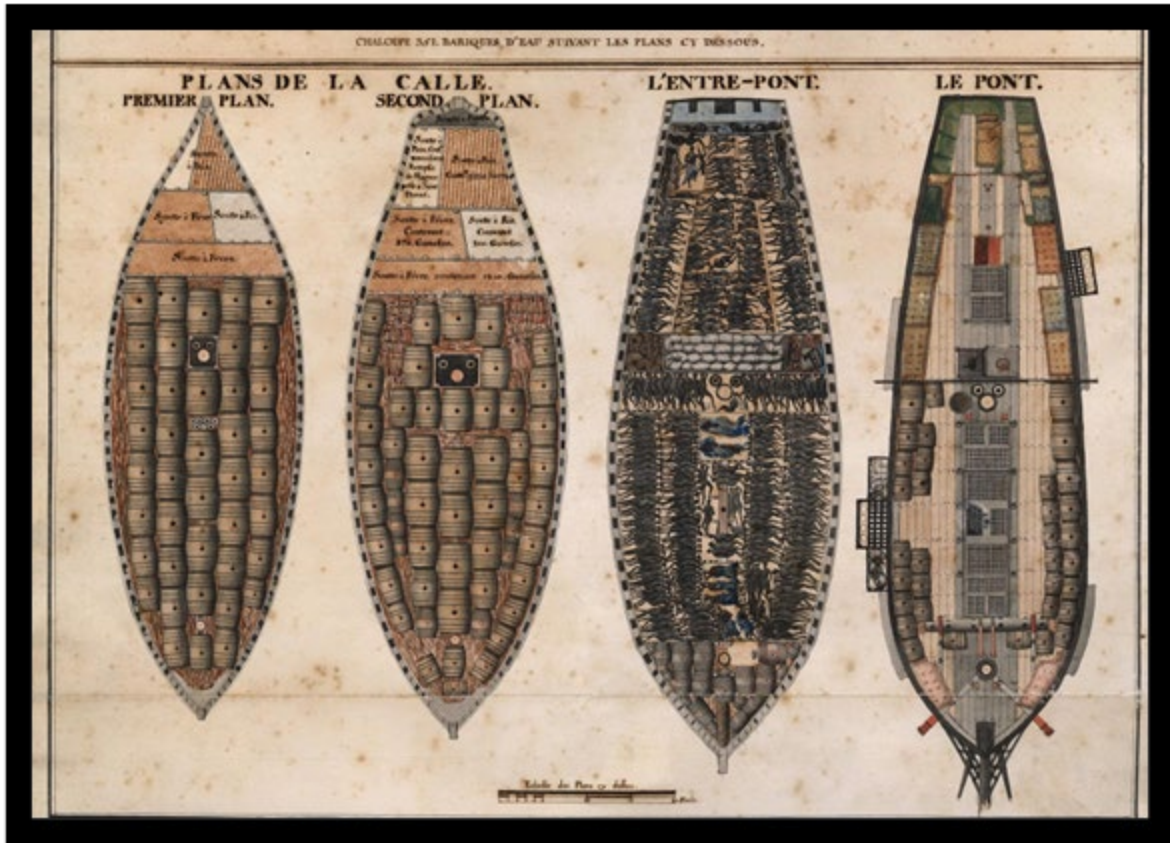


Figure 2:3. Storage plan for slaving vessels, image taken from the website <https://memorial.nantes.fr/en/nantes-the-slave-trade-and-slavery/>

The ships would leave the main port cities in France such as Nantes, Bordeaux, La Rochelle, and Le Havre, and sail south towards Africa with the products merchants were willing to trade the enslaved for. These items would consist of weapons, textiles, and wine; however, some other menial products might be included if in demand at the time. The products shipped and a merchant's price were dependent on the monetary value placed on every enslaved person. If one was healthy and strong, they may be worth more than a person with a weaker physical constitution. The products used to equal the trade of human life included items that could be manufactured such as textiles, cotton, iron and brass products, sugar, and rum (Stein 1979: 41). It can be argued that the slave trade was only possible because the value of human life in Africa was valued exponentially lower than anywhere else. Whereas, when those humans were bought

at a low price and then sold elsewhere, the ship could not contain the amount of product they got in exchange for that human life. According to Olaudah Equiano, his life was equal to that of 172 cowries in Africa ([Equiano 1745: 36](#)). While he was considered that much in Africa, he would be valued equal to nine thousand pounds of sugar in the Caribbean, as described by Miller ([Miller 2008: 16](#)).

After completing the trade of Africans in the ports of Senegambia, Bight of Biafra, Bight of Benin, Gold Coast, Windward Coast, and Sierra Leone, these vessels would leave for the Caribbean. This included locations such as Guadeloupe, Basse-Terre, Grande-Terre, Les Saintes, Marie-Galante, La Désirade, and Martinique making trades for products in demand in Africa. The French colonies in the Caribbean dominated these areas along with the British and Spanish. The demand for sugar exploded and in turn, so did the demand for human labor. This is where many of the enslaved were traded and the ships would then be loaded with sugar, molasses, and rum ([Stein 1988: 18](#)).

These trade vessels would then make their way to port cities in the Americas with their high demand for sugar and human labor. These locations included but were not exclusive to San Miguel de Guadalupe, El Salvador, Costa Rica, Florida, Virginia, and South Carolina. The total ports in the “New World” reached 179. The vessels would complete the triangle by obtaining the products produced from slave labor in these regions and returning to locations in France, the French Caribbean, and beyond. The items traded in the Americas in exchange for the enslaved and sugar were tobacco, coffee, furs, cotton, rice, and other heavy labor products ([Stein 1988: 16](#)).

Foodway Practices for the Individual Groups

French Sailing Food Practices

The structure and contents of Navy and privately owned vessels provisions remained unchanged from 1689 to 1763. Both institutions received produce through victuallars, people who give out the rations to sailors at the expense of the ship, that have been approved through the French government. This had a similar timeline with the British Navy Rations which also remained unchanged from 1677 to 1740. A discussion on the health of naval sailors and the connections to their diet and the development of scurvy did not begin until 1763. Due to the Seven Year War, many navy men lost their lives, not only to battle but to the sicknesses that came with life at sea. France saw a need to develop change onboard French ships to combat sicknesses such as scurvy, however, before this change, provisions given to naval men were the baseline for all European navies, but the food given varied aboard the ship depending on the rank of individuals. Regular sailors were given the least desirable food, of course, it was still better than the gruel given to the enslaved, while the higher-ranking officers were given the freshest food ([Mandelblatt 2021: 330, 336](#)).

Food provisions of French ships were purchased from victuallars and decided by the individual captains of the vessel based on crew size and voyage length. Each sailor would get 18 ounces (about 532.32 ml) of biscuits and $\frac{3}{4}$ pint of wine watered down with $\frac{3}{4}$ pints of water every day. Estimated water provisions equaled a cask of water per person ([Watkins-Kenney 2022: 162](#)). Water and wine were not the only drink drunk often on board. Other alcohols such as rum, brandies, gins, and beers obtained from different regions would be consumed. Daily rations were calculated by a weekly distribution for a group of seven men. Rations consisted of 84 ounces (about 2.38 kg) of salted pork, 3.5 pounds of salt beef, 84 ounces (about 2.38 kg) of dried cod, 28 ounces

of dried peas, porridge, and beans, 40 ounces of rice, and 0.476 liters of olive oil for 100 men ([Mandelblatt 2021: 335](#)). If the ship was stationed in a port, sailors were given a ration of half a pound of a loaf of bread per day. The rations given to the Navy were like the rations given to civilian vessels such as merchant vessels, privateers, whalers, fishing crafts, and slave ships as well as most of the other European nations of the 1700s.

Sailor's biscuits were a common food item given to the men. If biscuits were not available replaced with rusk bread, fermented bread that is sliced and baked twice, though the ship cooks usually did not bake these twice and relied on biscuits made from just flour and water during voyages. Sailors were provided a lot of meat in their rations to give them a proper protein diet. A ship would not only rely on rations for the full voyage. Some ships would also have live animals stored onboard that consisted of a limited number of pigs and chickens to be butchered and salted during the voyage. This method was more common on civilian vessels than the slaving vessels that had many sailors on board. Beef was salted and prepared before the voyage, usually at port ([Horrell 2017: 363](#)). In a private correspondence recorded in *Remarks on the Present Condition of the Navy, and Particularly of the Victualling*, from 1700s London, it tells how sometimes corrupt victuallers would provide less wholesome meat. They would give barrels of meat that include bones, cheeks, hearts, and other pieces of an animal that lacks good meat to make up the weight needed. To obtain this meat needed for a voyage, farmers would bring live produce to the market in the fall and butchers would kill and process them in the winter months. These meats were preserved in salt in brine for months until they were sold to the ships and were consumed by the sailors ([Horrell 2017: 365](#)).

If meat was no longer available after all provisions were eaten, substitutions of flour combined with raisins, currants, or suet were used. This became more of a commonality in 1731

Britain due to an increase in the need to preserve the health of the sailors. Pudding bags were provided in place of one day of beef. These bags were just flower and suet boiled together. Substitutes also depended on the region where the ship was sailing. If a ship had stopped at ports located in South Carolina, they might have obtained rice instead of fish or oatmeal. Olive oil was a staple for French ships, while the British substituted butter and cheese for olive oil. If a ship were local to France and headed to a trading area, they would bring aboard Indian corn, beans, chickens, and other live animals. Fishing vessels usually carried fish of course and would sometimes use the oil from the fish as a commodity to sell ([Fictum 2018:1](#)). As some of the substitutions mentioned were only an occasional event for the sailors, it was commonly given to the enslaved on these ships ([Mandelblatt 2021: 339](#)).

Enslaved Life Aboard a Slave Ship

Due to the dangers ever present when sailing, routine is what functioned best aboard slave ships. It was necessary to keep the enslaved complacent to avoid revolts and healthy enough to survive the voyage, though the bare minimum concern is the best description for health considering the treatment they faced. The amount of attention to health varied depending on the captain of the ship. This concern was driven by the loss of profit that comes with the loss of life. They boarded the vessel naked and with no possessions, led below deck, separated into two groups, one for women and one for men. They would then be placed into partitioned apartments six feet in length and 16 inches wide, so small they had to lay on their sides. ([Falconbridge 1788: 20](#)) During the day, they would be brought on deck and chained in the morning for fresh air if the weather permitted. They would be forced to exercise by dancing to music from instruments that originated from Africa. Some would even be given tasks on the ship. These were methods to keep the enslaved complacent enough to avoid revolts. These compact situations spread diseases along with

poor treatment and hygiene quality included yellow fever, smallpox, ophthalmia, and dysentery ([Miller 2008: 51-52](#)). A sailor's treatment of the enslaved could be extremely cruel for the slightest infraction. They would face whipping, commonly by a Manatea strap or a cat o' nine tails, random acts of violence, such as beatings, rape, and force-feedings ([Rediker 2007: 38](#))

The food fed to the enslaved were the cheapest and least desirable substances the ship carried. Of course, this also varied from ship nationality to location of sail. It is not surprising that the ship's cook would save the best food rations for the sailors while feeding the captives some type of gruel. Enslaved individuals were fed two meals a day, one at 8:00 o'clock in the morning and one at 4:00 o'clock in the evening. The enslaved were separated into groups of 10 and each group received a tub of food and spoons, as can be seen in Figure 4 ([Tattersfield 1991: 121](#)). Each person was given a small amount of water with a pannikin, this equaled about half a pint. On a special occasion, they were even given a grog. Mealtime was the only time water was given unless otherwise directed by the ship doctor ([Rediker 2007: 22](#), [Falconbridge 1788: 21](#)).



Figure 2:4. "Transport des négres dans les colonies", *Slavery Images: A Visual Record of the African Slave Trade and Slave Life in the Early African Diaspora*, accessed January 27, 2022, <http://www.slaveryimages.org/s/slaveryimages/item/3000>

The meals enslaved individuals received every day consisted of horse beans boiled with Muscovy lard, boiled yams, and rice, and they would sometime be given a gravy-like sauce called slabber sauce. This consisted of palm oil, flour, water, and pepper (Falconbridge 1788: 22). If these food items were not available, the substitutions ranged from maize, cassava, roots, and peas while substitutions for Muscovy lard were suet or salted herring. The horse beans and rice were usually purchased from European ports while the roots, yams, and corn were purchased from the ports along the African Coast. These food items were familiar to the enslaved so it was not difficult for them to eat, however, the unfamiliarity of horse beans would be difficult for them to digest and result in a worsening of sea sickness. Beef or pork was sometimes distributed, but it was from the bottom of the barrel, and so coated in salt from the brine that the small amount of water provided

to them was never enough. In the French colonies located in the Caribbean, salt beef was seen as the food of sailors and the enslaved because of the common connection between the two ([Mandelblatt 2021: 342](#)). Some enslaved individuals refused to eat during the voyage, attempting to starve themselves. It was believed that in death they returned to their homeland. If these individuals were discovered to be attempting suicide in this method by the crew they were beaten, threatened, hot coals would be held to their lips, or force fed with a device called a speculum oris that forces the jaw to open allowing food down the throat ([Tattersfield 1991: 142](#), [Falconbridge 1788: 22](#)). An image of this item is provided in Appendix D.

Pirate Life Aboard

Between 1716 and 1718 the total number of individuals involved in active piracy totaled 1800-2400 Anglo-Americans ([Rediker 1981: 205](#)). These individuals originated from positions such as navy sailors, privateersmen, or merchant mariners who understood seaboard life. Life aboard a ship was difficult, and these individuals experienced the harsh reality of food shortages, severe treatment, low wages, high death rates from accidents and disease, as well as the ship hierarchy and Captains who abused their authority through fraud and violence ([Rediker 1981: 207](#)). With lives like these, it is no surprise these men turned to a life of piracy where treatment, food, and wages were better.

Written articles drawn up before a vessel took its voyage ruled the crew with rigidity, dispelling the issues of hierarchical powers with captains, making them just another member of their crew. Captains were to be elected by their own crew, not positioned because of a title, and can be dismissed by the majority vote if the crew felt they did not govern the ship appropriately. These articles also addressed plunder distribution, appropriate discipline for certain actions, and

allocated authority ([Rediker 1981: 209](#)). The life of piracy may not have been easier but there is a certain appeal to having one's opinion count when living in such dangerous conditions.

Food for individuals living the life of piracy could become tragically difficult to obtain. The ship and crew would not receive rations like that of naval ships so they would have to rely on food they could obtain from anywhere. Ships engaging in piracy would get their food supplies from any ships they had seized or any settlements on the coast that they preyed upon. The sea provisions illegally apprehended were usually what was normally received before a voyage, but sometimes there were exceptions like marmalade and preserved peaches. The pirates would go ashore and rob civilians or ransom settlements for provisions. In the 1690s, French Raiders would usually target cattle or cattle ranches. While the pirates who raided the western coast of the Americas would receive flour, fish, fowl, pigs, goats, and any other cattle. They would also drink chocolate that was raided from Spanish territories in the central Americas ([Rediker 1981: 209](#)).

Historical Background of Artifacts

The artifacts have a history associated with them that can be researched through makers' marks, materials used in their construction, or the uses that the artifacts had depending on location and culture. It is up to the researchers to find how these artifacts fit into the narrative of a found object's life story.

One of the challenges of cooking on a ship during the 18th century was the limited space and resources available. Cooks had to be creative in their use of ingredients and cooking techniques to ensure that meals were both nutritious and flavorful. They also had to contend with the ever-changing conditions at sea, such as rough weather and limited access to fresh ingredients. Overall, cooking vessels and other foodway items used on ships during the 18th century played a crucial role in the daily lives of sailors and crew members. They were essential

tools for preparing meals and ensuring that sailors had the sustenance they needed for long voyages at sea.

The following six categories of artifacts were chosen due to their main functions and connection to foodways, whether they were used as tools or products left over from consumption. Several item categories in the total site artifact collection were left out of these categories even though they have some connection to foodways due to the sheer volume of artifact items that would require a more in-depth study focusing on their multiple functions not pertinent to foodways.

Cauldrons

In coastal Africa, during the early 18th century, cauldrons are commonly used for fetching water from wells. The copper cooking cauldrons with tin-coated insides played the role as water storage containers in their homes ([Cook 2016: 99](#)). These vessels could also serve as washing, cooking, and salt-making vessels in this region and time. Aboard a ship though, the main uses for cauldrons were preparation for food or they held substances for hull repair such as pitch.

The terms kettle and cauldron were used interchangeably throughout history and many historical sources use kettles when describing these cooking items ([Alpern 1995: 5](#)). For this thesis's purpose, cauldrons and kettle fragments will be referred as cooking vessel fragments due to these terms used interchangeably in *La Concorde/ Queen Anne's Revenge's* time of sail. These vessels could be made from copper, brass, or tin and may have lids and handles. Copper was an immensely popular material for cookware because it provided excellent thermal conductivity and heated the food appropriately ([Horrell 2017: 366](#)).

Some cooking vessels were called band kettles because they were strengthened by wire, iron, or copper strips ([Alpern 1995: 8](#)). These copper kettles banded with iron originated from Basque ports along the French Atlantic coast between 1580 and 1600 and made with red copper. The iron used was usually for the handles in the support bands. The average weight of these cooking vessels is around 12 lbs. The copper used for the making of these items came from several places. Markets of southwestern France would receive Swedish copper competing with central European copper that the coppersmiths of Bordeaux used to make cauldrons. In the 18th century, brass cauldrons started to become more popular. Extensive utilization of these types of cauldrons can be seen after the 1600s. Iron soon replaced brass because it was a sturdier material and took less maintenance while copper vessels would periodically need to be repaired because the bottom, the most fragile part of a cauldron and kettle, usually produced holes and cracks ([Cook 2012: 99](#)). The size of kettles and cauldrons can range from 10 to 15 millimeters for small cauldrons and 50 to 55 millimeters respectively for larger cauldrons ([Fitzgerald et al 1993: 47-49](#)).

Cauldrons and kettles are such a common item among households and ships that it should be no surprise these items were a common demand among trade as well. Basins and other containers such as cauldrons were in the greatest demand by African traders in the early decades of Portuguese contact and trade. Copper and brass were metals favored at the beginning of trade with Africa because these were easier to manipulate and work with ([Cook 2012: 99](#)). The annual sail of Dutch trade carried hundreds of thousands of pounds of trade goods including large numbers of cauldrons. Iron banded copper cauldrons were a primary trade item in the Basque trade. They appeared in large numbers and are listed first in trade records. These kinds of cauldrons were the most expensive item in Basque trade cargo, however, this is not the case for

the French trade, because copper cauldrons appear in a much smaller number in French trade records. Some cargo ships were found to only carry about four copper cauldrons that may have been for the use of members of the ship crew and not for trade at all ([Fitzgerald et al 1993: 52](#)). There are two accounts of people working on slave ships that mention copper cauldrons used to prepare meals for the slaves aboard the ship. The first account came from James Barbot, from the Albion frigate in 1699, when he mentioned setting up a copper cauldron aboard for the slaves. The other account came from the master of the Hannibal, Thomas Phillips, when he made a comment of a large copper furnace used in preparing meals for the slaves aboard his ship ([Moore 2008: 32](#)).

Faunal Remains

During the 18th century, meat was a vital source of protein for sailors and crew members on long voyages at sea. Meat was a precious commodity on board ship, the cook would try to make meat last as long as possible while on long voyages ([Druett 2001: 13](#)). One of the primary ways that meat was preserved on ships was through salting. Salted meat, such as beef, pork, and fish, was packed in barrels and stored in the ship's hold. The meat was often heavily salted to prevent spoilage and was soaked in water before cooking to remove some of the salt. Another common method of preserving meat on ships was through smoking. Meat, such as bacon and ham, was hung in the ship's smokehouse and smoked for several days to remove moisture and prevent spoilage. This method of preservation was particularly popular on whaling ships, where fresh meat was hard to come by ([Migaud 2011: 286–288](#)).

In addition to salting and smoking, sailors and crew members also hunted for fresh meat when possible. Fishing was a popular activity on board ship, and sailors often caught fish and other seafood to supplement their diet. When the ship was close to land, sailors might also hunt

for game, such as deer or wild boar. One of the challenges of meat preservation on a ship during the 18th century was the risk of spoilage and disease. Salted meat was often infested with maggots and other pests, and it could be difficult to keep fresh meat from spoiling in the ship's humid and cramped conditions. Cooks had to be vigilant in their inspection of meat to ensure that it was safe to eat ([Migaud 2011: 290](#)).

Pewterware of the 18th century

During the 18th century, pewterware was a popular material for household goods such as plates, cups, and cutlery. Pewter was a soft, malleable metal made from a combination of tin, copper, and other metals. It was a relatively inexpensive material widely used by the wealthy and working classes.

The pewterware industry in the 18th century was primarily centered in England, with many pewter manufacturers located in London and other major cities. Pewter was also produced in other European countries such as Germany, France, and the Netherlands. England was a major exporter of pewter goods. Pewterware was often traded along with other goods such as textiles, tea, and spices on merchant ships traveling between Europe and the Americas. One of the most important centers for pewterware trade during the 18th century was the city of Philadelphia in the American colonies. Philadelphia was a major port city and served as a hub for trade between the colonies and Europe. Many pewter manufacturers in England and other European countries exported their goods to Philadelphia, where they were sold to merchants and consumers throughout the colonies ([Fennimore 2012: 2](#)).

In the 16th century, the standard tin for pewter plates were alloyed with 1-3% copper and 0.15-0.35% bismuth. This is the range of pewterware the vessel *Mary Rose* contained. By the 18th century, the pewter guild had set four official qualities. The first one is *Fine*, this is 91-98%

tin that all sadware vessels should contain. The copper, antimony, and bismuth added are usually to strengthen the tin. The next quality is *Lay* metal used in spoons and measures. This permits the tin item to contain 16% lead. After, *Trifle* metal is used for buttons, toys, and hollowware. This is permitted to have no more than 10% lead in the tin. The final quality standard is *Black* metal. This contains up to 40% lead and is used in items that are not related to food ([Watkins-Kenney 2022: 126-127](#)).

During the production of pewterware, 1,298lbs of tin alloyed with 45 pounds of temper can produce up to 604 items. The temper is 30% copper and bismuth/antimony premixed with 70% tin. This is necessary due to the high temperatures required to melt copper. If they were to try and melt with the main mixture of tin requiring a lower melting point, then too much metal would be lost in oxidation. Many pewterers specialized in either flatware or hollowware and would trade other pewterers to supplement their sale stock. This was made relatively easy in England due to the tin mines under the country's control. England would forbid the export of pure tin so only finished products could be bought and shipped to other places with a pewter demand ([Watkins-Kenney 2022: 111](#)).

Stemware of the 18th Century

After the fall of the Roman Empire, where glass blowing began, the popularity and art of glass blowing died down and didn't pick back up until the middle of the 1600s. Glassware and bottles were expensive and seen as luxury items in the 17th and 18th century, however, glass bottles soon became a common item for trade and transport of liquids and could be reused if needed. These items tentatively survived the life, wrecking, and the long rest of the vessel in turbulent water of costal North Carolina. Glass stemware is a delicate and expensive item to

have, and to have them on board gives an idea of how the turn of the century has treated sailors who can afford to have such luxuries. ([Carnes-McNaughton & Wilde-Ramsing 2008: 2, 13-16](#)).

Cutlery of the 18th Century

Cutlery refers to knives, forks, and spoons, and it was an essential part of the tableware used on ships during the 18th century. Like other types of tableware, cutlery was often made of metal, such as silver, pewter, or brass, although some items were made of wood or bone.

The design of cutlery during the 18th century varied depending on the region and the social class of the people using it, however, some general trends can be identified. For example, knives typically had straight blades with pointed tips and a wooden or bone handle. Forks had two or three tines and were often used for spearing meat or other foods. Spoons had a round or oval bowl and a long handle for stirring or scooping food. One of the challenges of using cutlery on ships was its maintenance. Saltwater could cause metal to corrode, and the close quarters of ship life made it difficult to maintain hygiene. As a result, some sailors and passengers brought their own cutlery with them on voyages. Some would even have their initials carved on their personal utensils; however, these items are rare to find, and most of their design and materials reflected the 18th century social and cultural norms.

Ship Stove

Bricks in the 1700s were made with a wooden mold out of clays available to the brick maker, depending on location. They were then fired in a kiln. The French called bricks “*brique*.” Brick found on a ship could mean several things depending on the location of where it was found. Usually, brick and tile found means there was once a galley stove on board. Long journeys with the goal of transporting individuals require a way to provide hot food. This was managed by the ship's stove. Having an open flame on board a wooden vessel in the middle of

the ocean is always a significant risk, so to combat this, many different forms of the ship's stove were produced through time.

An important aspect of the foodways aboard a ship would be the ship's stove used to cook food in cauldrons. Food preparation is an extremely important aspect of life aboard a ship and the crew and passenger's health, morale, and communal relationships. These stoves also served to heat the hull as well as keep it dry. It would also be a location to gather sick crew members to keep them warm. The ship stove was also a hotspot for social gatherings among the crew members to share stories or socialize ([Horrell 2017: 361](#)). Though, the aspect that the ships' stove is a social location of the ship should not come as a surprise because it is essentially the kitchen. It is a domestic place that is seen as a backstage in a home or somewhat intimate place between humans ([Baatsen et al 2014: 167](#)). A ship's stove is usually below deck or in a deckhouse. It must be fireproof and fuel efficient for long voyages. It must be taken into consideration how extremely dangerous it is to cook aboard a ship because a single spark can ignite a large fire aboard a wooden ship. The weight of the stoves and its fuel source is something that must be thought of when installing a stove. These necessary thoughts of safety are what pushed cooking innovations on ships throughout time.

The first account of a ship stove comes from a 7th century A.D Byzantine vessel. It was excavated in 1960 and was reconstructed by archaeologists. The galley, where the ship stove was kept, was approximately 300 centimeters (about 9.84 ft) by 150 centimeters (about 4.92 ft) and was in the hull at the stern of the ship. It had a hatch that led down into the galley which could have been used as an entrance or a smoke bay for when food is prepared. The stove was made from a wooden platform covered in a clay base with rows of evenly spaced iron bars acting as a grill. The iron bars also acted as a platform to hold two large copper cauldrons found on the site.

A fire box was constructed atop the iron bars so that open flames were possible while grilling meat ([Bass & Doornink 1982](#); [Horrell 2017: 362, 368](#)). As this is the earliest ship stove found, it can be said that this form is the basis for the many different ship stoves developed throughout time.

In the late 15th and early 16th century, iron cook stoves were commonly made to prepare meals. They are mounted on the deck near the waist of the vessel. It consisted of a four-sided box with a layer of sand in the bottom for protection. A rod is usually suspended across the top of the cookstove so that cauldrons and other cookware can be suspended above the flames. This was not the only type of stove during the early 16th century. Some vessels had open brick fireplaces that had grating, rods, and hooks for the suspension of cauldrons ([Horrell 2017: 270](#)).

Summary

Having a historical context of the vessel itself, the strife happening during its time of sail, the people themselves, food practices, and the background of artifacts from site 31CR312 adds to the discourse on these topics. The vessel essentially lived three lives and in turn three purposes. First was its life as a vessel for the War of Spanish Succession. Then, it became important for the transport of the enslaved at the height of the transatlantic slave trade. Finally, it lived a short life as a pirate vessel, commanding fear from merchant ships at the hands of the infamous Blackbeard. During all this, the personal lives of the individuals living, surviving, and dying were woven into the very fabric of its existence. This was not just a ship, it was a home to some, treasure to others, and hell itself for many.

Chapter 3: Methodology and Theory

Theory

The theoretical approach to be used in this thesis is Behavioral Archaeological Theory and Site Formation Process Theory. Behavioral Archaeological Theory (BAT) and Site Formation Process Theory (SFPT) are two important concepts in archaeology used to understand how past human behavior and natural processes shaped the archaeological record.

Behavioral Archaeological Theory

Behavioral Archaeological Theory (BAT) emphasizes the study of past human behavior to understand the formation and interpretation of the archaeological record. The theory suggests that understanding human behavior is essential for interpreting the archaeological record and that the behavior of past humans is reflected in the material culture they left behind. BAT is concerned with the ways in which humans interact with their environment and how this interaction is reflected in the archaeological record. It emphasizes the importance of studying the context in which artifacts are found, including their spatial distribution and associated features, to understand the behavior of the people who created them. Michael Brian Schiffer states in his book “Behavioral Archaeology”, that there are four strategies in performing archeology with this theory in mind. These four approaches are “using material culture from the past to answer specific descriptive and explanatory questions, general questions in present material culture in order to acquire laws useful for the study of the past, general questions in the study of the past material remains to derive behavioral laws of wide applicability that illuminate past as well as present behavior, study of present material objects in the ongoing cultural systems to describe and explain present human behavior” ([Schiffer 1995: 69-73](#)).

In Schiffer's other work, "Studying Technological Change: A behavioral Change", he discusses fundamental constructs. This is used to provide a general and versatile historical framework for an artifact. He says the most effective way to do this is to apply the functions of an artifact's history. These functions are separated into four categories. First is the "techno-function" of the object. This is the basic use that the object is made for. Schiffer describes it as, "the utilitarian function involved in manipulating, storing, or transforming matter and/or energy" (Schiffer 2011: 23). The second function is the "socio-function" of the object. This is when the object is used in a symbolic way with humans in social groups. The third function is 'ideo-functions". This function is expressed by the object when they convey the previous owners' own ideologies. The fourth is "emotive functions". This is conveyed by the emotion objects could have evoked for individuals at their time of use ([Schiffer 2011: 23](#)). These four functions will be considered and used when discussing the interconnections between the three groups of individuals, the objects themselves, and the purpose they now serve.

In the journal, *The Underwater Archaeology of Red Bay*, Willis Stevens along with several other individuals used the processual theoretical approach, behavioral archaeology, through site formation processes. They used this to understand shipboard activities on a 16th-century Spanish Basque whaling ship. By using behavioral theory to study the pre-wrecked conditions of the ship, as well as the post-wreck site formation they were able to understand the correlation between the ship remains and the provenience of the artifact context to make a narrative of the daily life individuals faced during this period. The way they used this theory is how Site 31CR314 will be addressed.

Site Formation Process Theory

Site Formation Process Theory (SFPT) is concerned with the processes that create and modify archaeological sites over time. The theory suggests that the archaeological record is not static, but rather is constantly being modified by natural processes, such as erosion, deposition, and bioturbation, as well as human activities, such as excavation, construction, and reuse. SFPT emphasizes the importance of understanding the formation processes that create and modify archaeological sites to accurately interpret the archaeological record. It recognizes that the archaeological record is the product of complex and dynamic processes, and that these processes must be understood to interpret the record correctly. The artifacts in the *Queen Anne's Revenge* collection will be studied by focusing on where they were found at, the situation in which they were found in, how they correspond with each other, as well as the human behavior enacted upon the artifacts from each individual group.

Both BAT and SFPT are important for understanding the archaeological record and interpreting the behavior of past human societies. BAT emphasizes the importance of understanding past human behavior, while SFPT emphasizes the importance of understanding the formation processes that create and modify archaeological sites. Together, these theories provide a framework for interpreting the archaeological record and understanding the behavior of past human societies.

Methodology

The study will involve the analysis of artifacts recovered from *La Concorde/ Queen Anne's Revenge* using archaeological methods, such as artifact mapping, stratigraphic analysis, and artifact classification. The artifacts will be grouped by function, and their spatial distributions will

be analyzed using Statistical methods to identify patterns and relationships between different artifact types.

This thesis will be research-based while also performing artifact analysis on food-oriented artifacts found on site. The research will be done through the ECU online library database and searching in the USA Maritime archives and UK Maritime Archives. The bulk of my research will come out of the East Carolina University Joyner Library and the online database, Jstor. Further possible research will be conducted through online naval records to find more information on the ship. Another useful source will be The Boston Newsletter obtaining merchant information on what was obtained from ships that were commandeered by Blackbeard and his crew and how they connect to what they might have used and eaten during this time. This site will also be useful in researching slave trade information in the time period needed. The US National Archives website will be another major resource to research privateer information and merchant data relevant to the Beaufort area.

Comparative analysis will be another relevant method used in studying these artifacts. Previous research completed from four shipwreck sites will be used to understand the discourse of *La Concorde/ Queen Anne's Revenge* and its artifacts. These include *Henrietta Marie* which sank in the year 1700, *Whydah* which sank in the year 1717, the Elmina shipwreck off Ghana dating around early 1700s, and the Mardi Gras shipwreck in the Gulf of Mexico which dates to around 1800 but has an extensive artifact assemblage that will be useful in this analysis. These sites were chosen due to their relevance to Site 31CR314's origin dates, artifact assemblage, and pre-wreckage ship use, such as that of a slave ship and a pirate ship. Performing a comparative analysis on 16th century foodway artifacts from *La Concorde/ Queen Anne's Revenge* involves comparing different

artifacts to gain insight into the foodways and dietary habits of the people who used them. Here are some steps that can be followed to perform such an analysis:

Identify relevant artifacts: Begin by identifying them relevant to the study of foodways and dietary habits. For example, artifacts such as cooking pots, plates, bowls, spoons, forks, knives, drinking vessels, and storage containers may provide useful information.

Collect information about each artifact: Collect information about each artifact, such as its shape, size, material, decoration, and any inscriptions or markings that may be present. Also, record the location of the artifact and any associated features, such as fire pits or food waste.

Group similar artifacts: Group similar artifacts together based on their function or form. For example, group all cooking pots together, all spoons together, all drinking vessels together, and so on.

Compare and contrast: Compare and contrast the diverse groups of artifacts to identify similarities and differences in form and function. For example, do the cooking pots all have similar shapes and sizes? Do the drinking vessels have different shapes depending on their intended use? Are there differences in the materials used to make the artifacts?

Interpret the findings: Finally, interpret the findings to gain insight into the foodways and dietary habits of the people who used the artifacts. For example, if all the cooking pots have similar shapes and sizes, it may suggest that the people who used them had a standard way of preparing food. If the drinking vessels have different shapes depending on their intended use, it may suggest that the people who used them had specific drinks for specific occasions.

Kimberly Kenyon, PI for site 31CR314, has provided data, such as sitemaps, artifact images, lists of the artifact assemblages, along with concretion data. This gathering of data will be crucial for the analysis of the foodways artifacts aboard QAR. Access to the QAR lab allows for a more

in-depth analysis of artifacts of importance. This will make performing artifact analysis easier. To perform this, the material of the artifact, how it is constructed, its function onboard, its historical aspects, and its value to each group of individuals relevant to the site will be studied.

Statistical Package for the Social Sciences Analysis (SPSS).

Another method used when analyzing the artifacts and site is the program SPSS (Statistical Package for the Social Sciences). This is a Statistical package for social sciences. The program uses a graphic environment with three basic components. First, it has a data editor that allows the entering or importing of data necessary for Statistical analysis and producing charts and graphs for these analyses. The second is the output window that displays the results of the Statistical analyses completed. The third component is the accessibility of the charts and graphs made with the analysis and the ability to customize them. This program enables a person to do their own research by inputting survey data they have collected and test different Statistical outcomes to answer the user's own hypothesis ([Karp 1995: 4](#)). It will be beneficial to input data into SPSS on the artifacts' location found on site. This is necessary for the program to get a Statistically significant result to answer the research questions. The analyses and research that will be performed will be entered into this program and will enable better answers to the questions that have previously been addressed. SPSS is a powerful software program used to analyze data in many fields, including archaeology. When it comes to analyzing artifact distributions, SPSS can be a useful tool to help identify patterns and relationships between different artifact types and their spatial distributions. Here are some steps that can be followed to use SPSS for analyzing artifact distributions:

Collect data: Collect data on the spatial distribution of artifacts, such as their location, distance from other artifacts, depth, and any associated features, such as fire pits or food waste. Organize the data in a spreadsheet format, with one row per artifact and columns for the different variables.

Import the data into SPSS: Open SPSS and import the data into the program. Choose "File" from the menu bar, then "Open", and select the spreadsheet containing the data. Be sure to specify the correct variable types for each column (e.g. numeric, string).

Explore the data: Use SPSS to explore the data and identify any patterns or relationships between the different variables. For example, you can use the "Frequencies" command to generate frequency distributions of different artifact types or use the "Descriptives" command to generate summary statistics such as means and standard deviations.

Conduct Statistical tests: Use SPSS to conduct Statistical tests to determine the significance of any observed patterns or relationships. For example, you can use the "Correlations" command to calculate Pearson correlation coefficients between different variables or use the "ANOVA" command to compare the means of distinct groups.

Visualize the results: Finally, use SPSS to create visualizations of the results, such as scatterplots, histograms, or box plots. These can be useful for communicating the results to others and for identifying any outliers or other anomalies in the data.

Summary

The applied theoretical framework will help shape the discussions, thought processes, and understanding of the artifacts related to foodways from site 31CR314. Where one may see a simple cauldron as a device to cook, another will see the history of how it was made, the people that used them and their lifeways, as well as the effect that finding this object may have with the connections of the people currently preserving, researching, and viewing them in NCMM. The methods applied are shaped through these theories. They will be used to gain an understanding of why the items are connected to each other in such a way, why an item may be found sitting next to another unrelated object, or why it was found in a completely different area from its counterpart.

Chapter 4: Artifacts from La Concorde/ Queen Annes Revenge Related to Foodways

Current Site and Artifact Collection Description

The artifacts used in this thesis are cauldrons, faunal remains, stemware, cutlery, brick remnants, and pewter sadware. All these artifacts are involved in foodways for the vessel. This chapter will go into detail on the condition these artifacts are in and the number of artifacts that are in each item category.

In 2003, the North Carolina Department of Cultural Resources (NCDNCR) QAR Conservation laboratory began its mission to conserve and maintain the history of archeological research since the start of the *Queen Anne's Revenge* Recovery Project in 1996. A management plan was written in 1999 and proposed the best course of action for the site was full recovery. This was determined due to the turbulent waters the site is in and the conditions that will continue to irrevocably damage the site and cause a loss of valuable information for future generations.

The QAR lab is equipped to handle the treatment of a variety of archaeological materials. These can be from marine and terrestrial sites with an assortment of artifacts that require different methods of conservation. All the artifacts excavated and recovered from the site are sent to the facility for stabilization and preservation. With few exceptions, all artifacts should begin conservation with desalination. After conservation, artifacts are sent to the North Carolina Maritime Museum in Beaufort to be stored or displayed to the public. About 50 to 60% of the site has been excavated, with the total artifacts reaching an estimated number of 400,000 ([Eckert 2020: 36](#)) (Figure 4.2 – site map). Artifacts are usually found heavily concreted in situ, with the possibility of several artifacts in one concretion deposit (Figure 4.1 - Concretion excavated from site).



Figure 4.1. Concretion excavated from the site. Image provided by the North Carolina Department of Natural and Cultural Resource

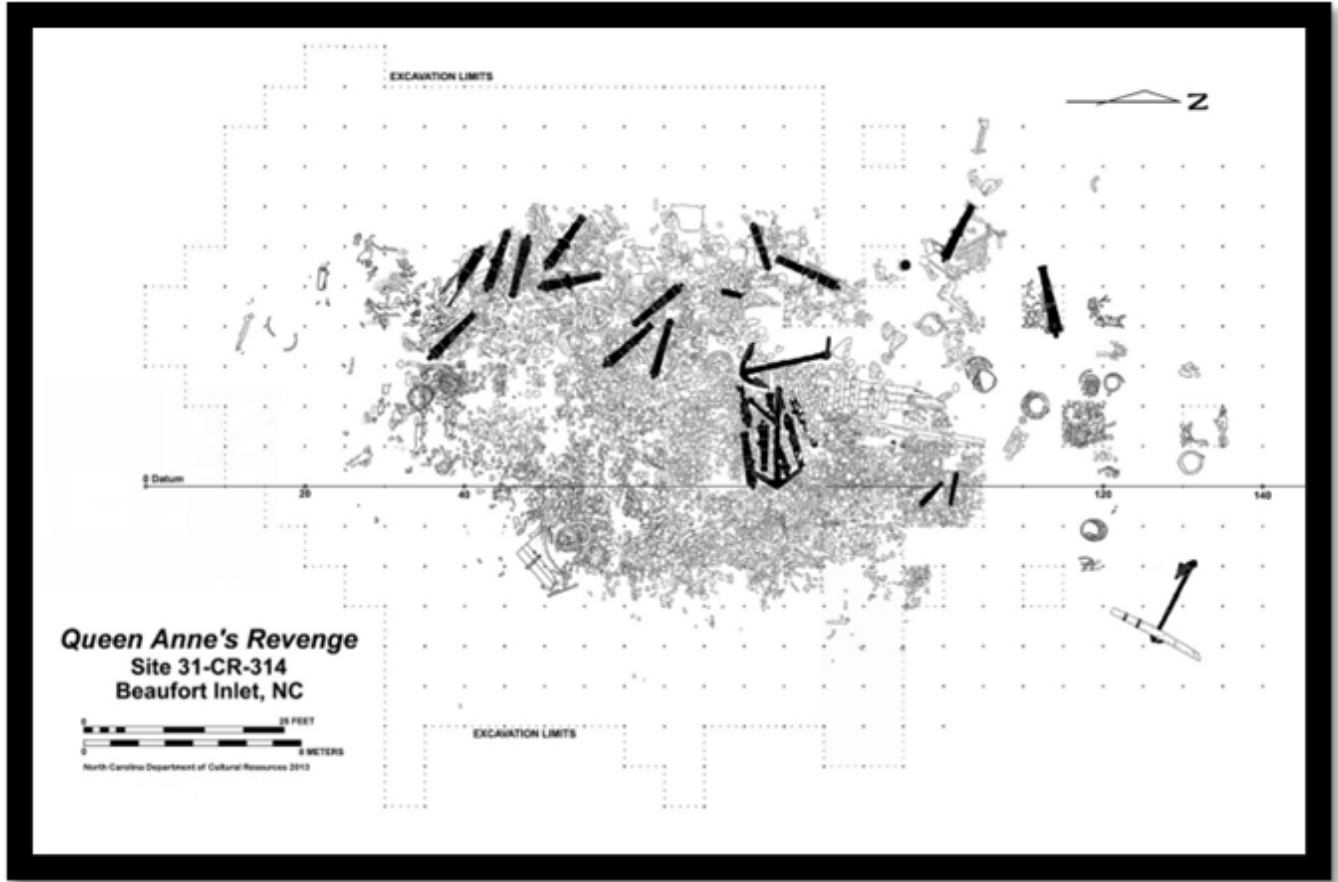


Figure 4.2. Site 31CR314 map. Image provided by the North Carolina Department of Natural and Cultural Resources

Cooking Vessels

Excepting modern intrusive objects, all the artifacts recovered from the QAR site predate 1718. Observing this, it is necessary to include research dealing with cauldrons and trade from these periods. So far, site 31CR314 has produced many fragments of iron cooking vessels. Some copper fragments have also been found that are suspected to be from a cooking vessel, however, the artifacts are too fragmented to ever know for certain whether they are from a vessel for preparing food or for heating pitch. The fragments have a lack of residue that would have provided a more definitive answer. It can be determined, however, that these fragments are from

a vessel due to the rivets and shapes of them. Due to the lack of a definitive origin, they will be left out of the data set of this thesis ([Wilde-Ramsing & Ewin 2012: 120](#)).



Figure 4.3. Iron Cauldron Fragments. Image provided by the North Carolina Department of Natural and Cultural Resources

Currently, the number of cauldron fragments is 20. The fragments are labeled as; curved iron fragment, cast iron fragment, cauldron handle, cauldron, cook pot fragment, cauldron leg/big foot, pot fragment, cook pot fragment with sand cast mold lines visible, iron fragments, kettle fragments, cauldron fragments, kettle rim fragments, iron fragment from the cauldron, and cauldron leg. They are further separated into the categories, Cooking Vessel 1, 2, and 3. This can be further understood by Table 1. While some of the fragments are kept in proper storage at the

QAR Lab, the larger comprehensive pieces like the one in Figure 4.4 have been loaned out to NCMM by the NCMM to provide a learning experience to the public. Checkups on these artifacts' welfare are performed regularly by the conservators at the QAR Lab.

QAR Artifact Number	Artifact	Material Type	Vessel Category
418.126	Curved Iron fragment	Wrought Iron	
525.001	Cast Iron Fragment--Kettle fragment?	Cast Iron	
525.003	Cauldron handle	Cast Iron	Cooking Vessel 1
555.009	Cauldron	Cast Iron	Cooking Vessel 1
1390.012	Cook pot fragment?	Cast Iron	
1402.001	Cauldron Leg, Big Foot	Cast Iron	Cooking Vessel 3
1578.01	Cast Iron Fragments, pot fragments?	Cast Iron	
1721.013	Cook pot fragment?	Cast Iron	
1765	Cook pot fragment? Sand cast mold lines visible	Cast Iron	Cooking Vessel 1
1801	Cook pot fragment?	Cast Iron	
1902	Cook pot fragment?	Cast Iron	
1990.001	Iron Fragments	Iron	
2063.003	Fragments - kettle?	Cast Iron	
2250.007	Cook pot fragment?	Cast Iron	
2300.055	Cauldron fragments	Cast Iron	
2347.003	Cauldron fragments	Cast Iron	Cooking Vessel 2
2499.006	Kettle fragment -- rim frag (?)	Cast Iron	Cooking Vessel 2
2500.002	Iron fragment - possibly from cauldron	Cast Iron	
2500.004	Cauldron leg	Cast Iron	Cooking Vessel 2
3316.01	Cauldron Fragment	Cast Iron	

Table 4.1. Cooking Vessel Artifact Table



Figure 4.4. Iron Cauldron Fragments. Image provided by the North Carolina Department of Natural and Cultural Resources.

Faunal Remains

The individuals of *La Concorde/ Queen Anne's Revenge* would attempt to eat meat for most meals. It stands to reason that the faunal remains of this endeavor would be found during site excavation. These faunal remains will be put into eight categories: bovine, swine, avian, whale, fish, turtle, unidentified bone, and concreted bone. A comprehensive list of these found faunal remains can be seen in Table 4.2. It may be impossible to determine whether the turtle,

fish, and whalebone are from the individuals of the *La Concorde/ Queen Anne's Revenge* time of sail or if they are from the environment itself. The individuals on ships such as this would eat beef, pork, chicken, fish, turtles, and whatever they bought from ports or in the case of the pirates, whatever they obtained from stealing, fishing, and hunting when resting on land.

The remains of these creatures can be found in the assemblage of Site 31CR314. A total of 135 faunal remains has been found. The remains would have been the spoils of food not thrown overboard after human consumption. Some could have been what was left over from the abandonment of the vessel, but many were most likely the result of mistaken discarding in the ship hull. Mostly consumed food remnants are not something you want on a vessel that is enclosed with hundreds of other human bodies due to health and comfort. Pig remnants make up the majority of faunal remains in the found collection, with cow a close second ([Clark 2005: 2-4](#)). The bones from site 31CR314 were found in various states. The artifacts could have suffered from bacterial attacks, insoluble salts, iron staining, and hydrolysis. This can be seen in certain forms of decay such as sponginess, brittleness, warping, cracking, mineralization, discoloration, and erosion.

QAR Artifact Number	Artifact	Material Type
0005.003	Pig, mandible, shatter	Organic - Bone
0009.003	Cattle, Vertebra, 1st cervical/axis, hacked,saw groove	Organic - Bone
0026.000	Cattle,Tibia,split	Organic - Bone
0101.002	Fish, sturgeon?(vertebrae), hack/sheared	Organic - Bone
0120.000	Small mammal size, limb bone, split shatter	Organic - Bone
0150.001	Bird, limb bone, split,	Organic - Bone
0233.007	Pig-Cattle size, limb bone, burnt?	Organic - Bone
0234.002	Pig-Cattle size?, limb bone, sawn, Intrusive?	Organic - Bone
0340.010	Cattle, vertebrae	Organic - Bone
0342.006	Cattle, rib	Organic - Bone
0342.007	Cattle rib, hacked shaft	Organic - Bone
0342.008	Pig metatarsus	Organic - Bone
0342.009	Pig tooth molar	Organic - Bone
0342.010	Pig-Cattle limb bone, shatter piece	Organic - Bone
0342.011	Cattle vertebrae	Organic - Bone
0342.012	Pig-Cattle vertebrae, split piece	Organic - Bone
0342.020	Pig metatarsus	Organic - Bone
0342.021	Pig rib, snapped shaft	Organic - Bone
0342.024	Pig metatarsus	Organic - Bone
0342.025	Cattle radius (?), split-shear piece	Organic - Bone
0342.026	Pig phalanx	Organic - Bone
0342.027	Cattle rib, split section	Organic - Bone
0342.028	Pig cranial eye orbit	Organic - Bone
0342.029	Pig cranial	Organic - Bone
0342.030	Pig metatarsus	Organic - Bone
0342.032	Pig metacarpus	Organic - Bone
0342.033	Pig-Cattle limb	Organic - Bone
0351.003	Pig phalanx	Organic - Bone
0366.012	Pig metatarsus	Organic - Bone
0366.013	Pig metatarsus, snapped	Organic - Bone
0366.014	Pig-cattle limb	Organic - Bone
0366.015	Cattle ulna, hack/shatter	Organic - Bone
0366.016	Pig cranial, hacked/split	Organic - Bone
0366.017	Pig metatarsus	Organic - Bone
0366.053	Pig-Cattle, limb	Organic - Bone
0366.090	Pig metatarsus	Organic - Bone
0366.091	Pig phalanx (2)	Organic - Bone
0366.104	Cattle femur, split shaft	Organic - Bone
0366.111	Cattle vertebrae, hacked off.	Organic - Bone
0387.001	Pig metacarpus.	Organic - Bone
0387.002	Cattle Rib	Organic - Bone
0387.005	Pig tibia? Shaft split	Organic - Bone

Table 4.2. Faunal Remains Artifact Table.

0387.006	Pig-Cattle rib	Organic - Bone
0418.029	Pig astragulus, hacked/sheared end; pig calcanius	Organic - Bone
0418.030	Pig Phalange	Organic - Bone
0418.046	Pig Metatarsus	Organic - Bone
0418.047	Pig Metatarsus	Organic - Bone
0418.048	Pig Metatarsus	Organic - Bone
0418.083	Cattle Calcanius, Hacked/sheared	Organic - Bone
0418.117	Cattle radius, shattered	Organic - Bone
0418.119	Pig cranial, shattered	Organic - Bone
0418.124	Cattle size limb bone	Organic - Bone
0418.125	Cattle size carpus?	Organic - Bone
0445.027	Pig-Cattle size limb bone, shattered	Organic - Bone
0445.028	Pig-Cattle size limb bone, polished/abraded	Organic - Bone
0452.005	Bird Limb bone	Organic - Bone
0479.002	Pig Metatarsus	Organic - Bone
0530.021	Bone	Organic - Bone
0546.001	Bone fragments	Organic - Bone
0620.001	Sheep/goat vertebrae	Organic - Bone
0636.020	Bone, Bos taurus (rib)	Organic - Bone
0637.003	bovine vertebrae	Organic - Bone
0637.008	whale bone fragment	Organic - Bone
0680.002	bone fragment,	Organic - Bone
0712.000.01	Bone fragment found under sternpost, Bos taurus (rib)	Organic - Bone
1363.002	Bovine ulna fragment	Organic - Bone
1498.007	wild boar bone	Organic - Bone
1617.000	Concretion, bone, glass, cannon ball, Pb shot	Concretion
1721.024	Bone, burned, fish fossil	Organic - Bone
1724.003	Bone, unfused distal left end of femur, juvenile deer (could be pig)	Organic - Bone
1845.000	Bone, Avian	Organic - Bone
1900.001	Bovine rib shaft fragment	Organic - Bone
1951.006	Bone	Organic - Bone
1951.009	Bone	Organic - Bone
1955.015	Bone, rib	Organic - Bone
1955.028	Bone	Organic - Bone
1955.037	Bone	Organic - Bone
1955.044	Bone	Organic - Bone
1955.058	Bone	Organic - Bone
1955.059	Bone	Organic - Bone
1955.061	Bone	Organic - Bone
1955.072	Bone	Organic - Bone
1955.077	Bone	Organic - Bone
1958.001	Bone fragments	Organic - Bone
1958.014	Bone (from inside nesting weight)	Organic - Bone
2018.001	small turtle plastron fragment	Organic - Bone
2067.001	sheep/goat rib fragment	Organic - Bone
2128.002	Bone fragments	Organic - Bone
2197.001	Bone	Organic - Bone

Table 4.2 Continued. Faunal Remains Artifact Table.

2392.005	Bone	Organic - Bone
2392.006	Bone	Organic - Bone
2392.008	Bone	Organic - Bone
2392.015	Bone	Organic - Bone
2392.017	Bone	Organic - Bone
2392.018	Bone	Organic - Bone
2392.021	Bone	Organic - Bone
2392.022	Bone	Organic - Bone
2392.023	Bone	Organic - Bone
2392.026	Bone	Organic - Bone
2392.028	Bone	Organic - Bone
2392.031	Bone	Organic - Bone
2392.035	Bone	Organic - Bone
2447.001	Bone, wild hog, (<i>sus scrofa</i>),1-metatarsal	Organic - Bone
2697.005	Bone, large mammal	Organic - Bone
2722.015	Bone, avian	Organic - Bone
2850.000	Turtle bone	Organic - Bone
2855.001	Bone fragment	Organic - Bone
2855.005	Bone	Organic - Bone
2856.001	Bone	Organic - Bone
2915.006	Bone fragments	Organic - Bone
2920.003	Bone, avian	Organic - Bone
3010.005	Bone	Organic - Bone
3010.006	Bone	Organic - Bone
3105.009	Bone	Organic - Bone
3105.017	Bone Fragment	Organic - Bone
3105.021	Bone Fragment	Organic - Bone
3170.021	Bone?	Organic - Bone
3217.000	Bone (turtle)	Organic - Bone
3322.009	large mammal bone	Organic - Bone
3337.001	Bone fragment	Organic - Bone
3347.007	Bone fragment	Organic - Bone
3443.001	Bone, (cf) <i>meleagris</i> (turkey) (distal tibiotarsus)	Organic - Bone
3527.002	Bone	Organic - Bone
3550.000	Bone, <i>Bos taurus</i> (rib)	Organic - Bone
3553.000	Bone	Organic - Bone
3581.004	Bone fragment, large mammal (lamb bone fragment)	Organic - Bone
3583.008	Bone fragments, large mammal (13 - pelvis fragments)	Organic - Bone
3632.011	Bone	Organic - Bone
3697.011	Burned bone fragment	Organic - Bone
3755.010	Bone	Organic - Bone
3767.010	Bone	Organic - Bone
3781.000	Bone, <i>Bos taurus</i> (rib)	Organic - Bone
3944.006	Bone	Organic - Bone
3950.016	Bone	Organic - Bone
3955.005	Bone, vertebra	Organic - Bone
4031.002	Bone fragment	Organic - Bone

Table 4.2 Continued. Faunal Remains Artifact Table.

QAR2447.001



dncr.nc.gov



Figure 4.5. QAR 2447.001. Image provided by the North Carolina Department of Natural and Cultural Resources.



Figure 4.6. QAR 620.001. Image provided by the North Carolina Department of Natural and Cultural Resources.

QAR3443.001



dncr.nc.gov



Figure 4.7. QAR 3443.001. Image provided by the North Carolina Department of Natural and Cultural Resources.



Figure 4.8. QAR 005.003. Image provided by the North Carolina Department of Natural and Cultural Resources.



Figure 4.9. QAR 342.007. Image provided by the North Carolina Department of Natural and Cultural Resources.

Pewter Sadware

Since the QAR Lab's excavation for site 31CR314 began, 139 pewter fragments have been found. In those fragments, a total of 85 artifacts are identified as sadware. This includes 34 whole vessels totaling 21 plates and 13 dishes. A comprehensive list can be seen in table 4.3. Today, researchers categorize pewter sadware by diameter, size, and rim style. These vessels provided evidence of five makers' marks that originate from late 17th to early 18th century London, England. These are George Hammond, John Stile, Henry Sewdly, Timothy Fly, and William Smith ([Watkins-Kenney 2022: 114](#)).

QAR Artifact Number	Artifact	Material Type
0029.000	Plate (George Hammond)	Metal - Pewter
0101.003	Charger rim fragment	Metal - Pewter
0128.000	Charger	Metal - Pewter
0201.006	Charger body fragment	Metal - Pewter
0216.000	Charger rim fragment	Metal - Pewter
0230.011	Charger body fragment	Metal - Pewter
0271.000	Charger rim fragment	Metal - Pewter
0320.001	Charger	Metal - Pewter
0333.000	Plate (George Hammond)	Metal - Pewter
0350.001	Charger	Metal - Pewter
0351.001	Charger	Metal - Pewter
0414.000	Dish	Metal - Pewter
0457.000	Dish rim fragment	Metal - Pewter
0639.001	Plate (Henry Sewdley)	Metal - Pewter
0641.000	Plate (Timothy Fly)	Metal - Pewter
0651.000	Dish - joins 693.000 & 1798.000	Metal - Pewter
0699.000	Dish rim fragment - joins 651.000 & 1798.000	Metal - Pewter
0889.000	flatware bouge fragment	Metal - Pewter
1264.000	Plate, folded in half. Makers mark on back, illegible	Metal - Pewter
1355.000	Plate (Henry Sewdley)	Metal - Pewter
1429.000	Plate (John Stiles)	Metal - Pewter
1439.016	Charger rim fragment	Metal - Pewter
1440.016	plate rim fragment	Metal - Pewter
1506.000	Plate (Henry Sewdley)	Metal - Pewter
1621.001	Plate (William Smith)	Metal - Pewter
1721.015	Plate rim fragment	Metal - Pewter
1750.000	Plate	Metal - Pewter
1751.000	Plate (John Stiles)	Metal - Pewter
1764.000	Fragment - Charger base? Marks on back	Metal - Pewter
1775.000	Plate	Metal - Pewter
1796.000	Plate rim fragment	Metal - Pewter
1798.000	Dish Fragment	Metal - Pewter
1850.000	Plate (John Stiles)	Metal - Pewter
1879.007	Plate rim fragment. Joins 1997.000 and 1978.000	Metal - Pewter
1879.019	Plate rim fragment	Metal - Pewter
1900.003	Plate fragment	Metal - Pewter
1903.013	plate rim fragment	Metal - Pewter
1903.014	Plate rim fragment	Metal - Pewter
1903.019	Charger well fragment?	Metal - Pewter
1978.000	Plate rim fragment, joins QAR 1997.000 & 1879.000	Metal - Pewter

Table 4.3. Pewterware Artifact Table.

1997.000	Plate rim fragment; joins QAR 1978.000 & QAR1879.000	Metal - Pewter
2076.000	Plate rim fragment	Metal - Pewter
2079.000	Charger well fragment? Like QAR1764.000 & QAR1903.019	Metal - Pewter
2251.018	dish flatware fragment - well?	Metal - Pewter
2251.022	Charger fragments	Metal - Pewter
2300.008	Plate from C16 chase (John Stiles)	Metal - Pewter
2300.009	Plate attached to C16 (John Stiles)	Metal - Pewter
2300.010	Dish/plate	Metal - Pewter
2329.000	Dish rim fragment	Metal - Pewter
2346.007	Fragments, one rim fragment	Metal - Pewter
2350.000	Porringer, two handles, flattened	Metal - Pewter
2410.000	Dish rim fragment joins 2412.000	Metal - Pewter
2412.000	Dish fragment - joins 2410.000	Metal - Pewter
2461.000	Plate rim fragment, joins 1879.000, 1978.000, 1997.000	Metal - Pewter
2477.010	Plate rim fragment	Metal - Pewter
2480.005	Fragments (incl 2 dish rim fragments)	Metal - Pewter
2535.000	Dish rim fragment	Metal - Pewter
2543.000	Dish rim fragment	Metal - Pewter
2570.012	Dish Rim Fragment	Metal - Pewter
2745.000	Plate Rim Fragment	Metal - Pewter
3083.002	Dish rim fragments	Metal - Pewter
3084.007	Dish rim Fragments	Metal - Pewter
3095.000	Dish rim fragment	Metal - Pewter
3128.000	Dish rim fragment (very like QAR 3095.000, 3179.000)	Metal - Pewter
3131.000	Plate rim fragment	Metal - Pewter
3132.000	Dish rim fragment	Metal - Pewter
3137.000	Dish rim fragment	Metal - Pewter
3179.000	Dish rim fragment	Metal - Pewter
3233.003	Dish fragments	Metal - Pewter
3281.000	Plate (X with crown)	Metal - Pewter
3318.001	Plate (Henry Sewdley)	Metal - Pewter
3439.000	Rim fragment	Metal - Pewter
3880.000	Plate rim fragment	Metal - Pewter
3951.003	Plate fragment with groove	Metal - Pewter
3969.000	Plate frags	Metal - Pewter
3972.000	Plate fragment	Metal - Pewter
3975.000	Plate, unmarked	Metal - Pewter

Table 4.3 Continued. Pewterware Artifact Table.

During onsite excavations, these artifacts were mainly found in the aft-stern zones and in proximity to cannons as seen in figure 4.10. Two plates and a dish were concreted onto a cannon, however, most had only a little to almost no concretion and were recovered individually. The damages that these artifacts suffered consisted of folding, tears, flattening, distortion, inversion, and discoloration. There is also evidence of use before *La Concorde/ Queen Anne's Revenge's* abandonment in the Beaufort Inlet. Fine crosshatched marks from utensils cutting food can be seen. There is also one dish that has a D -puncture that is possibly deliberately made ([Watkins-Kenney 2022: 113](#)).



Figure 4.10. Cannon concretion with pewter plate excavated from site. Photo provided by the North Carolina Department of Natural and Cultural Resources.



Figure 4.11. Tableware set found separately on Site 31CR314 in concretions. Photo provided by the North Carolina Department of Natural and Cultural Resources.

Stemware

Wine was a popular commodity for French sailors, so the proper stemware was equally as important to someone such as the captain, especially if he were to host a guest or a captain of another ship that he just defeated in battle. Currently, the QAR Lab has recovered 514 glass artifacts from the site, however, the focus for this thesis is on glass stemware. This consists of five stemware fragments from site 31CR314. Two of the fragments, artifacts QAR1597.015 and QAR3431.002 have been identified as stemware but not further classified (Figure 4.12). One fragment, artifact QAR0906.002, is the stem with a partial bowl and fragment of the base (Figure 4.13 and 4.16). Another fragment, artifact QAR1457.003, is the knop of the stemware (Figure 4.14). The knop has a wide annular style. The last fragment was able to be identified by

researchers. This artifact, QAR0638.001, is a molded Silesian stemware from George I coronation (Figure 4.15). It can be dated to ca. 1714 ([Carnes-McNaughton & Wilde-Ramsing 2008: 13](#)) A comprehensive list of stemware can be seen in Table 4.5.



Figure 4.12. Unidentified stemware fragment. Photo provided by the North Carolina Department of Natural and Cultural Resources.



Figure 4.13. Stem with fragments. Photo provided by the North Carolina Department of Natural and Cultural Resources.



Figure 4.14. Stemware Knob. Photo provided by the North Carolina Department of Natural and Cultural Resources.



Figure 4.15. Silesian stemware fragment. Photo provided by the North Carolina Department of Natural and Cultural Resources.



Figure 4.16. Assembled stemware fragments with bowl and base. Photo provided by the North Carolina Department of Natural and Cultural Resources.

QAR Artifact Number	Artifact	Material Type
0638.001	Stemware, stem fragment, molded, "Silesian," George I Coronation	Glass
0906.002	Stemware, stem with partial bowl and fragment of base	Glass
1457.003	Stemware, knob, "wide annular knob" style	Glass
1597.015	Stemware (?) fragment	Glass
3431.002	Stemware, stem fragment	Glass

Table 4.4. Stemware Artifact List.

Cutlery

The higher-positioned individuals on board *La Concorde/ Queen Anne's Revenge* used cutlery. Some ships did provide spoons for the enslaved, however, the amount of cutlery remains found so far suggests that not everyone may have been given spoons to use. In the current collection, nine cutlery artifacts have been rediscovered. Most of the artifacts are pewterware while one is silver, and one other is silver alloy. One item has an inscribed x on the top side of the handle (2573.000). A comprehensive list can be seen in table 4.5.

QAR Artifact Number	Artifact	Material Type
0409.005	Spoon	Metal - Pewter
1312.000	Spoon handle - silver plated?	Metal - Silver Alloy
1408.000	Handle for basting spoon	Metal - Silver
1841.001	Spoon and partial handle	Metal - Pewter
2208.001	Spoon Bowl	Metal - Pewter
2403.000	Spoon bowl, end of rat's tail handle	Metal - Pewter
2573.000	Spoon Handle, X inscribed on top side	Metal - Pewter
2959.002	Spoon fragment	Metal - Pewter
3697.001	Spoon handle frag	Metal - Pewter

Table 4.5. Cutlery Artifact Table.



Figure 4.17. [Pewter Spoon Fragment](#). Photo provided by the North Carolina Department of Natural and Cultural Resources.



Figure 4.18. Pewter Spoon Bowl. Photo provided by the North Carolina Department of Natural and Cultural Resources.



Figure 4.19. Pewter Spoon. Photo provided by the North Carolina Department of Natural and Cultural Resources.



Figure 4.20. Silver Handle of Basting Spoon. Photo provided by the North Carolina Department of Natural and Cultural Resources.



Figure 4.21. Pewter Spoon Fragment – Side View. Photo provided by the North Carolina Department of Natural and Cultural Resources.

Brick Remnants

Currently, excavations have uncovered 27 items categorized as brick. A comprehensive list can be seen in Table 4.6. Several items can be determined as coarse earthenware, one is sandstone, and another is simply categorized as tile. Three items were described as burned or possibly burned with gives a possibility of evidence for the ship's stove. There is one item that is

categorized as a brick bat. Most of the artifacts seem to be red orange in color and unglazed. They seemed to have been tempered with crushed quartz, shell, and organics. The bricks found are of different sizes and cannot be used as a reliable source in finding the location of original production due to “non-temporal variations in brick dimensions produced during the manufacturing process,” according to Carnes-McNaughton ([Carnes-McNaughton 2007: 6](#)).

QAR Artifact Number	Artifact	Material Type
0397.000	Brick/tile. Earthenware, v coarse, red/orange paste, no glaze, tile, complete, ridges on one side.	Ceramic
0509.053	Brick/Tile Fragment ?	Ceramic
0584.001	Brick/tile	Ceramic
0685.002	Brick fragment	Ceramic
0856.017	Brick/Tile fragment, coarse earthenware	Ceramic
0880.002	brick/tile fragment	Ceramic
0891.000	Brick tile	Ceramic
0917.000	Brick/Tile	Ceramic
1293.000	Brick fragment	Ceramic
1984.003	Brick fragments	Ceramic
2022.001	Tile	Lithic - Rock
2454.001	Brick/Tile fragment, coarse earthenware	Ceramic
3010.002	Brick	Ceramic
3010.003	Brick/Tile fragment, coarse earthenware	Ceramic
3010.004	Brick/tile	Ceramic
3084.012	Brick Fragment	Ceramic
3307.002	Brick fragment	Ceramic
3400.003	Brick, possibly burned	Ceramic
3573.001	Coarse earthenware fragment brick?	Ceramic
3579.005	Brick fragments	Ceramic
3594.002	Brick	Ceramic
3678.000	Brick, burned	Ceramic

Table 4.6 Brick and Tile Artifact List

QAR3678.000



dncr.nc.gov



Figure 4.22. Brick Fragment. Photo provided by the North Carolina Department of Natural and Cultural Resources.

QAR3678.000



dncr.nc.gov

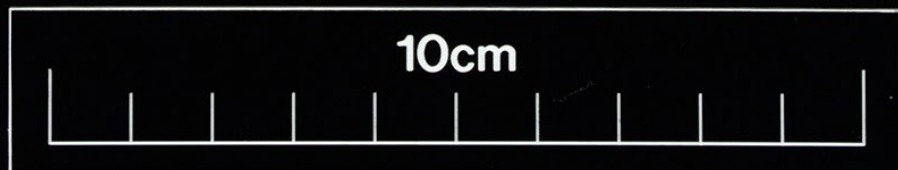


Figure 4.23. Brick Fragment - Verso. Photo provided by the North Carolina Department of Natural and Cultural Resources.

Brick is a durable material that can withstand a lot of different environmental effects. Of course, that does not mean these items are completely unaffected. These items can face discoloration, erosion, and deterioration. Due to salts, air-pollutants, acidic conditions, among others. Since this material is porous, depending on the material used to make the brick, water and temperature can speed up deterioration greatly. This is seen in brick items that are waterlogged

and faces repeated freezing and thawing, however, due to the environment of Site 31CR314, the bricks excavated did not need intensive treatment. The QAR Lab performed a desalination treatment on the bricks and then were dried.

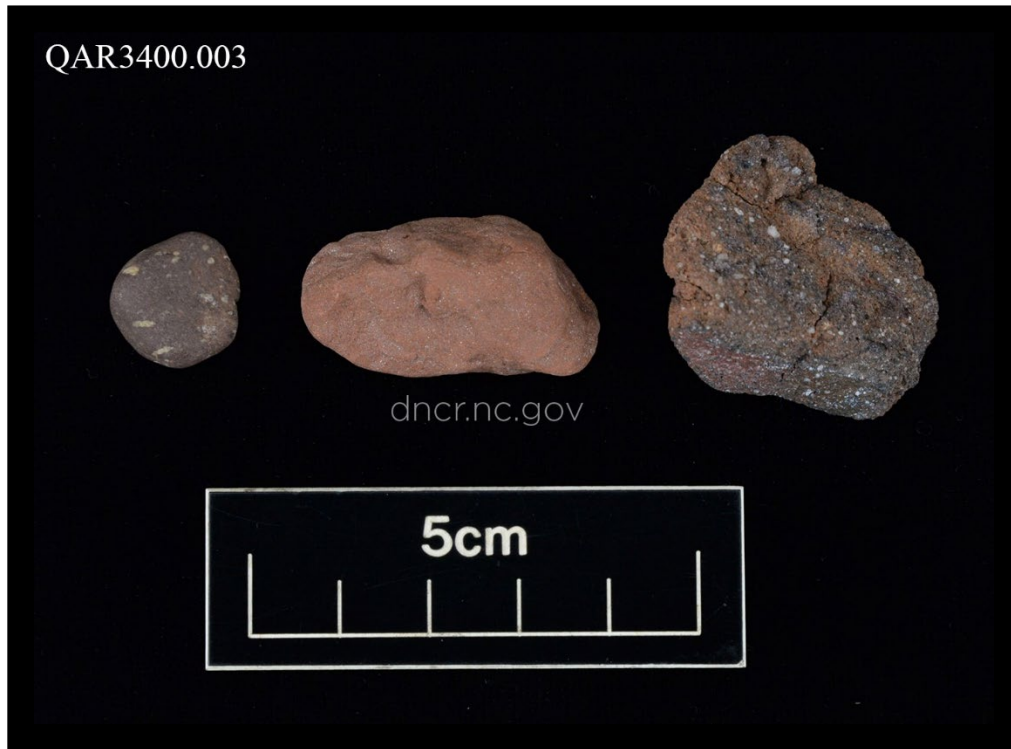


Figure 4.24. QAR 3400.003. Brick Fragments. Photo provided by the North Carolina Department of Natural and Cultural Resources.



Figure 4.25. QAR 3755.017. Brick Fragments. Photo provided by the North Carolina Department of Natural and Cultural Resources.

Summary

The artifacts covered in this chapter shows the number of items that have currently been excavated from the site and the state in which they were found. These objects may have been in different states of decomposition, but the conservation has enabled them to last for many years to come. These remnants are what archaeologists must use to understand the people of the past. In doing this they become a part of the interconnections made through items.

Chapter 5: Assemblage Case Studies

Five wrecks will be used for comparative data for foodway artifacts, HMS *Invincible*, *Henrietta Marie*, *Whydah*, *La Bell*, and The Mardi Gras wreck. This chapter will include a brief history of each wreck at the time of sail and its rediscovery, and the artifacts associated with foodway uses. When choosing what shipwrecks would be most beneficial when using comparative analysis several factors were considered. First, the date of the wreckage event for each vessel needed to be in the period range of *La Concorde/ Queen Anne's Revenge*. Second, the vessel needed to have a similar purpose for its sail such as piracy and/or enslaved transportation. Third, the artifact assemblage related to foodways must be relevant enough to be used for this thesis.

HMS Invincible

The HMS *Invincible* was a 74-gun French gunship. It launched on October 21st, 1744. The ship was first used in the West Indies for the French Navy. The ship was captured in 1745 near Cape Finisterre, by the English Admiral, Lord Anson. After its capture, the English began to emulate the construction style as well as use the ship itself for their own purposes, however, the ship met its end in March of 1758 when its anchor became stuck on the seabed in Solent. When the crew finally freed the anchor, it swung up and impaled itself on the vessel's bow. During the commotion, the ship drifted too far toward the coast. To correct its course by putting the helm over leeward, the tiller became jammed, and the ship grounded at the 'Horse and Dean Sands.' This was a sandbank at the east of Saint Helens ([Bingeman 2010; 5-10, 23](#)).

In 1979 an unidentified shipwreck began to be studied. It was assumed at first that the wreck was the remains of the 1799 ship, *Impregnable*, with the site spanning 59 meters long, however, in 1980, Bingeman found a tally stick in one of the folded sails of the wreck that identified the wreckage as that of HMS *Invincible* ([Bingeman 2010; 25](#)). As excavation of the

site continued, many items from the site were unearthed. This included two pewter plates and a porringer found at the stern of the ship. On the pewter, a maker's mark can be seen connecting them to a London pewterer named Samuel Ellis who made his merchandise in 1721 to 1765. Half of a coconut hypothesized to be used as a cup was found along with many fragments of bottles. These bottle fragments were put into three categories: wine bottles, half bottles, and mallet bottles. According to Bingeman, they all predate 1758. The ship was fitted with a galley stove that was new for the ships of this time. This can be seen by the galley bricks that were found and concluded to be used as a hearth for the vessel's galley. Two cauldrons were found full of smaller artifacts seeming to be used as containers to transport objects but were decidedly abandoned. They were both made of copper. Iron cauldrons were found inside the largest copper cauldron. Many spoons were found on the site. Some are made of wood and others pewter. One of the spoons had the initials TH engraved on the handle and it is hypothesized that it belonged to a captain's steward named Thomas Hilliard who sailed on the ship several times ([Bingeman 2010; 154-156, 164-165](#)).

Henrietta Marie

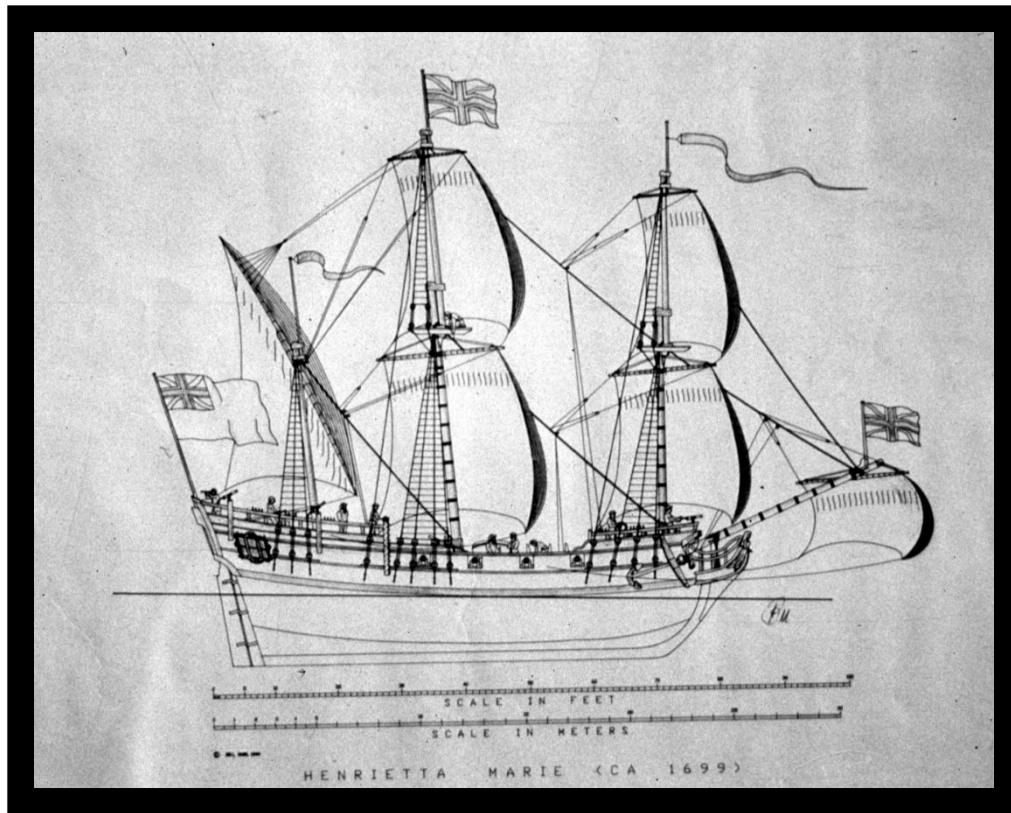


Figure 5.4 "*Henrietta Marie*", *Slavery Images: A Visual Record of the African Slave Trade and Slave Life in the Early African Diaspora*, accessed November 1, 2023, Image courtesy of the public domain: <https://www.slaveryimages.org/database/search-result.php?search=Henrietta+Marie>

Henrietta Marie was an early 17th-century slaving vessel. The vessel started its operations in 1697 at the end of the War of the Grand Alliance. This ship followed the usual route for slave-trading. The ship was fitted to handle up to 300 enslaved individuals. It would set sail for the three-month journey from the English Channel to the Bight of Benin and then sailing to Barbados, next would be the Americas, and finally returning to its home port. Along this route, the crew traded enslaved individuals for merchandise such as brown and white sugar, rum, ginger, textiles, metals, and other materials. The disregard and treatment of enslaved individuals along with the conditions in which these ships were kept saw a major loss of life with each

voyage. It was expected that the number of enslaved individuals they left the port with would be halved upon arrival along with the crew. Causes of death would include mistreatments such as brutal beatings, suicides from starvation or trying to jump overboard, sicknesses such as scurvy, dysentery, or malaria ([Cottman 1999: 56-63](#)). In June 1700, after selling the 190 enslaved individuals that survived the journey to Port Royal, Jamaica, *Henrietta Marie* set sail towards England. The cargo holds now held 81 hogsheads sugar, 11 barrels of indigo, 14 bags of cotton and 21 tons of logwood and ivory ([Moore & Malcolm 2008: 23](#)). While sailing along the Florida Straits the vessel faced a sudden severe storm. The ship and all twelve crew members were lost ([Cottman 1999: 72-73](#)).



Figure 5.5 "Ship's Bell from the *Henrietta Marie*", *Slavery Images: A Visual Record of the African Slave Trade and Slave Life in the Early African Diaspora*, accessed November 1, 2023, Image courtesy of the public domain: <https://www.slaveryimages.org/database/search-result.php?search=Henrietta+Marie>

In 1972 the wreck was located 22 km (about 13.67 mi) west-northwest of the Marquesas Keys. It was found by Armada Research Corporation, a treasure hunting company that was searching for another site. Due to the artifacts found on the initial investigation it was determined that the site was that of an English slaving vessel. The vessel was identified by a bronze watch bell with the name and date embossed. Researchers could then focus their efforts on learning about *Henrietta Marie*'s life. Among the many artifacts recovered from the site, an extensive 330 items of pewterware makes that list. These include items such as 66 tankers, 131 spoons, 2 plates, 2 jugs, 20 bottles, and 109 bowls also known as Guinea Basins. Some still have the marking from their manufacturers. These makers marks all belong to three English pewter makers, Joseph Hodges, Thomas Winchcombe, and George Hammond. Thomas Winchcombe's being the most prominent manufacturer seen on most basins ([Moore 2008: 21-31](#); [Watkins-Kenney 2022: 113](#)).

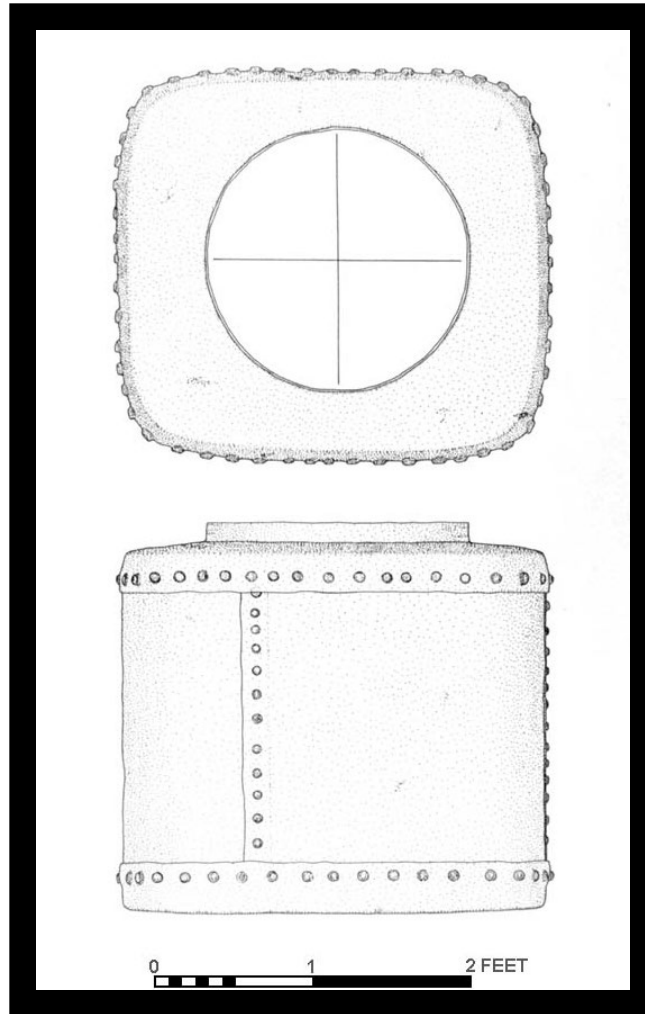


Figure 5.6 "Cooking Cauldron from the Slave Ship *Henrietta Marie*", *Slavery Images: A Visual Record of the African Slave Trade and Slave Life in the Early African Diaspora*, accessed November 1, 2023, Image courtesy of the public domain:
<https://www.slaveryimages.org/database/search-result.php?search=Henrietta+Marie>

131 pewter spoons were recovered from the site, 72 of them found inside a pewter jug. The spoons are 18.4 cm with preserved decorative markings. According to Moore the spoons are known as "Royal Portrait" spoons. The spoons recovered all had the William III design with his initials and a dragon design on the back. Two pewter plates were recovered from the site in excellent condition. The makers' marks and initials can be seen. The initials on the pewter plates were HM to indicate the ship it was used on and not the owner of the plate. It is hypothesized

that these plates were used by the crew and were not for trade indicated by the fine lines and utensil marks seen on their surface. The records found stated that the pewter manufacturer, Thomas Winchombe, loaded 672 lbs. of pewter on the ship and a merchant named Robert Wilson loaded 840 lbs. of Pewter for the ship's final sail ([Moore 2008: 32](#); [Watkins-Kenney 2022: 115](#)).

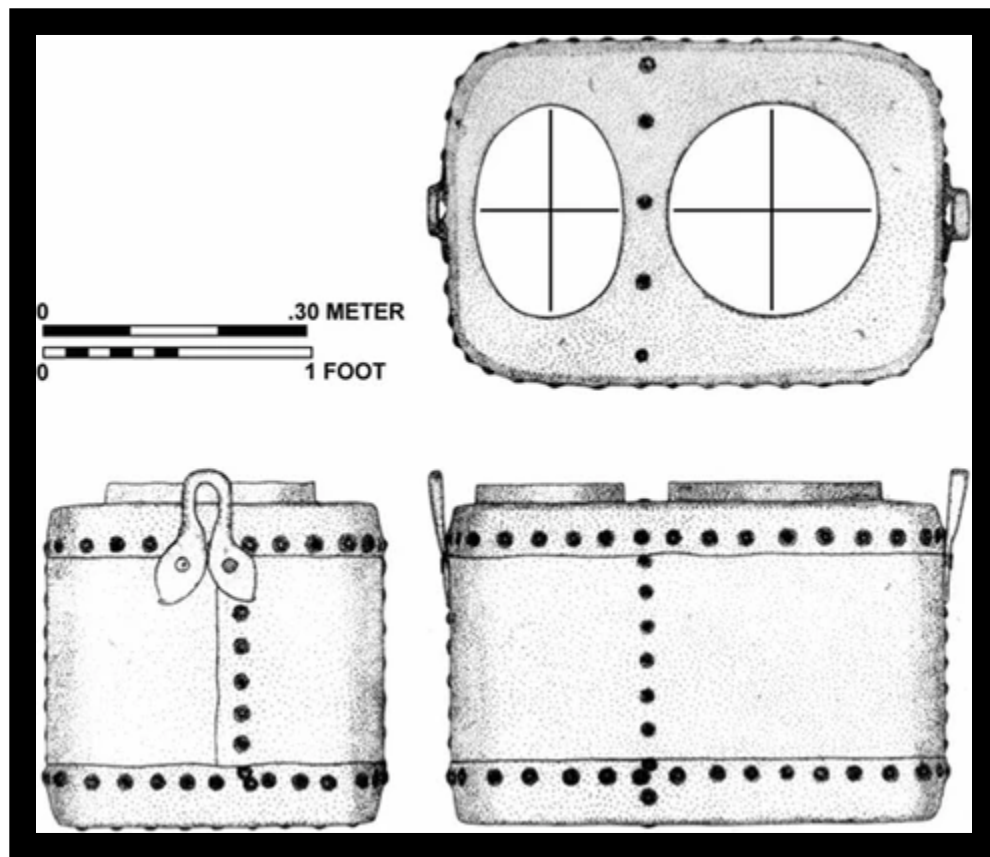


Figure 5.7. Cauldron from the slave vessel *Henrietta Marie* (1700) Image courtesy of the public domain: <https://www.slaveryimages.org/database/search-result.php?search=Henrietta+Marie>

Two copper cauldrons were recovered from the *Henriette Marie* wreck in 1973 ([Moore 2008: 21](#)). The date of the wreck is very close to *La Concorde/Queen Anne's Revenge* and is useful in comparing cauldron data. One of the cauldrons found was in poor condition, but a

graphic reconstruction shows the shape of the vessel. It was made with copper sheeting, had two separate chambers, and at the top, coamings (a raised boarder around the rim), and loops on either end of the vessel were present. The two separate chambers were necessary for when the ship had either a small or considerable number of passengers on board. The smaller chamber was used for a smaller group of people and the larger chamber was for larger groups. Another idea for this type of cauldron comes from a Revolutionary War period privateer called *Defense*. This uneven-sectioned copper cauldron was found on the site, and it is suggested that the larger section was used for cooking while the smaller section was used to boil peas or potatoes ([Smith 2008](#)). The other cauldron found on *Henrietta Marie* was in relatively better condition, as it was almost fully intact. It was made with thicker copper sheeting and had no handles or arrangements built on it except for a chain that was used to hang the vessel over a ship stove ([Moore 2008: 23](#)). Because of how much larger this cauldron is compared to the other; it can be said that this vessel was used for feeding large groups of enslaved African cargo.

La Belle

La Belle was one of four ships that had sailed from France, captained by Robert Cavelier, Sieur de La Salle. The ships arrived in 1684 and established a settlement called Fort St. Louis. The purpose of the voyage, however, was to locate the mouth of the Mississippi River to establish a more permanent settlement in the perfect place for a center of trade, giving France a beneficial start in settling the New World, as well as to invade Spain's established New World silver mine. *La Belle* was the crew's surviving vessel after two years of travel and settling. La Salle along with 20 other men left the ship in the hands of Tessier, originally the second mate of *La Belle*, to search for the Mississippi River on foot. Tessier sent five of the ship's best sailors to shore to find water for the crew who were slowly dying of dehydration, taking the only long boat

with them. As a storm started to rise, Tessier made the decision to raise anchor and sail towards Fort St. Louis without the skilled sailors. The remaining crew could not control the ship and it violently ran aground at the southern end of the bay. Only six of the remaining crew, including Tessier, survived the crash and arrived on shore by fashioning a raft out of the ship's remains ([Bruseth & Turner 2005: 13-28](#)).

In 1995, the Archaeology Division of the combined Texas Antiquities Committee and the Texas Historical Commission got the funding to begin its search for *La Belle*. They found the potential wreck site in the southern area of the bay as that was thought to be where it would be located due to previous research. They began the excavation in June of 1995 and immediately started uncovering artifacts. Most of the artifacts found were trade goods. This included a large amount of hawk bells, brass pins, knives, axe heads, and glass beads ([Bruseth & Turner 2005: 52](#)).

Artifacts relevant to foodways include a set of three brass cooking pots with bail handles used to suspend over a fire, a colander with a six-petal floral design, and two serving ladles. The cutlery in the collection consisted of over 200 knives, some for cutlery while others for skinning and other uses, two forks, one made from brass and the other made from silver, and 70 spoons made from brass, pewter, and wood. The collection has 116 pewter sadware items with crests and maker marks visible. These marks include IP, FIN, L.G. and one pewter bowl marked C.D.L. The pewter items contained 101 plates in total, the rest include bowl, porringer, and cups. This also includes two personal French pewter cups marked with the owners' names and makers' marks. One of the cups had the name Jean Phily scratched on it. This is the name of the ships pilot and ship master ([Bruseth & Turner 2005:99-100](#)).

This collection also includes floral remains. Seed fragments were identified as Mediterranean olives, grapes, probably from the wine, dates, and English walnuts. They also found faunal remnants from the North American region. These include acorns, black berries, wild grapes, mulberries, persimmons, wild plum, wild cherries, pecans, sugarberries, and prickly pear ([Bruseth & Turner 2005: 112-113](#)).

The collection of faunal remains totals 824 with 64 specimens being sent out for isotopic analysis. These remains include 26 pigs, four domestic herbivores (goat or sheep), seven bison, five white tail deer, five turtles, three alligators, four geese or swan, three wild turkeys, and seven marine fish ([Guiry 2018: 689](#)). It was determined the most abundant animal bone found belonged to “ship rats”. The live animals that were brought along the voyage included pigs, one cow, a pair of goats, chickens, and dogs ([Bruseth & Turner 2005: 122-125](#)).

Whydah

Whydah has a similar history to *La Concorde/ Queen Anne’s Revenge*. The galley ship started out as a slaving vessel that was then captured by pirates and was soon lost to the seas at a remarkably similar time. Unlike the French vessel, *La Concorde*, *Whydah* was built in 1715 and owned by a British parliament member named Sir Humphry Morice ([Sandler 2017: 3](#)). With Lawrence Prince as its captain, the vessel started its triangular trade route in 1716. A total of 312 enslaved individuals survived the journey to the Jamaican Islands and were sold. When leaving the ports of Jamaica, the vessel contained hundreds of ivory tusks, slabs of cinchona, malaria medicine, sugar, molasses, dye materials, gold, silver, jewels, and jewelry. In February 1717, on the last leg of *Whydah’s* journey, the ship met with two pirate vessels, the *Sultana* and the *Marianne*. It took three days for the *Sultana* to catch up and overtake the *Whydah*. When pirate captain Sam Bellamy fired the first warning shots captain Prince felt it was more

beneficial for him and his crew to surrender peacefully. In return for this gesture, Bellamy gave Prince *Sultana* and released all the crew who did not join the pirates. ([Sandler 2017: 32, 36-37](#)).

In April 1717, *Whydah* met its end due to the rough and stormy waters of Cape Cod. Resulting in only two survivors, 144 of the ship's crew including its 16 prisoners and captain died in the event. The ship was torn apart due to crashing into a sandbar and exposed to the continuous crash of the stormy waves ([Sandler 2017: 68-69, 76](#)).

The official rediscovery of *Whydah* occurred on July 20, 1984. After a long year of searching, the Expedition *Whydah* crew finally came across some evidence of the lost vessel, a cannon ball dating to the early 18th century and a coin. The initial *Whydah* investigation by Barry Clifford and Maritime Underwater Surveys Inc. began in 1978 then responsibility for the search was transferred to Maritime Exploration Inc. ([Hamilton 1992: i](#)) The site of *Whydah*, labeled WLF-HA-1, was 1500ft (about 457.2 m) off the coast of Barnstable County, Massachusetts, under 20-30ft of water. Artifacts such as 16,045 lead shot were recovered from the site, along with 1,298 silver coins, eight cannons, a bow anchor and many more artifacts. Foodway items included 19 pewter artifacts such as one tankard, seven spoons, one fork, one teapot, and eight plates with the makers mark for John Robyn's from Penzance, Cornwall. Foodway artifacts also included 42 faunal remains, 21 copper kettle rivets, two brass kettle lugs, two knife handles made of wood, an earthenware bowl, and one iron fork. This included 128 glass bottles were recovered along with two bottle stoppers and a keg spigot. ([Hamilton 1992: 1-3, 258](#); [Walkins-Kenney 2022: 116](#)).

The Mardi Gras Shipwreck

During the 18th century, despite the rivalry and tensions with Spain, France was still actively establishing settlements in the Gulf Coast and other Spanish territories. France

established New Orleans in 1718 along the Mississippi staking its claim on one of the most beneficial areas of trade in the region. The area was ceded to Spain in the Treaty of Fontainebleau in 1762, preventing it from being given over to Britain in the Treaty of Paris, however, due to Napoleon's rise of power, Spain soon lost control of the land upon the turn of the century ([Damour 2017: 339](#)). During the several events this area faced, the ships in this area would serve several roles. These include merchant ships, naval ships, and privateering vessels. The Mardi Gras shipwreck served as one or more of these roles, however it is unknown of its actual use. The vessel was lost around 1815 at the mouth of the Mississippi river in 4,000 ft (about 1.22 km) of water ([Damour 2017: 340](#)).

The Mardi Gras wreck was found in 2004 in the Mississippi Canyon leasing area. It was soon excavated in 2007. The artifact assemblage was dated to be from the turn of the 18th to 19th century ([Horrell 2017: 360](#)). The artifacts associated with foodways include three pewter spoons and other spoons identified by bone and wood fragments. Two of the pewter spoons had double-lobed drops and were stamped with 'FABREGUETTE JEUNE A BORDX' (Fabreguette the younger from Bordeaux) identifying them as products made by a French family of pewter smiths in the late 18th century. During conservation it was noted that the inside of one spoon bowl is marked with an X with an additional line running through its center, and the initials, 'B D F,' on the reverse of the handle.

A ship's stove was also recovered from the site, making it one of the first fully recovered stoves (Figure 5.13). The stove is made of cast-iron with dimensions of 19.3 x 26.8 x 17.5 inches and still had the kettle attached. The stove consisted of two side-plates with raised lips that held the other plates in place, a back-plate with a cast flue (a rectangular hollow that travel vertically to release smoke), a bottom-plate, a small front-plate, and the kettle that was held together with

six tie-rods. The stove's feet had holes which may have been used to bolt it into the hull ([Horrell 2017:368](#)). The kettle itself is made of cast-iron and has dimensions 19.5 x 13 x 13.4 inches. The measurements of the basins of the kettle are unequal. Two sheets of lead were recovered near the stove. It was hypothesized that these lead sheets were used to protect the deck from possible loose sparks and the heat the stove would give off. This is due to an impression found on one of the sheets that matches the stove's foot. The stove would usually be in the ship's galley. The galley's location is usually at the stern of the vessel and was not exceptionally large with some type of opening to vent smoke ([Horrell 2017: 361, 369](#)). This site will be used due to these artifacts even though the time of the wreck is not ideal for a comparative analysis focusing on early 18th century sail.

Summary

These sites are necessary for the understanding of the common behaviors of these individuals of this time. They may not have been as connected to each other as humans are currently in their massive exposure to cultures unlike their own, but ships allowed for an interchange of ideas and practices among the mundane that would not have spread if such individuals were isolated from the rest of the world. These ships carried a mixture of different people from one place to the next albeit some forcefully while others chose to explore with the known dangers of such an endeavor such as sailing. These wrecks provide a snapshot of what once was and provide added discourse on the lifeways of these groups of individuals. Having written data from these time periods gives great details, however, artifacts and wreck sites provide physical evidence that lessens the contamination of human bias.

Chapter 6: Analysis and Conclusions

This chapter will focus on analyzing the artifact distribution of Site 31CR314 and a comparative analysis of the five wrecks: HMS *Invincible*, *Henrietta Marie*, *Whydah*, *La Belle*, and the Mardi Gras wreck. Behavioral Archaeology theory will be applied when analyzing these five wrecks along with *La Concorde/Queen Anne's Revenge*. Then move on to the conclusions of this thesis and the answering of the thesis questions.

SPSS Analysis

To begin the analysis of foodway artifact distribution of Site 31CR314 through statistics, start by discussing the methods used with SPSS. To start the process, a codebook is needed. This is necessary for keeping track of what your variables mean when analyzing the data. It defines and labels each of the variables and assigns meaning to the numbers presented. A simplified version code book used for this research is below (Table 6.1). The more in-depth code book can be found in Appendix A.

SPSS Name	Variable	Coding Instructions	Measurements Scale
ID	QAR Artifact #	Number Assigned to Each Artifact (Some ID's will Repeat)	Nominal
AI	Artifact Identifier	CV – Cooking Vessel UT – Utensils SW – Stemware PS – Pewter Sadware FR – Faunal Remains BR – Brick Remnants	Ordinal
PROV	Provenience Location	Provenience location broken down into individual Units measured 5 feet by 5 feet.	Scale
X	Exact PROV Range	PROV Range of X	Scale
Y	Exact PROV Range	PROV Range of Y	Scale

Table 6.1. SPSS Codebook.

There are some variations to several artifact data sets, as can be seen in the Original Data of Table 6.2. According to a personal correspondence with Kimberly Kenyon, “When a large concretion is discovered on the seabed it often spans multiple units. This is common with a cannon, whose encasing concretion can be up to 10 feet in length. The provenience for the artifacts discovered within a particularly large concretion only reflects that of the concretion. We do not have the means or time at present to backfill more specific provenience data for each sub number of a parent concretion. So, all the objects that came out of a parent concretion only have the provenience for the parent concretion”. So, to use the data set in SPSS without getting an error for a number with multiple site units, the numbers were broken up into multiple sections with all the same data but different site units. An example of original and fixed data order can be seen below

(Table 6.2). The original number of total artifacts being analyzed is 274, however, with this change in the data, final count composed of 387 rows of data.

Original Data				
ID	AI	PROV (Unit Number)	X	Y
418.126	CV	244/245/294/295	95.6	98.5
Fixed Data for SPSS Entry				
418.126	CV	244	95.6	98.5
418.126	CV	245	95.6	98.5
418.126	CV	294	95.6	98.5
418.126	CV	295	95.6	98.5

Table 6.2. Data Entry.

After entering the data into SPSS, the program analyzed the frequency of the data. Table 6.3 and Figure 6.1 shows the percentage of how frequently the specific artifact type shows up in the total collection of foodways. The majority of artifacts that make up the foodway artifact are faunal remains with pewterware being the second most frequent artifact to occur. Next, descriptive statistics of X, Y, and PROV are analyzed. Table 6.4 shows the average location of the total foodway artifacts. This can be seen in the column labeled “Mean Statistic”. The mean can be understood as “the original point of location where items may have been situated on the ship and dispersed from when wreckage event occurred”. For the average unit number used for provenience location the center of artifact distribution shows the site unit 175.73 to be the distribution center, however, when looking at the more precise locations of X and Y, the center of the foodway artifact distribution is X – 81.86, Y – 65.38. These locations have been marked on the site map in Figure 6.2, for a visual understanding of these locations. The Yellow dot indicates the location of PROV using the descriptive analysis. As can be seen, using this method for the variable PROV is not

possible, however, when using it on the X and Y variables we get a better result in understanding the center of the distribution.

		Frequency	Percent	Cumulative Percent
Valid	BR Brick Remnants	34	8.8	8.8
	CV Cooking Vessels	27	7.0	15.8
	FR Faunal Remains	198	51.2	66.9
	PS Pewter Sadware	114	29.5	96.4
	SW Stemware	5	1.3	97.7
	UT Utensils	9	2.3	100.0
	Total	387	100.0	

Table 6.3. Frequency of Artifact Type.

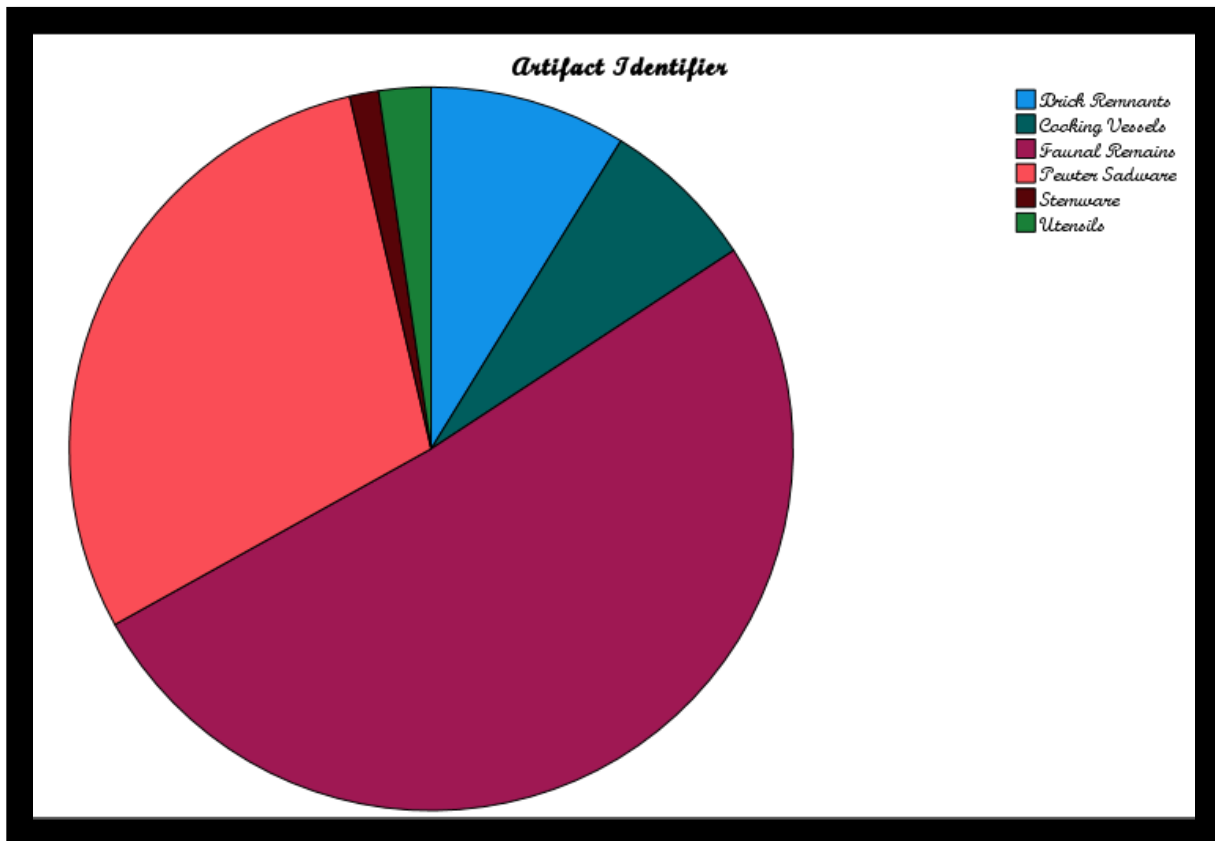


Figure 6.1. Pie Chart of Artifact Type Frequency

	Descriptive Statistics								
	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
PROV X Range	383	60	130	81.86	11.372	1.505	0.125	2.797	0.249
PROV Y Range	384	0	135	65.38	18.887	0.572	0.125	1.192	0.248
Unit Provenience Number	377	1	360	175.73	73.070	-0.348	0.126	-0.188	0.251
Valid N (listwise)	373								

Table 6.4. Descriptive Analysis of General Artifact Distribution.

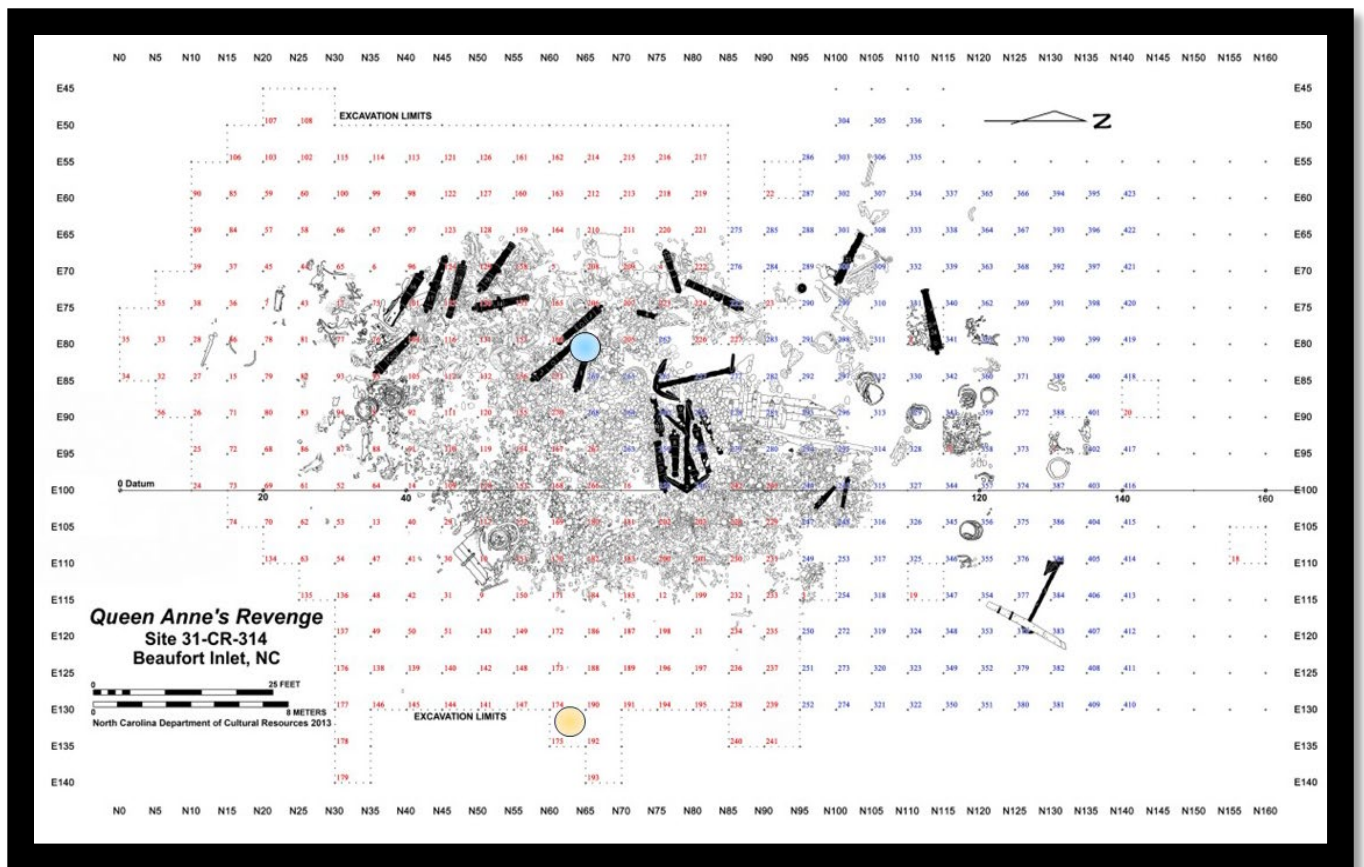


Figure 6.2. Site Map with Descriptive Analysis on Artifact Distribution.

The next analysis is to use descriptive analysis of the artifact distribution on artifact types. Table 6.4 shows PROV, PROV X Range, and PROV Y Range. We have already established that PROV (Unit Provenience Number) cannot be used for descriptive analysis so those readings will be skipped, however, X and Y distribution of artifact types can be seen in Figure 6.5 (located in

Appendix B). The measurement used for the map is taken from “5% Trimmed Mean”. In theory, since each unit is measured 5’ x 5’, a distance could be measured from the mean of the artifact categories and the individual unit location to find how far an object could have traveled after the wreckage event. This, however, would have to consider the various effects the entire site endured during the 300 undiscovered years, such as water current, weather, human disturbances, etc. that would affect artifact movement.

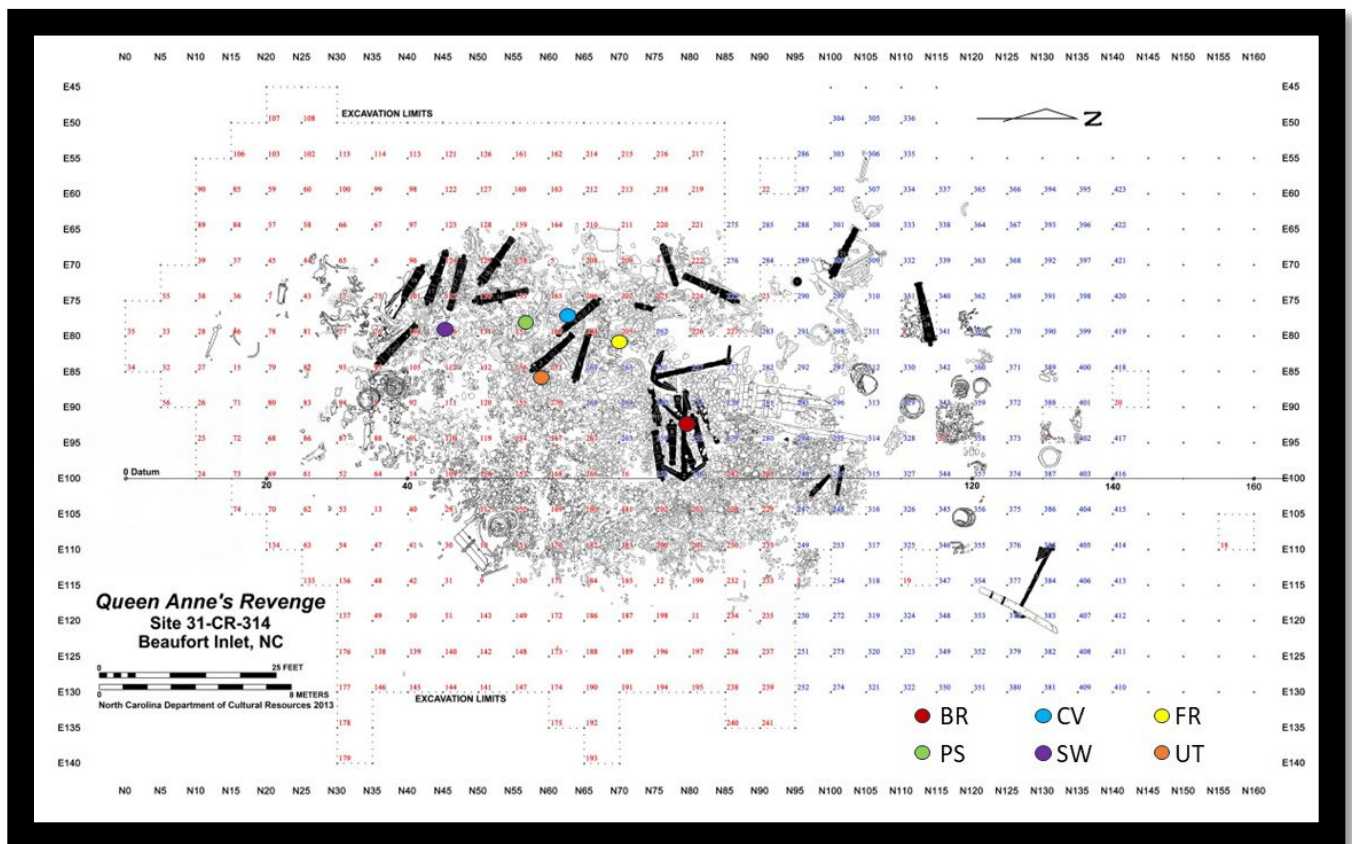


Figure 6.3. Site Map with Visuals of Artifact Type Distribution Mean.

Individual Comparative Analysis

To begin the comparative analysis with the five other wreck sites, the contrast of *La Concorde/ Queen Anne's Revenge* must be stated. What makes site 31CR314 unique out of these five wrecks? While the exact reasoning behind Teach's decision to beach the vessel can be

debated, the fact that it happened is unique. There was no catastrophic event that sank the ship suddenly and this allowed the able-bodied crew to extract its valuable and desired items. This means that even though the artifact collection is extensive, the remaining items found on the site were what they had deemed as trash, unmovable, or generally undesirable. The majority of artifacts may have already been broken or unusable before the event. Another fact unique to site 31CR314, is the environmental conditions these artifacts lived in for the past 300 years. All the sites were found on or near the coast of the United States, however, the dynamic of North Carolina's Beaufort Inlet is, itself, unique. According to the 1999 QAR Management Plan, the site lays in over 20 feet of water, 1.2 nautical miles from Fort Macon and 1,500 yards west of the Beaufort Inlet shipping channel. Due to the sites' proximity to the shipping channel, cartographic studies show that the location of the site had several instances of the migration of the channel passing over it. This would subject the site to intensive channel currents for some years and then completely cover it in as much as 20 feet of sand other years. Another issue is the shallowness of the site. This allows a constant barrage of waves that can be even more detrimental to the site during hurricane season. These rough conditions have allowed the site to become what can be seen today. Massive iron concretions housing many artifacts at once.

La Concorde/ Queen Anne's Revenge

It is necessary to keep in mind that the use for *La Concorde/ Queen Anne's Revenge* at its end was that of a pirate ship being abandoned. Edward Teach could have fully planned out how the ship would end up well before the grounding event. This would mean that he would have taken steps to ensure he could get as much value out of the ship as possible. He could have also sold any trade items well beforehand or transferred anything of value to a functioning ship, before running the vessel aground. The collection of Site 31CR314 may not contain many items

of trade or items a crew member might hold sentimental value towards. As previously stated, the only thing left would be trash. That said, an archaeologist's job is to find meaning and value in what past humans may qualify as trash.

A total of 20 cookware artifacts have been found to date. This does not include the fragments of copper found as they have not definitively been defined as originating from a cooking vessel. Most of the fragments have been made from cast iron with one item being wrought iron. One iron cauldron fragment is large enough to identify its original form and how the feet were shaped. These were either used for food preparation or hull maintenance. The pirate crew would not have needed many cauldrons to prepare their food. The smaller cauldrons were probably used to prepare the pirate crew's food while the larger could have possibly been used as storage. The French slaving crew, however, would have needed several large ones to feed over 400 enslaved plus the crew.

The pewterware collection of sites 31CR314 is large compared to the other artifact categories and similar pewter collections can be found on the other sites due to the materials popularity in the time period. The pewter sadware of *La Concorde/ Queen Anne's Revenge* can be traced to the pewter manufacturers, George Hammond, John Stile, Henry Sewdly, Timothy Fly, and William Smith. Many of the pewter plates found have use marks to indicate that they were not used as trade items, however there were a lot of "charger" plates in the collection and are known to be used as decorative place holders in dining sets. These items were most likely intended for trade due to the amount seen, though it is unknown why Teach did not sell these items.

Only nine spoons, some only handles and others only the bowl section, were found on *La Concorde/ Queen Anne's Revenge* so far, all made from pewter. Only one spoon handle has

engraving. An x is inscribed on the top side of the spoon handle. This may indicate someone preferred that spoon or that it was broken, and the x indicated it should not be used. These were possibly not taken because they were already broken and left in the hull.

Five items categorized as stemware have been found on the site. One of the artifacts can provide identification evidence of origins because of the style design. It is a Silesian stemware from George I coronation. These items were possibly used by the individuals of higher positions as a *status* symbol when drinking wine.

So far, *La Concorde/ Queen Anne's Revenge* has found a few bricks and tiles that can indicate the use of a ship's stove. There is evidence that the bricks have been used close to a fire due to black burn marks seen on several brick remnants.

The largest collection of foodway artifacts besides the immense collection of bottle artifacts not included in this thesis, is the faunal remains identified. The animal remains include pigs, cattle, fish, birds, sheep, and turtles. Several of the bones have teeth marks from scavengers. The environment these remains have sat in for the last 300 years has allowed the iron to leach into them and stain them.

HMS Invincible

Much like *La Concorde/Queen Anne's Revenge*, *HMS Invincible* was a French vessel, however, this vessel was a gunship while *La Concorde/ Queen Anne's Revenge* was a flagship. There is a 26-year difference between the two vessels' time of sail, so there may be some cultural changes in that amount of time, but it should not be by much. This vessel sank unexpectedly due to sailors' error and bad luck.

The two pewter plates found had the makers mark for a London Pewterer, Samuel Ellis. So far, all the pewter on Site 31CR314 has not been identified in connection with this individual.

This is due to the fact that Samuel Ellis' time of manufacturing was 1721 to 1765. The fact that pewter plates were found can indicate that, like *La Concorde/ Queen Anne's Revenge*, these items were possibly used for personal consumption of food by higher status individuals on board. Since this was an arms vessel and not used as a trading vessel, the pewter sadware's purpose can be narrowed down further than with *La Concorde/ Queen Anne's Revenge*. Evidence of a pewter porringer has been found on site with the artifact number, 2350.000.

The site had two large copper cauldrons filled with smaller artifacts, including smaller iron cauldrons. The cooking vessels doubling as transport containers on *HMS Invincible* were probably left in a hurry when the crew was trying to escape the ship slowly filling with water while grabbing anything of value. The many spoons found on board were made of wood and pewter, one with a personalized carving on it. One of *HMS Invincible's* spoons has initials that match the steward of the ship. This gives a more definitive indication of personal use. Many galley bricks were found on site and can be connected to the galley hearth. Records indicate that the ship had been fitted with a new version of the ship's stove of the time.

Henrietta Marie

The English vessel, *Henrietta Marie*, had a similar use at time of sail as a slaving vessel. It started its career earlier than *La Concorde/ Queen Anne's Revenge*, in 1697, the beginning of the boom in slave trade. It was specifically made to carry up to 300 enslaved. The ship met its end when a sudden storm hit and sank the vessel along with its crew.

Since this vessel was an active trading ship at the time of its demise, many of the artifacts were found in large quantities, however, with the extensive amount of pewter found, it could be that some were used for trade while the bowls and spoons could have been used to provide food for the enslaved. This vessel and *La Concorde/ Queen Anne's Revenge* have pewter made by a

common English pewter manufacturer named George Hammond. Of course, this should not be a surprise with dates of these vessels time of sail being close to each other.

When reviewing the spoons, many had engraved designs and were labeled as “Royal Portrait” spoons. These spoons were most likely used as trade items and not used by the enslaved due to this simple fact. Two plates can be determined to be used by the crew due to use marks from utensils and the initials, “HM”, for the ships name.

The two cooking vessels found on this site were made of copper. The smaller of the two was a two chambered cooking vessel whose use can be equated to food preparation for the small crew as well as the two separate chambers could have been used to prepare separate food items at the same time. The larger cooking vessel, or cauldron, had only a chain attached to it. This chain was possibly used to prepare a large quantity of food intended for the enslaved, to hang over the ship's stove.

La Belle

This ship's purpose was to transport individuals and materials to establish a settlement at the mouth of the Mississippi River in 1684. This would mean that items found on this wreck would have been intended to be used on land after reaching the location. The crew, however, established a temporary settlement before locating the site of their intended permanent settlement. Most, though not all, of the items for the settlement would have been removed from the vessel for the temporary settlement before the vessel sank. The items found on the wreck site would have been the items they felt were not needed until the permanent settlement. This would also include the items the crew needed. Even though this wreck may not seem as relevant for comparative analysis due to its intended purpose of sail, the collection of faunal remains is useful

in comparing the faunal remains found on *La Concorde/ Queen Anne's Revenge* for the time period.

The wreck site produced many brass items including three kettles with bail handles, serving ladles, and a colander. There were also over 200 iron case knives found intended for trade, along with 116 pewter items. These may have been intended for trade and thus kept on the ship. Only two forks were found while 70 spoons could be identified.

The shipwreck provided much information on both floral and faunal remains. The seeds found were able to identify what they had with them at the beginning of the voyage because they were specimen originating from England, as well as what they had gathered from the North American regions through trade or wild gathering. The faunal remains showed that these individuals' main diet was pigs, fish, wild game, and goat or sheep. Quite like that of *La Concorde/ Queen Anne's Revenge*. Unfortunately, excavation of Site 31CR314 has yet to produce floral remains to identify any plants used for consumption.

Whydah

The *Whydah* has similar origins to *La Concorde/ Queen Anne's Revenge*. It began as a slaving vessel and was captured by pirates. The galley ship was built in 1715 and sailed at the same time as *La Concorde/ Queen Anne's Revenge*, however, the vessel met its end in 1717 by a heavy storm during their sail through Cape Cod. The ship was newly built and had not completed a single journey before its demise. It is said that the ship was a floating treasure trove due to the valuable contents in its hold.

The foodway artifact collection of this site includes 19 pewter items with maker's marks, indicating their manufacturer as John Robyn. This includes a tankard, spoon, a fork, a teapot, and plates. Copper kettle rivets were found indicating there once was a copper kettle aboard. 42

Faunal remains were also uncovered from the site. This includes three birds, 14 fish, one human, four shell remnants, and the rest are undetermined mammal remains. These bones can tell us that their diet consisted of some type of mammal, along with what they may have caught while at sail. The human bone was most likely from the tragedy that struck the ship.

The Mardi Gras wreck

The Mardi Gras shipwreck is the least relevant wreck to *La Concorde/ Queen Anne's Revenge*; however, its recovery of an intact ship's stove makes this necessary when faced with the brick remnants found on site 31CR314. The vessel may have been used as a merchant ship, naval ship, and/ or a privateering vessel. The vessel was lost in the early 1800s, almost 100 years after *La Concorde/ Queen Anne's Revenge* sailed. The wreckage was small, and the condition of the site was not preserved well. This made the collection of relevant foodway artifacts quite small. Three pewter spoons were uncovered from the site that provided a maker's mark, 'FABREGUETTE JEUNE A BORDX'. These items originated from a French pewter smith family from the late 1700s.

The ship's stove was recovered from the site. This can provide information about the common ship stove of the time. Of, course it may not seem relevant due to the date originating from 100 years later than *La Concorde/ Queen Anne's Revenge*, however, the construction of an items basic form originates from previously used items. The basic needs of a ship's stove are to contain an open flame safely and to cook food. By looking at the stove from the year 1800, one can determine what a stove from 1700 may have functioned. The stove itself was made of cast-iron and still contained a cast-iron kettle along with lead sheets used to protect the wood under the stove from loose sparks. No brick was recovered from the site.

Conclusions

When reviewing the history and data collected, an understanding begins to form and the ability to answer this thesis' primary and secondary questions can become possible. The primary question seeks to understand the connecting food practices between all three groups aboard *La Concorde/ Queen Anne's Revenge*. These three groups of individuals lived interconnected while not necessarily being in their company for an extended period of time. The enslaved aboard the vessel relied heavily on what the crew provided them, possibly through the items found on Site 31CR314. Their survival depended on the treatment and care given to them, whether it be from the French crew or the pirate crew. In turn, the French crew and pirate crew relied on the survival of the enslaved as merchandise to profit from them. The pirates relied on the French crew for their provisions and supplies already aboard to provide for their crew along with anything they stole or brought from other vessels. There is the final connection of the French crew relying on the pirate crew through mercy. We know that the pirate crew took the time to deposit the French crew on Bequia. They even allowed the French crew some provisions of food and water. Through these interactions during this historical event, they all had to rely on each other in some way. In turn, their lives were interconnected. This ensures that one individual group's story cannot be recounted without including the other to understand the history.

The first secondary question asks how the material from the site represents and contributes to the understanding of this interconnection of foodways. To answer this, one has to understand that we as researchers and the public becomes a part of this interconnection between these three groups. The cauldron was used to feed the enslaved in large amounts by the French crew, it was then used to feed the pirate crew, and finally 300 years later, after excavation,

conservation, and transferring the item to a museum, the public now uses the curated cauldron fragment as a foodway teaching device.

The second secondary question asks how the other artifact collections contribute towards this understanding. When reviewing the comparative analysis of these collections we can see that the intended use, situation, and location in which these wreck sites occurred can determine the narrative of why these specific artifacts are found and give us the ability to study them as well as understand the contrasts of the separate collections. *La Concorde/ Queen Anne's Revenge* has to be looked at through the lens of “an intentional abandonment on a shallow coastal bank”. The foodway artifacts were left for a reason, be it that they were broken, had no monetary or sentimental value, or were simply seen as too much of a hassle to remove from the vessel. We can look into the history behind how and why they were used before the abandonment, but the ending event should be kept at the forefront of the mind when forming an understanding of these collections. This idea has to be applied for the other site collections as well.

HMS *Invincible* was a French gun ship that sailed in 1744-1758. Its final day occurred while it was being used after capture by the English and met its demise by running aground through the error of the manning crew. The collection will then have to be looked through the lens of “an armed vessel, aground in shallow coastal waters, at the fault of the crew”. The foodway artifacts left would have been those that could not be removed quickly as the ship filled with water. *Henrietta Marie* was a slaving vessel that sailed in 1697-1700. While continuing its trade route after trading all of the enslaved individuals it had aboard, it sank from a sudden storm near the Marquesas Keys with its crew and all the trade items in the hull. The lens this collection has to be viewed through is “a sudden loss with all items intended for trade and use by the crew and enslaved, in a coastal environment”. The expectation of this collection would be that the

items found would provide a treasure trove of information for several different topics due to the nature of its wreckage.

La Belle was a ship intended for transport of items and people forming a settlement in 1684, it sank due to an unruly storm and a severely dehydrated crew. The lens to look through for these artifacts is “a vessel intended for building a settlement, moored near the coast after the forming of a temporary settlement”. The *Whydah* was a slaving vessel commandeered by pirates during its first voyage in 1715-1717. The vessel was lost during a storm while sailing past Cape Cod shores and was torn apart. The lens to view this collection is “a stolen slaving vessel in turbulent water”. The collection would be items needed to care for the enslaved as well as anything the crew needed; however, the collection has been in an environment not ideal for preservation. The Mardi Gras vessel was possibly used as a merchant ship, naval ship, or privateering vessel in the early 1800s. It is unknown the exact reason for the loss of the vessel however, the site is quite deep, at 4,000 ft. of water. The lens to look through for this is “a wreckage at the mouth of the Mississippi River, in very deep water”. The collection would not be able to provide as much information history wise but the artifacts that are recovered from the site can provide information for the artifact types.

By taking these historical backgrounds into account while comparing the collections, they can provide ideas as to way one item may be on this particular site while not found in the collection of another. *Henrietta Marie* can provide information on how *La Concorde/ Queen Anne's Revenge's* collection may have looked like if it was still an active slaving vessel. HMS *Invincible* can provide a view of how *La Concorde/ Queen Anne's Revenge's* site may have looked if it was in the service of the French Navy. These ideas are especially important to think about when considering the histories of the sites and their collections.

The third secondary question asks about any discernible differences between foodways for the three groups aboard *La Concorde/ Queen Anne's Revenge*. The French crew would be receiving rations from what the slaving company would be willing to pay for. The amount is accounted for by a set list of consumption rate by the crew, how long the voyage would take, and the amount of enslaved they are planning to trade for. The foodway practices would be determined on these factors as well as anything the crew was able to trade for at trade ports or what they could catch. The enslaved were at the mercy of what the slaving crew would be able to receive in rations and at ports as well, however, the food given was prepared in a large cauldron and was of much lower quality than the crew. Because of the unfamiliarity of the ingredients the meals most likely did not agree to them. It was also common for some enslaved to feel the need to not eat at all which can be viewed as a foodway practice in itself and would have repercussions for that individual if their defiance was discovered by the crew. This would in-turn cause another foodway practice involving the *speculum oris*. The pirates' foodway practice would also be determined by the rations received by the French crew. This is through their actions of commandeering the vessel. Whatever foodway items and rations were on board was now theirs to use as they pleased. They would also obtain food from any other vessels they may have robbed and anything they could catch for themselves. To better answer the question, there are differences on how they may have prepared their food such as the different cauldrons and ingredients used to prepare separate quality food and possibly what items they would have used when performing the act of eating, but the interconnection between these groups are still active even in the practice of different methods of consumption.

The fourth and final question is how the provenience of cookware on the site map and knowledge of other foodway artifacts in proximity to cookware enhance understanding of

foodways aboard the ship. Figure 6.4 shows a site map with each artifact in this study marked. This answer can be seen in the analysis of the collection through SPSS. By taking the average location of all of the foodway artifacts and marking it on the site map, it can be seen that the artifact distribution originates close to the center of the site, however it is positioned towards the stern of the vessel on the portside. This would be confirming these items possibly originated from the galley that would be located in this area. We can get more specific on the individual locations of artifact types by looking at the mean of the X and Y locations on the site map. When analyzing the average location of the brick fragments it shows that the original location is almost exactly centered on the site. Specifically, over the large grouping of cannons. This would not be surprising due to the fact that the galley kitchen would be the only place the bricks would be located. The collection of stemware is the farthest from the center and closer to the stern. This is possibly because that would be where the captains' quarters could be found. Items such as stemware was a luxury and a status symbol, so they would not have been kept in the galley for anyone to use. The average location of the pewter sadware is toward the stern and portside of the site. Several factors could go into the reason they were found here. First, pewter sadware, like the stemware, were used as a status symbol and would have been used by the captain and other individuals of higher status. Second, it is close enough to the center and the galley where they would have been stored that they simply shifted in the three hundred years underwater. And third, several could have been stored in the cargo hold for trade and that is where they ended up. The collection of cooking vessels can also be seen more toward the stern and at the portside. This is near the possible location of the galley but far enough away that one has to wonder if it was shifted by anything during its 300 years. The faunal remains are almost center of the site but falls more toward the portside. This distribution would make sense because of several factors. The

distribution is a result of the discards of bones into the hold. The hold would have also contained barrels of salted meat that were left by the crew because they were the bad cuts or had already gone bad before the intentional abandonment. Finally, the collection of utensils can be seen more centered and towards the stern. These items would have been in the galley and are relatively lightweight items so it would be understandable that this is the average location.

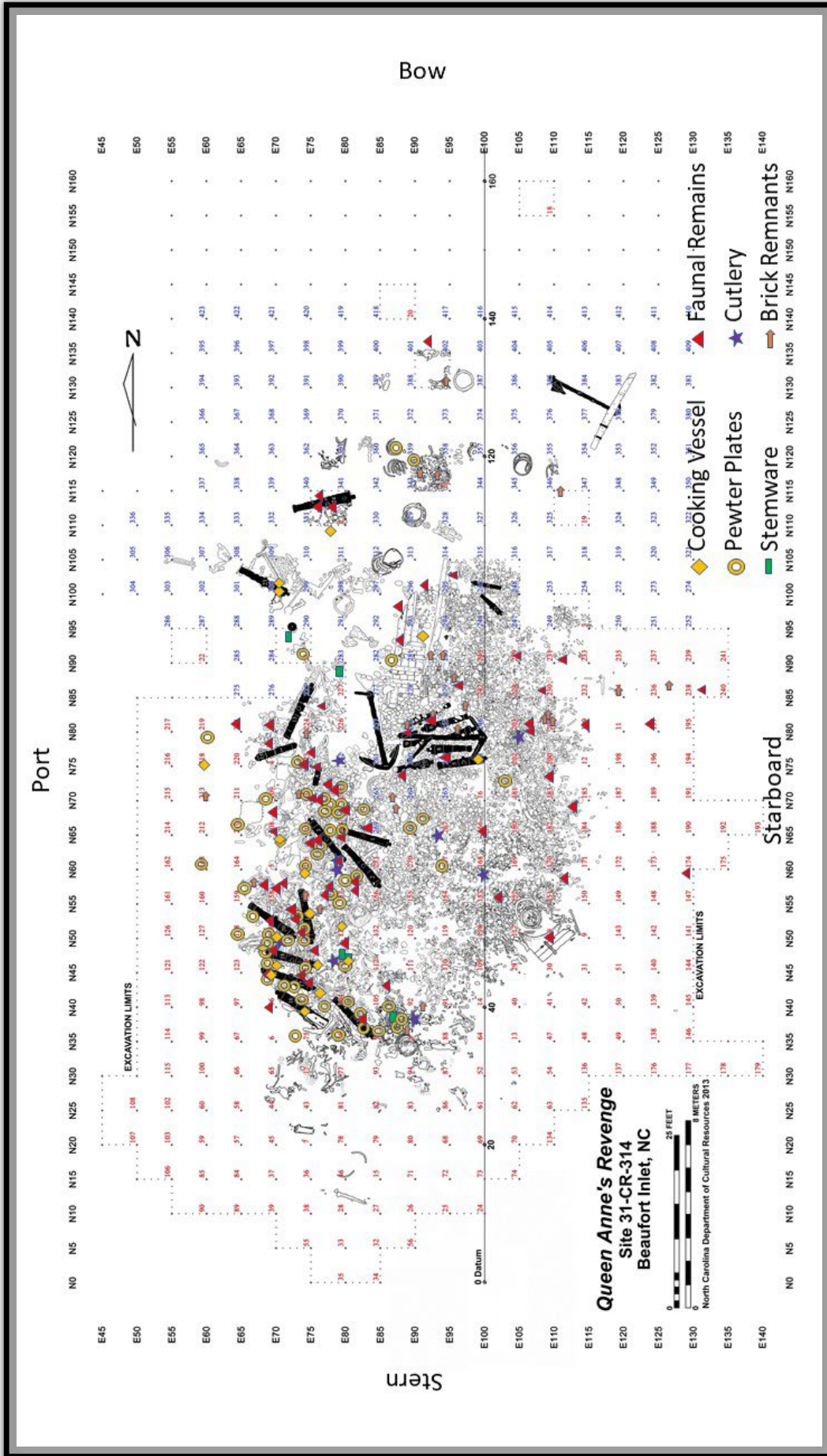


Figure 6.4: Site Map with Individual Artifact Distribution

The locations are based on the mean value received from the calculations of SPSS. Several factors need to be understood before accepting the results of the mean. Besides the collection of faunal remains and pewter sadware, the other collections are quite small and can result in skewed results when calculating with quantitative data. These are not exact locations and only show average location. This can be affected by the direction and rate of currents, the number of hurricanes the site went through, any human interactions it might have received like fishing in the last 300 years, and wildlife that tried to make a home. Another fact that can skew the results is how the vessel settled when it was run aground. The ship heeled over onto its portside, which would have been made worse by the weight of the cannons on board. Loose items would have rolled into positions they were not left in. A final factor that can skew these results is that the site is not fully excavated. Adding any new foodway artifacts from the leftover 40% of the site is definitively going to change these mean values.

To take these methods of research a step forward one may have to wait until the completion of the excavation of Site 31CR314. This is especially the case for methods using quantifiable data to get hypotheses. Another issue for this thesis is the lack of historical information of utensils on shipboard life. There is also the historical issue that France did not keep proper records until the turn of the 18th century and in turn we lack knowledge of the origins of *La Concorde/ Queen Anne's Revenge*, however, this thesis takes a step toward understanding what methods would work better with research into interconnections through foodways for French sailors, enslaved, and pirates of the 18th century.

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Appendix A: Codebook for SPSS Data Set

ID

		Value
Standard Attributes	Position	1
	Type	String
	Format	A11
	Measurement	Nominal
	Role	Input

AI

		Value	Count	Percent
Standard Attributes	Position	2		
	Type	String		
	Format	A2		
	Measurement	Ordinal		
	Role	Input		
Valid Values	BR	Brick Remnants	34	8.8%
	CV	Cooking Vessels	27	7.0%
	FR	Faunal Remains	198	51.2%
	PS	Pewter Sadware	114	29.5%
	SW	Stemware	5	1.3%
	UT	Utensils	9	2.3%

PROV

		Value
Standard Attributes	Position	3
	Type	Numeric
	Format	F15
	Measurement	Scale
	Role	Input
N	Valid	377
	Missing	10
Central Tendency and Dispersion	Mean	175.73
	Standard Deviation	73.070
	Percentile 25	130.00
	Percentile 50	166.00
	Percentile 75	236.00

X

		Value
Standard Attributes	Position	4
	Type	Numeric
	Format	F7
	Measurement	Scale
	Role	Input
N	Valid	383
	Missing	4
Central Tendency and Dispersion	Mean	81.86
	Standard Deviation	11.372
	Percentile 25	75.00
	Percentile 50	78.10
	Percentile 75	85.00

Y

		Value
Standard Attributes	Position	5
	Type	Numeric
	Format	F5
	Measurement	Scale
	Role	Input
N	Valid	384
	Missing	3
Central Tendency and Dispersion	Mean	65.38
	Standard Deviation	18.887
	Percentile 25	55.00
	Percentile 50	63.81
	Percentile 75	75.40

Appendix B: Descriptives for Individual Artifact Type.

Artifact Identifier		Statistic	
Unit Provenience Number	BR Brick Remnants	Mean	186.21
		5% Trimmed Mean	191.12
		Median	207.50
	CV Cooking Vessels	Mean	157.78
		5% Trimmed Mean	157.53
		Median	125.00
	FR Faunal Remains	Mean	185.49
		5% Trimmed Mean	190.39
		Median	204.00
	PS Pewter Sadware	Mean	164.21
		5% Trimmed Mean	164.55
		Median	157.00
	SW Stemware	Mean	106.40
		5% Trimmed Mean	102.39
		Median	112.00
UT Utensils	Mean	170.78	
	5% Trimmed Mean	169.81	
	Median	157.00	
PROV X Range	BR Brick Remnants	Mean	93.07
		5% Trimmed Mean	93.09
		Median	93.75
		Mean	77.37

	CV Cooking Vessels	5% Trimmed Mean	77.01
		Median	74.25
	FR Faunal Remains	Mean	82.54
		5% Trimmed Mean	81.32
		Median	78.10
	PS Pewter Sadware	Mean	78.03
		5% Trimmed Mean	77.95
		Median	77.41
	SW Stemware	Mean	80.10
		5% Trimmed Mean	80.14
		Median	80.00
	UT Utensils	Mean	86.76
		5% Trimmed Mean	86.59
		Median	80.80
PROV Y Range	BR Brick Remnants	Mean	80.36
		5% Trimmed Mean	80.36
		Median	80.00
	CV Cooking Vessels	Mean	63.50
		5% Trimmed Mean	62.32
		Median	50.00
	FR Faunal Remains	Mean	69.08
		5% Trimmed Mean	68.42
		Median	65.00
	PS Pewter Sadware	Mean	56.24
		5% Trimmed Mean	55.06

		Median	57.10
	SW Stemware	Mean	44.80
		5% Trimmed Mean	44.56
		Median	45.50
	UT Utensils	Mean	58.51
		5% Trimmed Mean	58.54
		Median	59.00

Table 6.5. Descriptive Analysis of Artifact Type Distribution.

