

THE DISH RAN AWAY WITH THE SPOON: REVISITING UNPROVENIENCED  
FOODWAYS ARTIFACTS FROM THE EIGHTEENTH CENTURY SPANISH FLEET  
SHIPWRECKS

by

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The Spanish empire was the first European power to establish permanent settlements that flourished as New World colonies on several of the Caribbean islands and coasts of North America. The distance between Spain and the colonies led to differences in the lifestyles and customs which developed in these frontier spaces. Archaeological investigations both on land and underwater have yielded a considerable amount of material culture reflecting Spanish life in the territories of Florida and the Caribbean. This thesis will examine artifacts associated with Spanish colonial “foodways” in two shipwreck assemblages from the early eighteenth century coast of Florida. These foodways artifacts highlight societal and commercial trends of the eighteenth-century Spanish maritime empire.



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by

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## TABLE OF CONTENTS

LIST OF TABLES.....	xi
LIST OF FIGURES.....	xii
CHAPTER 1: INTRODUCTION.....	1
<i>1.1 Purpose of Project</i> .....	1
<i>1.2 Justification</i> .....	6
<i>1.3 Historical and Archaeological Background</i> .....	7
<i>1.4 Research Methodology</i> .....	15
<i>1.5 The Archaeological Collections</i> .....	16
<i>1.6 Limitations</i> .....	17
<i>1.7 Chapter Overview</i> .....	18
CHAPTER 2: LITERATURE REVIEW.....	19
<i>2.1 Introduction</i> .....	19
<i>2.2 Unprovenienced Artifacts</i> .....	19
<i>2.3 Frontier Concepts and Alternative Economies</i> .....	20
<i>2.4 Material Culture Studies</i> .....	23
<i>2.5 Object Biographies</i> .....	26
<i>2.6 Foodways</i> .....	27
<i>2.7 Cutlery</i> .....	28
<i>2.8 Conclusion</i> .....	29
CHAPTER 3: HISTORICAL BACKGROUND.....	31
<i>3.1 Introduction</i> .....	31
<i>3.2 Methodology</i> .....	31

3.3 <i>Spanish Colonialism and Trade in the New World</i> .....	32
3.3.1 Eighteenth Century Spain and the Bourbon Monarchy.....	32
3.3.2 Eighteenth Century Trade Goods of the New World.....	34
3.3.3 Eighteenth Century Spanish Contraband.....	41
3.4 <i>History of Cutlery</i> .....	43
3.4.1 Cutlery Type Development.....	43
3.4.2 Medieval Cutlery Development.....	45
3.4.3 Renaissance Cutlery Development.....	46
3.4.4 Baroque Cutlery Development.....	47
3.5 <i>History of Colonial Foodways</i> .....	48
3.5.1 Terrestrial Foodways History.....	48
3.5.2 Maritime Foodways History.....	55
3.6 <i>1715 Fleet Background</i> .....	58
3.6.1 8IR00000.....	58
3.6.2 8IR00019 “Corrigan’s Wreck” .....	59
3.6.3 8IR00023 “Cabin Wreck” .....	60
3.6.4 8IR00027 “Rio Mar Wreck” .....	62
3.6.5 8SL00017 “Douglass Beach Wreck” .....	62
3.7 <i>1733 Fleet Background</i> .....	63
3.7.1 8MO101 “San Jose” .....	64
3.7.2 8MO104 “San Pedro” .....	65
3.7.3 8MO131 “Angustias” .....	67
3.7.4 8MO133 “San Felipe/El Lerri” .....	69

3.7.5	8MO146 “Capitana El Rubi” .....	70
3.8	<i>Conclusion</i> .....	71
CHAPTER 4: ARCHAEOLOGICAL DATA.....		72
4.1	<i>Introduction</i> .....	72
4.2	<i>Overview of the Archaeological Collections</i> .....	72
4.3	<i>Cutlery Types</i> .....	73
4.4	<i>Typology Descriptions</i> .....	74
4.5	<i>Degree of Completion</i> .....	75
4.6	<i>Materials</i> .....	76
4.7	<i>1715 Artifact Collection</i> .....	77
4.7.1	8IR00000 (General 1715 Fleet) .....	77
4.7.2	8IR00019 (Corrigan’s Wreck) .....	81
4.7.3	8IR00023 (Green Cabin Wreck) .....	84
4.7.4	8IR00027 (Rio Mar Wreck) .....	88
4.7.5	8SL00017 (Douglass Beach Wreck) .....	90
4.8	<i>1715 Collection Decorative Features</i> .....	95
4.9	<i>1733 Artifact Collection</i> .....	100
4.9.1	8MO101 ( <i>San José</i> ) .....	100
4.9.2	8MO133 ( <i>El Lerri</i> ) .....	103
4.9.3	8MO104 ( <i>San Pedro</i> ), 8MO131 ( <i>Angustias</i> ), and 8MO146 ( <i>Capitana</i> ) .....	104
4.10	<i>1733 Collection Decorative Features</i> .....	105
4.11	<i>Handle Design Typologies</i> .....	106

4.11.1 Fiddle.....	107
4.11.2 Spade.....	107
4.11.3 Oval.....	108
4.11.4 Floral.....	109
4.11.5 Figurine.....	109
4.11.6 Twisted.....	109
4.11.7 Trefid.....	110
4.11.8 Dog-Nose.....	110
4.12 <i>Stamps</i> .....	111
4.13 <i>Linear Breaks</i> .....	112
4.14 <i>Conclusion</i> .....	114
CHAPTER 5: INTERPRETATIONS.....	116
5.1 <i>Introduction</i> .....	116
5.2 <i>Comparison of 1715 and 1733 Collections</i> .....	116
5.3 <i>Comparison to Other Collections</i> .....	118
5.4 <i>Comparison to Contemporary Artwork</i> .....	133
5.5 <i>Artifact Biographies</i> .....	156
5.5.1 Artifact I – 93.673.103.1.....	156
5.5.2 Artifact II- 93.641.112.1.....	157
5.5.3 Artifact III- 93A.641.135.1-2.....	160
5.5.4 Artifact IV- 72A.21.53.1.....	161
5.5.5 Artifact V- 72A.15.318.1.....	164
5.5.6 Artifact VI- 93.673.65.1.....	165

5.5.7	Artifact VII- 05A.101.065860.0001.....	166
5.5.8	Artifact VIII- 72A.13.96.1.....	167
5.5.9	Artifact IX- 72.13.364.3.....	168
5.5.10	Artifact X- 94A.36.843.1.....	169
5.5.11	Artifact XI- 93A.605.19.1.....	171
5.5.12	Artifact XII- 93A.605.105.....	173
5.5.13	Artifact XIII- 93A.605.1753.....	173
5.5.14	Artifact XIV- 93.605.398.1.....	174
5.5.15	Artifact XV- 93.614.071.....	177
5.6	<i>Relation to Frontier Models</i> .....	177
5.7	<i>Conclusion</i> .....	179
CHAPTER 6: CONCLUSION.....		180
6.1	<i>Introduction</i> .....	180
6.2	<i>Discussion</i> .....	180
6.2.1	Contextual Problems.....	180
6.2.2	Temporal Problems.....	181
6.2.3	Identification Problems.....	182
6.2.4	Comparative Problems.....	183
6.3	<i>Answering the Research Questions</i> .....	184
6.3.1	What conclusions can be reached regarding Spanish colonial foodways in the eighteenth century through the examination of unprovenienced artifacts recovered from shipwrecks in Florida waters?.....	184
6.3.2	What are the biographies of cutlery from eighteenth century Spanish shipwrecks?.....	185

6.3.3 What do these biographies relate about eighteenth century Spanish colonial foodways and trade?.....	186
6.4 <i>Recommendations for Future Research</i> .....	188
6.5 <i>Conclusion</i> .....	189
REFERENCES.....	190
APPENDIX A: GLOSSARY.....	201
APPENDIX B: CUTLERY ANATOMY.....	203
APPENDIX C: 1715 FLEET ARTIFACT COLLECTION PHOTOS.....	205
APPENDIX D: 1733 FLEET ARTIFACT COLLECTION PHOTOS.....	271
APPENDIX E: ARTIFACTS WITH LINEAR BREAKS PHOTOS.....	291
APPENDIX F: PREFORMS FOR CUTLERY ANALYSIS.....	300
APPENDIX G: REPORTS OF CARGO MANIFESTS.....	304



## LIST OF TABLES

Table 1.	South's Frontier Artifact Pattern (South 1977:145, Table 16).....	14
Table 2.	Comparison of South's patterns and Skowronek's patterns (South 1977:145; Skowronek 1982:40, 171).....	15
Table 3.	1715 Fleet – Site 8IR00000 artifact distribution.....	80
Table 4.	1715 Fleet – Site 8IR00019 artifact distribution.....	81
Table 5.	1715 Fleet – Site 8IR00023 artifact distribution.....	87
Table 6.	1715 Fleet – Site 8IR00027 artifact distribution.....	90
Table 7.	1715 Fleet – Site 8SL00017 artifact distribution.....	94
Table 8.	1715 Fleet collection – artifact decorative features.....	96
Table 9.	1733 Fleet – Site 8MO101 artifact distribution.....	102
Table 10.	1733 Fleet – Site 8MO133 artifact distribution.....	104
Table 11.	1733 Fleet – Sites 8MO104, 8MO131, and 8MO146 artifact distributions.....	105
Table 12.	1733 Fleet collection –artifact decorative features.....	105
Table 13.	Crosstabulation of handle typology by fleet.....	110
Table 14.	Crosstabulation of handle typology by cutlery types in the 1715 collection.....	110
Table 15.	Crosstabulation of handle typology by cutlery types in the 1733 collection.....	111
Table 16.	Crosstabulation of stamps and cutlery type in the 1715 collection.....	112
Table 17.	Crosstabulation of cutlery type with linear breaks by fleet.....	113
Table 18.	Comparison of 1715 and 1733 Fleet collections to other archaeological and historical collections.....	133
Table 19.	Comparison of 1715 and 1733 Fleet collections to contemporary artwork.....	155

## LIST OF FIGURES

Figure 1.	1715 Spanish Silver Fleet Wreck Sites (Gilkes 2014).....	10
Figure 2.	Locations of the 1733 Spanish Plate Fleet Shipwrecks (Division of Historical Resources, Bureau of Archaeological Research 2005).....	13
Figure 3.	“From mountain to monarch: how silver coins were made. A schematic chart traces the process of mining silver ore at Potosí, refining it, converting it to coin and transporting the wealth to Spain. This is a composite of steps that were followed by the late seventeenth century” (Craig 2000:41, Illustration 4.2).....	39
Figure 4.	Variation of handle terminals.....	75
Figure 5.	Degrees of completion in cutlery pieces.....	76
Figure 6.	Artifact number 94.36.829.7 – linear break.....	113
Figure 7.	Artifact number 72A.015.000318.0001 – linear break.....	114
Figure 8.	Artifact number 05A.101.065860.0001 – linear break.....	114
Figure 9.	“Storm Wreck” spoons (Cox 2012:2).....	119
Figure 10.	<i>Amsterdam</i> collection handles and spoons (Marsden 1985:139).....	122
Figure 11.	<i>Machault</i> collection knife handles (Sullivan 1986:91).....	124
Figure 12.	Boca Chica Channel Wreck collection, silver fork (NHCUAB 2003:154).....	125
Figure 13.	<i>Defence</i> collection spoon (Switzer 1983:46).....	126
Figure 14.	Museum of Fine Arts Boston collection, 1690 Trefid I handle terminal spoon (Buhler 1972:44).....	127
Figure 15.	Museum of Fine Arts Boston collection, Dog-nose handle terminal utensil set (Buhler 1972:56).....	128
Figure 16.	Museum of Fine Arts Boston collection, Oval II handle terminal spoons (Buhler 1972:165).....	129
Figure 17.	Oval II terminal serving spoon and fork (Boylan 1974:127).....	130
Figure 18.	Eighteenth century forks (Boylan 1974:129).....	131

- Figure 19. Eighteenth century forks and spoons (Boylan 1974:130).....132
- Figure 20. Giuseppe Arcimboldo, *The Cook*, oil on canvas, ca.1616-1623, The Royal Danish Collection, Rosenborg Castle, Copenhagen, <http://gersondenmark.rkdmonographs.nl/5.-christian-iv2019s-winter-room-and-studiolo-2013-joergen-wadum/5.2-the-studiolo> (accessed June 14, 2017).....136
- Figure 21. Andre Bouys, *La Récurveuse* [The Scrubber], oil on canvas, 1737, Musée des Arts Décoratifs, Paris, <http://www.lesartsdecoratifs.fr/francais/musees/musee-des-arts-decoratifs/editions/arts-decoratifs/francais/musees/musee-des-arts-decoratifs/parcours/xviie-xviiiie-siecles/l-acajou/la-recureuse> (accessed June 14, 2017).....137
- Figure 22. Jean-Baptiste-Siméon Chardin, *The Silver Cup*, oil on canvas, ca.1760, Louvre Museum, Paris, [https://commons.wikimedia.org/wiki/File:Jean\\_Sim%C3%A9on\\_Chardin\\_-\\_The\\_Silver\\_Cup\\_-\\_WGA04786.jpg](https://commons.wikimedia.org/wiki/File:Jean_Sim%C3%A9on_Chardin_-_The_Silver_Cup_-_WGA04786.jpg) (accessed June 14, 2017).....138
- Figure 23. Alexandre-François Desportes, *Cat Stealing Food*, n.d., The Great Cat, <http://www.thegreatcat.org/the-cat-in-art-and-photos-2/cats-in-art-18th-century/alexandre-francois-desportes/> (accessed June 14, 2017).....140
- Figure 24. Juan Bautista de Espinosa, *Still Life with Silver Gilt Salvers*, 1624, The Hilmar Reksten Art Foundation, Bergen, Norway, <https://www.magnoliabox.com/products/still-life-with-silver-gilt-salvers-ix003487> (accessed June 14, 2017).....141
- Figure 25. Juan van der Hamen y León, *Still Life with Boxes of Sweets*, 1621, The State Hermitage Museum, St. Petersburg, Russia, [http://www.hermitagemuseum.org/wps/portal/hermitage/what-s-on/temp\\_exh/1999\\_2013/hm4\\_1\\_276/?lng=en](http://www.hermitagemuseum.org/wps/portal/hermitage/what-s-on/temp_exh/1999_2013/hm4_1_276/?lng=en) (accessed June 14, 2017).....142
- Figure 26. Juan van der Hamen y León, *A Chocolate Service with a Wooden Box of Packed Chocolate, Two Lacquered Gourd Drinking Bowls, a Wooden Milk Whisk, Napkins, a Spoon and Pastries on a Pewter Plate*, oil on canvas, ca. early 17<sup>th</sup> century, Sotheby's, <http://www.sothebys.com/es/auctions/ecatalogue/lot.265.html/2014/old-master-paintings-n09102> (accessed June 21, 2017).....143
- Figure 27. William Hogarth, *Captain Lord George Graham, 1715-1747, in his Cabin*, oil on canvas, ca.1745, National Maritime Museum, Greenwich, [https://commons.wikimedia.org/wiki/File:Captain\\_Lord\\_George\\_Graham,\\_1715-47,\\_in\\_his\\_Cabin.jpg](https://commons.wikimedia.org/wiki/File:Captain_Lord_George_Graham,_1715-47,_in_his_Cabin.jpg) (accessed July 12, 2017).....144
- Figure 28. Jean Etienne Liotard, *Still Life Tea Set*, oil on canvas, 1783, The J. Paul Getty Museum, Los Angeles, CA, <http://www.getty.edu/art/collection/objects/735/jean->

	<a href="#">etienne-liotard-still-life-tea-set-swiss-about-1781-1783/</a> (accessed June 14, 2017).....	145
Figure 29.	Carlo Magini, <i>Still Life with a Copper Jug</i> , oil on canvas, ca.1720-1750, National Museum in Warsaw, <a href="https://commons.wikimedia.org/wiki/File:Magini_Still_life_with_a_copper_jug.jpg">https://commons.wikimedia.org/wiki/File:Magini_Still_life_with_a_copper_jug.jpg</a> (accessed June 19, 2017).....	146
Figure 30.	Luis Meléndez, <i>Still Life with Box of Jellied Fruit, Bread, Silver Salver, Glass, and Wine Cooler</i> , oil on canvas, 1770, Museo Nacional del Prado, Madrid.....	148
Figure 31.	Luis Meléndez, <i>Still Life with Melon, Boxes of Sweets, Cask, and Spoon</i> , oil on canvas, ca.1770, in <i>Luis Melendez: Master of the Spanish Still Life</i> , eds. Gretchen A. Hirschauer and Catherine A. Metzger (Yale University Press: New Haven, CT, 2009).....	149
Figure 32.	Luis Meléndez, <i>Still Life with Melon and Pears</i> , oil on canvas, ca.1772, Museum of Fine Arts, Boston, MA, <a href="http://www.mfa.org/collections/object/still-life-with-melon-and-pears-32670">http://www.mfa.org/collections/object/still-life-with-melon-and-pears-32670</a> (accessed September 8, 2016).....	150
Figure 33.	Luis Egidio Meléndez, <i>Still Life with a Chocolate Service</i> , oil on canvas, 1770, Museo Nacional del Prado, Madrid, <a href="https://www.museodelprado.es/en/the-collection/art-work/still-life-with-a-chocolate-service/004dba61-31c4-42b8-8bc4-5ceb8fe20825">https://www.museodelprado.es/en/the-collection/art-work/still-life-with-a-chocolate-service/004dba61-31c4-42b8-8bc4-5ceb8fe20825</a> (accessed June 19, 2017).....	151
Figure 34.	Antonio Pereda y Salgado, <i>Two Figures at a Table with Kitchen Utensils</i> , oil on canvas, ca.1631-1678, Penrhyn Castle, Gwynedd, UK, <a href="http://www.nationaltrustcollections.org.uk/object/1421752">http://www.nationaltrustcollections.org.uk/object/1421752</a> (accessed June 19, 2017).....	152
Figure 35.	Antonio de Pereda, <i>Still Life with an Ebony Chest</i> , oil on canvas, 1652, State Hermitage Museum, St. Petersburg, <a href="https://commons.wikimedia.org/wiki/File:Antonio_de_Pereda_y_Salgado_-_Still-Life_with_an_Ebony_Chest_-_WGA17174.jpg">https://commons.wikimedia.org/wiki/File:Antonio_de_Pereda_y_Salgado_-_Still-Life_with_an_Ebony_Chest_-_WGA17174.jpg</a> (accessed June 19, 2017).....	153
Figure 36.	Juan Bautista Romero, <i>Still Life with Strawberries and Chocolate</i> , oil on panel, ca.1775-1790, North Carolina Museum of Art, Raleigh, NC, <a href="http://ncartmuseum.org/art/detail/still_life_with_strawberries_and_chocolate">http://ncartmuseum.org/art/detail/still_life_with_strawberries_and_chocolate</a> (accessed June 19, 2017).....	154
Figure 37.	Artifact 93.673.103.1 – bone/ivory toothpick with figurine.....	157
Figure 38.	Artifact 93A.641.000112.0001 – twisted silver handle.....	158
Figure 39.	Artifact Number 93.641.112.1 – twisted silver handle with marks, butt close-up.....	159

Figure 40.	“Coat of Arms of the Commonwealth of Puerto Rico” <a href="https://commons.wikimedia.org/wiki/File:Coat_of_arms_of_the_Commonwealth_of_Puerto_Rico.svg">https://commons.wikimedia.org/wiki/File:Coat_of_arms_of_the_Commonwealth_of_Puerto_Rico.svg</a> (Accessed 22 December 2016).....	159
Figure 41.	“Coat of Arms of Santa Isabel City (Spanish Guinea)” <a href="https://commons.wikimedia.org/wiki/File:Coat_of_Arms_of_Santa_Isabel_City_(Spanish_Guinea).svg">https://commons.wikimedia.org/wiki/File:Coat_of_Arms_of_Santa_Isabel_City_(Spanish_Guinea).svg</a> (Accessed 22 December 2016).....	160
Figure 42.	Artifact 93A.641.000135.0001-2 – gilt fork with Figurine handle.....	161
Figure 43.	Artifact 72A.021.000053.0001 – silver spoon with Fiddle handle and stamps, front.....	163
Figure 44.	Artifact 72A.021.000053.0001 – silver spoon with Fiddle handle and stamps, back.....	164
Figure 45.	Artifact 72A.015.000318.0001 – spoon bowl with linear break.....	165
Figure 46.	Artifact 93.673.65.1 – Dog-nose spoon.....	166
Figure 47.	Artifact 05A.101.065860.0001 – Spoon bowl with distinctive breaks.....	167
Figure 48.	Artifact 72A.013.000096.0001 – Silver fork with Spade I handle & stamps.....	168
Figure 49.	Artifact 72.13.364.2 – Spade II style handle with “B <sup>o</sup> ,” mark.....	169
Figure 50.	Artifact 94A.036.000843.0001 – Figurine type handle.....	171
Figure 51.	Artifact 93A.605.19.1 – Two-piece cocoa frother head.....	172
Figure 52.	Artifact 93A.605.19.1 – Cocoa frother head side.....	172
Figure 53.	Artifact 93A.605.105 – Oval II type handle.....	173
Figure 54.	Artifact 93.605.1753 – Three-tined fork.....	174
Figure 55.	Artifact 93.605.398.1 – Pewter spoon with marks, front.....	176
Figure 56.	Artifact 93.605.398.1 – Pewter spoon with marks, back.....	176
Figure 57.	Artifact 93.614.071 – Wood handle.....	177

## CHAPTER ONE: INTRODUCTION

### *1.1 Purpose of Project*

The eighteenth century saw some of the worst losses in maritime trade for the Spanish Empire due to numerous catastrophic weather incidents. In the first third of the century, multiple flotillas were sunk off the coast of Florida. Particularly devastating losses were seen in both 1715 off the central east coast and 1733 in the Florida Keys. Shipwrecks are unique types of archaeological sites due to their “time-capsule” like nature. At the exact moment they sink, shipwrecks offer a snapshot of life at the time. Russell Skowronek (1982) examined this time-capsule concept, as well as the theory of ships as “floating frontier communities,” in his study of artifacts from the 1733 *flota*. As the only extant study focusing on the artifacts of either the 1715 or the 1733 fleet shipwrecks, Skowronek’s work is used as the primary basis of comparison for this thesis.

While both fleets originated in the New World, they have different titles which signify the area of the Americas from which they traded goods and later departed. The “Tierra Firme” fleet serviced the Viceroyalty of Peru, including Panama and Santa Marta, and was laden with South American goods in the port of Cartagena (Andrews 1978:41). The “New Spain *flota*” serviced the Viceroyalty of New Spain, which “included modern Mexico, the American Southwest, and much of Central America and the Caribbean islands” (Mills and Taylor 1998:351). The term *flota*, used to refer to the 1733 fleet, is a specific term that refers to “the annual Spanish trading fleet that gathered goods from Mexico, usually sailing to and from Veracruz” (Deagan 1987:189). The goal of this thesis is to expand on the previous research carried out on artifacts from the shipwrecks of the 1733 Spanish *flota* and compare that new

research to artifacts of the 1715 Tierra Firme fleet shipwrecks to investigate the ways material culture can further the knowledge base of eighteenth century Spanish colonial life and trade.

James Deetz (1996:35) describes material culture as “usually considered to be roughly synonymous with artifacts, the vast universe of objects used by human-kind to cope with the physical world, to facilitate social intercourse, and to benefit our state of mind.” These archaeological artifacts have been studied through many theoretical lenses over time, and more recently via a concept known as “artifact biographies” which investigate the life history of objects from production to consumption and deposition. Artifact biographies, also known as object or cultural biographies, examine items in terms of its “life” as an object, from procurement, to manufacture, trade, use, and disposal (Ashby 2011). This approach has the potential to increase the understanding of the symbolic, behavioral, economic, and technological lives of artifacts.

The material culture remains in this study will be examined in relation to the societal norms and daily life associated with the idea of a “frontier,” which can be defined as “a meeting place of peoples in which the geographic and cultural borders were not clearly defined” (Adelman and Aron 1999:815). This frontier concept will be utilized as a basis of understanding regarding the context, temporally rather than physically, of the artifact in this study. Frontier economics will form a large part of the interpretations section of this thesis, due in part to the wide array of research that has been conducted on aspects of and trends in “alternative economies” including contraband goods and trading practices outside of the imperially sanctioned system (Harman 1969; Sanders 1977; Skowronek 1984, 1992; Deagan 2007; Thompson 2012).

The primary source of evidence for the comparison between the fleets in this study will be the material culture associated with foodways onboard the ships. Claude Levi-Strass (2013:47) refers to food as an aspect that may be used to interpret characteristics of a given culture, stating:

...to integrate all the characteristics of a given culinary system...it will be necessary to seek the most economical manner of orienting it...so that it can be superposed on contrasts of a sociological, economic, esthetic or religious nature: men and women, family and society, village and bush, economy and prodigality, nobility and commonality, sacred and profane, etc. Thus we can hope to discover for each specific case how the cooking of a society is a language in which it unconsciously translates its structure—or else resigned itself, still unconsciously to revealing its contradictions.

Foodways artifacts will be utilized in this study due to their steady use in western civilization through time which makes them relatively universal in terms of interpretation when examined in such a context. The term “foodways” has several variations of definition. Jacqueline Thursby’s (2008:176) interpretation is that foodways are “the intersection of food and culture.” Foodways has also been described as, “...the whole interrelated system of food conceptualization, procurement, distribution, preservation, preparation, and consumption shared by all members of a particular group” (Anderson 1971, as cited in Deetz 1996:73). These items can include storage jars, baskets, kettles, pots, pans, platters, cutlery, and cups. Due to the extensive assemblages and wide variety of foodways artifacts associated with the 1715 and 1733 fleet collections, this thesis will focus specifically on cutlery (forks, knives, spoons, and broken handles thereof). The



material, design, purpose, and quantity of each utensil or utensil typology will be examined and compared to contemporary historic documents.

The following research questions will be addressed in this thesis:

1. What conclusions can be reached regarding Spanish colonial foodways in the eighteenth century through the examination of unprovenienced artifacts recovered from shipwrecks in Florida waters?
2. What are the biographies of cutlery from eighteenth century Spanish shipwrecks?
3. What do these biographies relate about eighteenth century Spanish colonial foodways and trade?

Regarding the primary research question, the eighteenth century Spanish fleet shipwrecks located in Florida waters (1715 and 1733) were, and are being continuously, impacted by both illegal looting and state-sanctioned treasure hunting. Salvage efforts began on these sites at the time they wrecked by the surviving crew members. Looting began in the mid-twentieth century and increased in intensity with the introduction of SCUBA (self-contained underwater breathing apparatus) (Weller 2001). The extent of the impacts made prior to the current state contract permit system is relatively unknown as the discovery of many of these shipwrecks pre-dates the Abandoned Shipwreck Act (U.S. National Parks Service 1988). Scholars have recently begun asking questions regarding the degree of damage to treasure hunted sites and striving to mitigate those effects (Price 2015; McKinnon 2016). Artifacts recovered from the 1733 *flota* under state contracts were divided between treasure hunters and the state of Florida and were often only photographed, sketched and described before being divvied up (Skowronek 1982:32). These artifacts were removed from their original resting locations, within their respective sites, by

treasure hunters who applied little scientific methodology for recording positions of artifacts in relation to one another. As such, they have no useable spatial or temporal contexts for archaeologists who study them now, or in the future, and are thus deemed “unprovenienced.” This means that it is impossible to know where in the ship they may have been either utilized or stored. Nothing can hence be deduced about any one artifact in relation to another because it is unknown where each artifact existed, and in which context. Like Skowronek’s (1982) study, this thesis will strive to make useful conclusions about Spanish colonial life and trade from these unprovenienced artifacts by examining each piece based solely on their physical characteristics.

The secondary research question seeks to define the cultural biographies of cutlery artifacts recovered from the 1715 and 1733 Spanish shipwrecks. Steve Ashby (2011:1) states, “production, exchange, ownership, and use may all affect the way in which an artefact is used and understood... meaning may be built upon, transformed and manipulated throughout its life history, as it changes hands, is physically altered, and comes to be used or displayed in new contexts.” By considering the life of an artifact, each stage represents a distinct set of cultural values that may or may not hold true from start to finish, but each will inherently influence the design, location, and fate of an artifact.

To address the third research question, this thesis will create characteristic typologies for the cutlery artifacts from both the 1715 and 1733 Spanish fleet shipwrecks’ collections. The typologies, in combination with the artifact biographies, will be examined to look for common trends in the cutlery onboard these ships. Colonial foodways and trade patterns can hence be studied with a clearer understanding of the artifacts’ meaningfulness. Finally, this thesis strives to act as a case study for the utilization of artifacts in the study of eighteenth century life and trade, despite the lack of archaeological context.

## *1.2 Justification*

Spanish vessels associated with the 1715 and 1733 fleets wrecked off the coast of Florida have been continuously “worked” by historic salvagers and modern treasure hunters. Treasure hunting became more popular and appealing with the assistance of SCUBA in the mid-twentieth century. State permitted treasure hunting finds were split between the contracted individuals and the state of Florida. Since these artifacts were taken out of their original context without scientific documentation, they have long been ignored by professional archaeologists because of their lack of context, and written off as unable to offer anything beneficial to the archaeological and historical communities. Lack of provenience should not hinder archaeologists from studying and striving to make inferences about past societies by using whatever data an artifact may yield.

This thesis strives to formulate a method by which unprovenienced artifacts may be studied, and used to derive information about a given time, place, or culture despite their lack of archaeological context. Frequency of certain artifacts and comparisons between collections will allow for conclusions to be made in terms of objects that were onboard these ill-fated ships. As legal treasure hunting still occurs in the U.S. and Florida, archaeologists who wish to gain information from artifacts that were taken out of context must find a way to reconcile the unprovenienced nature of treasure-hunted artifacts with the potential for usable information that said artifacts may generate. It should be noted that this study does not and is not intended to condone treasure hunting or the illegal or unethical recovery of archaeological artifacts, but rather to exemplify the types of information that may be gained from the study of these artifacts. It is also hoped that this information may someday be used in public outreach initiatives to contrast the information that is available when studying unprovenienced artifacts with the

information that could have existed if the context of the artifacts had been preserved and recorded.

Foodways were chosen for study in this thesis because of their relatable, interpretable nature. Cutlery pieces are seen throughout colonial contexts and are easily compared to one another. Size, shape, material, and origin may also be used when interpreting status and the contemporary utilization of wealth. The potential conclusions from this research are twofold: first, to provide a case study where unprovenanced artifacts are used in a way that yield meaningful information to the field of maritime archaeology; and second to utilize foodways artifacts to make interpretations regarding Spanish life and trade in the form of material culture studies.

### *1.3 Historical and Archaeological Background*

By the mid-sixteenth century, the Spanish government had felt the necessity to organize a convoy system with armed escorts to protect the large, annual treasure ships returning to Spain from the New World after being plagued by piracy and bad weather (Smith 1996:85). In the course of never-ending attempts to protect its commercial interests in the vast and sometimes cruel Atlantic Ocean, Spain issued several ordinances throughout the sixteenth century pertaining to the number of ships that were required for a fleet to sail, and the dates to which they should adhere (Peterson 1975:62). Ships bound for the Viceroyalty of New Spain (modern Mexico and Central America) were directed to depart Europe in the spring, while those bound for South America were to leave in late summer, and all ships were to winter in the New World (Peterson 1975:62).

During the winter months, ships would be loaded with goods from the annual trade fairs including products from the New World as well as the Manila routes across the Pacific Ocean

(Smith 1996:86). Though the fleet captains often attempted to depart the New World as quickly as possible after their ships were loaded, to avoid storms and tropical sickness, they were commonly delayed by logistical and official complications (Peterson 1975:92-93). The two fleets would meet in Havana, an important point to resupply and repair any damage to the ships, before finally being released to depart for Spain. By the late sixteenth century, officials were required to make several copies of cargo manifests, some sent on separate ships and some retained at the port of departure in addition to the captain's copy, as a way to account for missing cargo in the event of a lost ship (Peterson 1975:93). These manifests were also intended to discourage smuggling by merchants and crewmembers, although it "was practiced on such a scale that it must have had the connivance of many of the officials concerned" (Peterson 1975:93).

As early as the second voyage of Christopher Columbus, Spanish sailors in the Atlantic Ocean "learned the meaning of the Indian word *huracán*" (Smith 1996:86). These storms were some of the greatest dangers to sailors in the Atlantic Ocean as they moved quickly and could be upon a ship without much warning. Because of the incredible danger associated with these storms, "pilots learned to watch for a thin line of clouds on the northeastern horizon and monitor the color of the sky at sunset, [because] these were virtually the only warnings available of such impending dangers" (Smith 1996:87). Unfortunately, many fleets, as well as individually sailing ships, were lost to storms during the sixteenth, seventeenth, and eighteenth centuries while attempting to cross the Atlantic Ocean.

In late July of 1715, the Tierra Firme fleet, from Cartagena, and the New Spain *flota*, from Vera Cruz, met in Havana to begin the trans-Atlantic return journey to Spain. Even before their rendezvous in Cuba, the New Spain *flota* had encountered bad luck when half of its ships were lost in a storm while at anchor in Vera Cruz (Marx 1968:122). The ships from South

America were also delayed in their departure due to flawed logistics and registration techniques (Peterson 1975:362-363). Because of the repeated delays, the fleet's captain general demanded that they depart the Indies on July 24, despite it being the middle of hurricane season (Smith 1997a:157). After five days of sailing in fine weather, the eleven ships of the Tierra Firme fleet were caught in a hurricane and the ships were scattered along the coast of Florida (Peterson 1975:364). Though the captain general of the fleet ordered the ships to sail slightly off the wind's incoming direction, the captain of the French ship *Griffon*, which had purposefully delayed its trans-Atlantic journey to sail with the protection of the Spanish fleet, sailed as close-hauled as possible and was the only ship to steer clear of the reefs and make it through the storm safely (Smith 1996:96, 1997a:157). Though they had successfully navigated the treacherous Straits of Florida, the eleven ships of the 1715 Tierra Firme fleet wrecked along the central-eastern coast of the peninsula, south of Cape Canaveral, from Sebastian Inlet to Fort Pierce (Figure 1) and "most of the crews and passengers were drowned or dashed to pieces on the reefs...many died on the beach from injuries, illness and starvation" (Peterson 1972:262). According to Roger Smith (1997a:157), "of the 2,500 persons on board, nearly half lost their lives."

The surviving crew members of the 1715 fleet were left without basic supplies like drinking water, food, and medical supplies (Peterson 1975:366). In little over a month, letters from the fleet commander requesting help were sent via a small messenger boat to Havana, from whence supply and salvage ships arrived shortly thereafter (Peterson 1975:366-367).

Unfortunately for the Spanish survivors of the shipwrecks, an English-Bermudian pirate, Henry Jennings, attacked the salvage camp and plundered a sizeable quantity of their recovered specie (Peterson 1972:262). Spanish salvage crews only recovered about half of the registered silver and gold in the following years, and because of rampant smuggling of precious metals by

merchants and crewmen “no accurate figure of the final loss can ever be arrived at” (Peterson 1972:262).

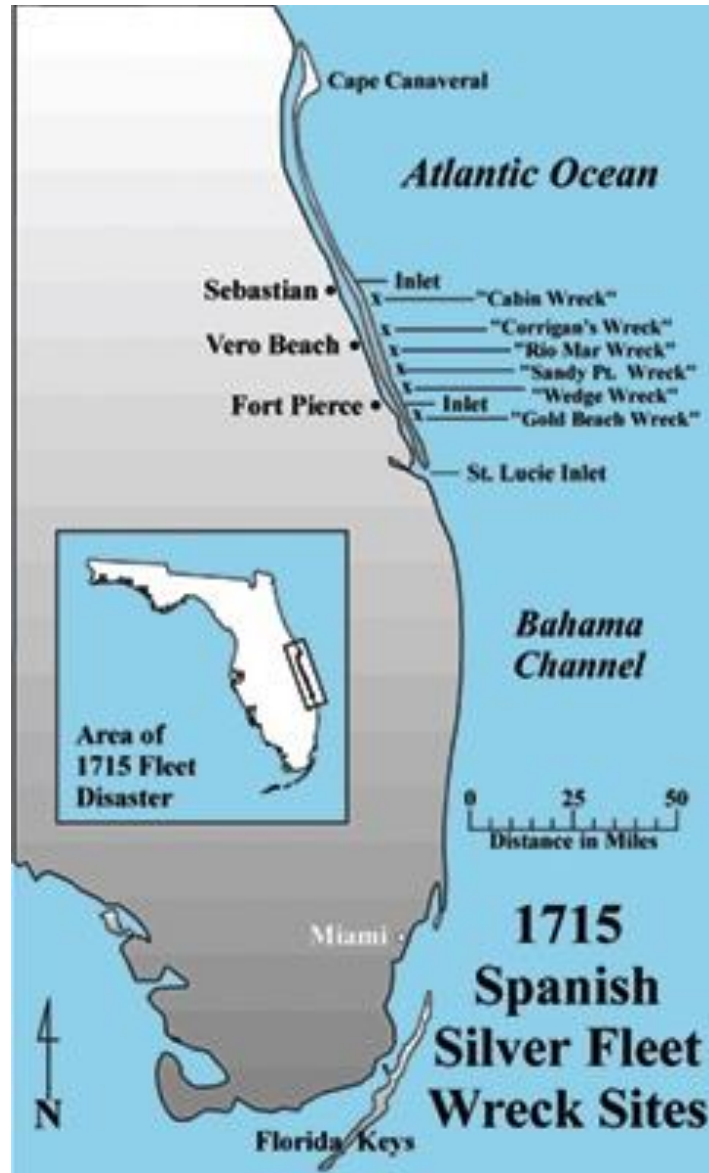


FIGURE 1. 1715 Spanish Silver Fleet Wreck Sites (Gilkes 2014).

Nearly 250 years after wrecking, the first of the 1715 shipwrecks were located by modern treasure hunters in 1961. Thousands of silver and gold artifacts, Chinese porcelain, ceramics, and personal effects were recovered in the years following (Peterson 1972:263). Weaponry, naval guns, and animal bones endemic to both land and sea were also found on the shipwreck sites of

the 1715 Tierra Firme fleet, and preliminary study was originally sponsored by the state archaeologist (Peterson 1972:263). Since the initial rediscovery and salvage of the 1715 fleet's ships, numerous other treasure hunting operations have taken place, and pieces of history have been forever lost to the pursuit of profit.

Only eighteen years after the Tierra Firme fleet wrecked in 1715, an eerily similar set of circumstances befell Spanish ships sailing from the Caribbean in 1733. While stationed in the New World during the winter of 1732-1733, the crews of the ships in the *flota* experienced rampant disease, of which many succumbed or were forced to abstain from the journey back to Spain until they recovered (Weller 2001:21). In addition to disease, several delays affected the departure date of the 1733 *flota* including the late arrivals of silver from Mexico City, as well as provisions for the ships (Weller 2001:21). The fleet of "eighteen merchant ships and four armed galleons" finally departed Havana on Friday July 13, and began their journey with favorable weather (Smith 1997b:158).

After only a day of sailing, the winds changed and strengthened, prompting Captain-General Rodrigo de Torres to order that the fleet turn around in an effort to return to the safety of Havana (Smith 1997b:158). Torres' attempt was futile and by July 15, the fleet was hopelessly caught in the hurricane (Peterson 1975:377). Roger Smith (1997b:158) states that "by nightfall, most of the ships had been sunk or swamped along 130 km of reefs bordering the island chain; only one vessel made it safely back to Havana." Luckily for the survivors of the 1733 *flota* shipwrecks, "when the fringes of the storm hit Cuba the same day, the officials at Havana were apprehensive for the safety of the fleet and sent a ship... to the mouth of the Florida Straits to discover what had happened" (Peterson 1975:377). Just as in 1715, survivors began to salvage materials from their ships almost immediately after the storm passed and, luckily, the survivors



of the 1733 *flota* were not subjected to a pirate raid on their camp, thus much of the recovered cargoes ultimately arrived at their intended destination in Spain (Peterson 1972:263). Salvage of the numerous shipwrecks took several years, and when the final calculations were made, it was clear that “more gold and silver had been recovered than had been listed on the manifests – a result of inevitable contraband” (Smith 1997b:158).

The first of the 1733 New Spain *flota* galleons was found in the first half of the twentieth century (Peterson 1972:263). The preservation of the ships of this great fleet were comparable to those of the 1715 fleet. Many pieces of cargo and personal effects were recovered by treasure hunters including armament, tablewares, ceramics, pieces of rigging, Chinese porcelain, and many coins, both silver and gold (Peterson 1972:263-264). Though the salvage work conducted on each of the shipwrecks of each of the fleets was sanctioned by the state of Florida and the state archaeologist, no systematic, scientifically based excavations or peer-reviewed publications have been completed on the artifacts of these shipwrecks, with the exception of Skowronek’s work discussed below.



FIGURE 2. Locations of the 1733 Spanish Plate Fleet Shipwrecks (Division of Historical Resources Bureau of Archaeological Research 2005).

Stanley South's (1977) analysis and comparison of artifact patterns between three terrestrial frontier sites led to the modification of his Carolina Artifact Pattern into a slightly different Frontier Artifact Pattern. This pattern is based upon the frequency of certain artifact groups appearing in a given archaeological investigation which can be applied to a standardized

expected percentage of the overall artifact collection (South 1977:145). This pattern is shown below in Table 1.

TABLE 1. South’s Frontier Artifact Pattern (South 1977:145, Table 16)

<b>Artifact Group</b>	<b>Mean %</b>	<b>Pattern Range %</b>	<b><math>\sigma</math> (Standard Deviation)</b>	<b>Predicted Range (95%)</b>
Kitchen	27.6	22.7—34.5	6.15	10.2 to 45.0
Architecture	52.0	43.0—57.5	7.88	29.7 to 74.3
Furniture	0.2	0.1—0.3	0.10	0 to 0.5
Arms	5.4	1.4—8.4	3.60	0 to 15.6
Clothing	1.7	0.3—3.8	1.85	0 to 6.9
Personal	0.2	0.1—0.4	0.17	0 to 0.7
Tobacco Pipes	9.1	1.9—14.0	6.39	0 to 27.1
Activities	3.7	0.7—6.4	2.87	0 to 11.8

Russell K. Skowronek’s (1982) Master’s thesis, “Trade Patterns of Eighteenth Century Frontier New Spain: The 1733 *Flota* and St. Augustine,” applies South’s frontier pattern to ships and shipwrecks by comparing material culture from several ships of the 1733 *flota* to terrestrial frontier sites. Skowronek utilized similar quantitative analysis in his study based on the pattern and methodology set forth by South (1977:88-100). Skowronek acknowledged the filters and scramblers of the sites including natural elements and the extensive salvaging operations that took place on the shipwrecks of the 1733 *flota*, both by Spanish shipwreck survivors and modern treasure hunters, and disseminated information by looking at the assemblage of material culture as one whole data set, instead of each ship as an individual set (1982:167-169). He stated that “a simple look at a single site...might give a biased view of the fleet...only by looking at the data as a whole or by reopening excavations on sites with smaller counts of artifacts might these biases be corrected” (Skowronek 1982:168). Skowronek’s (1982:171-172) study ultimately revealed that:

...the fit with the Frontier Pattern is somewhat better with matches in all groups but Kitchen and Architecture, the largest percentage groups...the 1733 *flota*...and the Frontier Pattern is almost perfect...rather than view ships simply as “floating communities” and the all too “stable” implications of such, seagoing vessels should be seen as “floating frontiers.”

His conclusions were based upon the similarities between South’s artifact pattern ranges and the ranges seen within both the 1733 *flota* and terrestrial St. Augustine collections, which are shown below in Table 2.

TABLE 2. Comparison of South’s patterns and Skowronek’s patterns (South 1977:145; Skowronek 1982:40, 171)

<b>Artifact Group</b>	<b>South- Frontier Predicted Range</b>	<b>South- Carolina Pattern</b>	<b>Skowronek- 1733 <i>flota</i></b>	<b>Skowronek- St. Augustine Range</b>
Kitchen	10.2-45.0%	27.6%	29.02%	78.09-94.40%
Architecture	29.7-74.3%	52%	39.99%	4.39-17.80%
Furniture	0-0.5%	0.2%	0.49%	0.03-0.18%
Arms	0-15.6%	5.4%	11.72%	0.11-0.82%
Clothing	0-6.9%	1.7%	1.29%	0.14-1.0%
Personal	0-0.7%	0.2%	13.45%	0.09-0.35%
Tobacco Pipes	0-27.1%	9.1%	0.3%	0.49-1.81%
Activities	0-11.8%	3.7%	3.69%	0.09-0.35%

#### 1.4 Research Methodology

The research methodology in this thesis is comprised of three facets: historical inquiry, artifact analysis, and artifact biographies. The first component to the research methodology of this thesis is historical inquiry. As many primary sources were consulted as possible, unfortunately there are a limited number of accessible sources directly relating to the two fleets in question. There are, however, a plethora of historical sources relating to Spanish colonial life and seamanship which aided in making comparisons and inferences about the two fleets in

question. Secondary historical sources were also utilized in the historical research phase of this project. A wide range of sources exist and were consulted regarding Spanish colonialism, trade, life, and material culture. Previously conducted studies of artifact biographies, foodways, and cutlery were also used as background research and comparative models for this study.

Artifact analysis initially required requesting artifacts from the Florida Bureau of Archaeological Research for study. Relevant pieces were then measured, weighed, counted, photographed, and described. All the quantitative data was entered in a spreadsheet where it could be easily sorted between typologies and sites. Photographs were taken with a Canon D90 and saved in artifact-specific folders on both the BAR hard drive and a portable, external hard drive. The author also retained hard copies of each photo. Once quantitative information was gathered, statistical comparisons led to the development of typological groups based on common characteristics. The creation method of these typologies will be discussed in Chapter Two, and the typologies themselves will be discussed in Chapter Four.

The final methodological feature of this thesis was artifact biographies. Artifact biographies were used to study objects of the past through the investigation of their life history. They provided a framework for understanding artifacts throughout their life by giving agency to the object itself as well as the culture and the individuals who made, used, altered, traded, and discarded the object. A selection of artifacts was chosen specifically for the artifact biographies, which were also utilized in comparisons between contemporary artwork and archeological collections.

### *1.5 The Archaeological Collection*

The archaeological collections of the 1715 Tierra Firme Fleet wrecks and the 1733 New Spain *flota* wrecks were used in this study and are housed in the Florida Bureau of

Archaeological Research (BAR) facilities in Tallahassee, Florida. All the cutlery artifacts that were studied in this project have been stabilized and conserved by the Florida BAR. While most are broken, and some are degraded due to their marine depositional context, many are in good condition, even including original surface, size and markings. The archaeological collections will be discussed in detail in Chapter Four.

### *1.6 Limitations*

This project has the potential to be limited by numerous factors. First and foremost, the availability of documented, ethically excavated archaeological materials. Unprovenienced artifacts will form the basis for this study and, as their context is unknown, each artifact's association with another is based purely on typology, material, and characteristic similarities (including decoration and makers' marks), not proximity within a site. The existing artifacts in the Florida BAR collections that have been chosen for study in this project were unearthed by treasure hunters and divided between those individuals and the state (Skowronek 1982:32), thus resulting in an incomplete collection of artifacts from any given site within either the 1715 or the 1733 fleet. While studies of unprovenienced artifacts are becoming more frequent (Skowronek 1982; Voss 2012; Budsberg, et. al. 2016), the general lack of comparative scholarly discussion limits the possible interpretation and conclusions of this project.

The fact that many of these shipwrecks were salvaged by survivors immediately following the wrecking event and have been looted in the recent past, will make it difficult to evaluate the role and significance of items that may have been on board but do not exist in the archaeological record due to scrambling and filtering processes. The author's inherent personal bias also has the potential influence the process of this project; that bias has been acknowledged

in an attempt to carry out an objective thesis project. A multitude of scholarly sources will be consulted and referenced in an effort to mitigate any potential bias on the part of the writer.

### *1.7 Chapter Overview*

The first chapter of this thesis has covered the purpose, aims, background, theoretical and methodological approaches, and formal research questions posed in this project. The second chapter will be comprised of a literature review which discusses the details of the theoretical framework in this study. Chapter three will give an in-depth historical background for many topics included in this study including Spanish colonialism, eighteenth century shipboard life, the development of cutlery, and the events surrounding the wrecking of the 1715 and 1733 Spanish fleets. Chapter four will present the archaeological research conducted in the course of this project. The fifth chapter will describe the author's interpretations and comparisons to contemporary archaeological collections and artistic representations of cutlery. The final chapter of this thesis will offer conclusions regarding the research completed and put forth in this thesis. The appendices following the chapters of this thesis will include a glossary, artifact photos, and forms for recording data which were developed during the course of this project.

## CHAPTER 2: LITERATURE REVIEW

### *2.1 Introduction*

Archaeological theory and methodology drive the research, publications, and ethics of the field. A range of theoretical and methodological frameworks can be applied to any project, depending upon the appropriateness of the research questions, goals, and material studied. This chapter examines the literature that was employed in the formation of the theoretical and methodological frameworks utilized during the research and analysis conducted in this thesis.

### *2.2 Unprovenienced Artifacts*

Items that have been removed from archaeological sites without scientific methods are deemed “unprovenienced.” This means that the artifacts have no context within the site or in relation to other artifacts. When artifacts are found near one another, archaeologists can deduce their context. For example, the galley of a seventeenth century ship at Yassi Ada was indicated by “a tiled fire-box, well embedded in clay to minimise the fire risk...a wide range of cooking utensils was available and, most surprising of all, there was a fine service of tableware, sufficient for at least three table settings” (Muckelroy 1978:222). Without the context of archaeological artifacts, the exact use and intention of each artifact can be nearly impossible to determine. The following statement exemplifies this idea: “the isolation of such items from general cargo is more difficult, although with the material from the *Kennemerland* (1664) it proved possible to suggest that certain groups of items were predominantly for shipboard use” (Muckelroy 1978:223). Because unprovenienced artifacts are most commonly removed from their respective archaeological sites by unscrupulous means, and even sold to private individuals to fund future treasure hunting endeavors, they are often discredited by archaeologists as having nothing usable



to offer in terms of study or interpretation since they have no context and that by studying them archaeologists might be condoning the unscientific recovery or sale of artifacts.

In support of the study of unprovenienced artifacts, Barbara Voss (2012:146) argues that, “despite a lack of conventional archaeological context, some artefacts have high interpretive value because of their association with important historical events.” Nicholas Budsberg, James Jobling, and Filipe Castro (2016:407) state that, “looters and treasure hunters claim and privatize the past, and when academics publish their artifacts, they are reclaiming them for the public.” The study of an unprovenienced astrolabe, dubbed the “Rio Grande do Norte astrolabe” by Budsberg, Jobling, and Castro (2016) offers a convincing analysis of an unprovenienced artifact and argues for the study of such pieces because of their historical value as unique objects. A third example of unprovenienced artifacts is Stephen R. James, Jr. (1988), in which Spanish Olive Jars from two shipwrecks off the coast of the Dominican Republic were utilized to expand the existing typologies and add to the chronology of those specific ceramics. Despite being recovered by treasure hunters, the Olive Jar collections from these two shipwrecks, *Conde de Tolosa* and *Nuestra Señora de Guadalupe*, numbered several hundred complete artifacts which allowed for James’ extensive work in analyzing and comparing those assemblages. Similarly, the artifacts in this study were removed from their sites by treasure hunters without a scientific recording strategy the artifacts are unprovenienced and thus can only be analyzed in terms of their form, function, and commonality, not by their physical relationships within their sites.

### *2.3 Frontier Concepts and Alternative Economies*

This thesis examines Spanish material culture in relation to the societal customs, daily life, and the idea of a “frontier” mentality (Harman 1969; Sanders 1977; Skowronek 1982; Deagan 2007; Thompson 2012). The concept of the frontier was utilized as a basis of

understanding the general temporal and physical context, rather than specific archaeological location of the artifacts in this study; a benefit when examining unprovenienced artifacts. Kenneth Lewis (1984:8) explored colonial frontiers stating, “frontiers associated with European expansion are perhaps the most intensively studied examples of colonization...because the intrusive societies were forced to adapt to conditions similar to those encountered by all migrating groups...are also likely to disclose behavioral regularities common to colonization in general”. The 1715 and 1733 Spanish fleet shipwrecks present a variation of the frontier concept. While still a part of the colonial era, region, and process, these ships were separate frontiers in and of themselves due to their physical distance from areas where their cultures and societal norms originated, much the way outer space is referred to today.

Aside from the general concept of the frontier as an area on the fringes of society, the frontier artifact pattern, developed by Stanley South (1977:145), denotes areas that share average percentages of artifact types falling within certain ranges. In South’s pattern, there are exponentially higher counts of kitchen, architecture, and arms artifacts than any other artifact group (1977:144). The frequencies of these artifact groups can be interpreted as the need for subsistence, shelter and transportation, and defense which overall “result from a shorter occupation period per architectural unit on the frontier than [those locations] not on the frontier” (South 1978:229-230). Russell Skowronek used this pattern of frontier artifacts to examine the material culture remains of Spanish shipwrecks in his study of the 1733 *flota* (1982). This parallel to South’s Frontier Pattern confirms the place of the early eighteenth century Spanish fleet shipwrecks in this study as a part of the frontier model.

An aspect of the frontier model is the frontier economy and exchange. Daniel H. Usner, Jr. describes ‘frontier exchange economics’ as, “the intercultural relations that evolved within a

geographical area in a way that emphasizes the initiatives taken by the various participants...but in pursuit of their respective goals, they found plenty of common ground upon which to adapt” (1992:8). Frontier economics relate to the concepts of “alternative economies” or “informal economy.” Alternative economies are those methods by which people provide for themselves, financially, through activities which are not sanctioned by the ruling government. Amanda D. Roberts Thompson (2012:56) states that, “the informal economy is typically defined as consisting of all actions related to the illegal production, commerce, and/or transportation of goods that fell outside of formal (i.e., legal) economic systems.” Included in these economies are illicit trade and contraband activities which were common throughout the Spanish territories of the New World due to strict trading policies mandated by the Crown (Harman 1969; Skowronek 1992; Deagan 2007; Thompson 2012). The study of such systems has led to the development of diagnostic artifact typologies that suggest the presence of illicit trading activities including ceramics, precious gems and metals, textiles, and agricultural goods (Newquist 2011:93).

Illicit trade is made clear in archaeological contexts when, as indicated by Keith Muckelroy (1978:199), “[items of personal possession are] in quantities too great for purely personal use, but too small for Company trading, suggest[s] a spot of (illegal) private trading among the contents of a private chest” as well as by “merchantmen for which the lists of goods loaded are known, when any divergences discovered among the actual remains must be evidence of inadequate recording at the time, fiddling, or unofficial lading by crew members; the last of these has been suggested for certain goods on a number of Dutch East Indiamen...” (220). Further, historical documents can reveal illicit trade and alternative economies such as the examples of the *Presidio Santa Maria de Galve*, in which numerous instances of blatant contraband exchange with the French are revealed in the records (Thompson 2012:56), and the

mission of Apalachee in the Tallahassee region, where both documents and artifacts revealed illicit trading activities, potentially by the mission or local ranchers (McKinnon 2016). While some historic documents relating to the 1715 and 1733 fleets' shipwrecks exist, none of the official paperwork explicitly states whether there were alternative economic factors related to the cargoes of the fleets, although Bob Weller (2001:33) states that after the 1733 *flota* ships wrecked, Spanish salvage efforts revealed that much more specie was onboard several of the ships than was originally documented in the manifests. Thus, material culture studies are necessary to reveal other indications of these alternative economies.

#### *2.4 Material Culture Studies*

This thesis is a material culture study; a concept which can be defined as “a range of studies which looked at material objects, buildings and landscapes in both the prehistoric and recent past and present, in which the methods of archaeology, ethnography and related areas were combined” (Johnson 2010:66). One of the best and most comprehensive material culture studies of Spanish colonial artifacts is Kathleen Deagan's (1987, 2002) work on artifacts from Florida and the Caribbean. Deagan's was the first and only study to synthesize existing information about Spanish colonial material culture. In her work, she states that, “...material culture is, after all, not only the most basic category of our archaeological database but also the one category that separates archaeologists from social historians, geographers, philosophers, and poets” (2002:4). Deagan's work includes artifacts dating from the beginning to the end of the Spanish colonial period in the New World, and pieces that were located throughout the colonies from various sites and collections in Florida, as well as several Caribbean islands. Her first volume (1987) focuses solely on ceramics, glassware, and beads, while her second volume (2002) is more comprehensive, including sections on religious items, clothing, personal firearms,

coins, and recreational activity items like games and tobacco paraphernalia. The second volume also addresses the incorporation of middle range theory for the analysis of a variety of artifact types and materials that, “could connect our observable material culture database to unobservable past cultural expressions” (Deagan 2002:3). Deagan’s incorporation of shipwreck and unprovenienced materials provides the emphasis and framework for this research on Spanish colonial foodways.

Stanley South’s (1977) artifact classification system has been applied by several other scholars’ artifact categorization of material culture (Skowronek 1982; Deagan 1987, 2002). South’s system is essentially a tree that begins with a broad grouping, divided into classes, then distinguished by material, and divided between other specifics within the material group, before being given a specific type (1977:93). For example, in South’s kitchen artifact group there are eight classes: ceramics, wine bottles, case bottles, tumblers, pharmaceutical type bottles, glassware (for drinking and eating purposes), tableware (specifically cutlery), and kitchenware (including all apparatuses used in processing and cooking food) (1977:95). This methodology was applied to the initial categorization of artifacts in the catalog that was used for this thesis. The artifacts from the 1715 and 1733 fleets’ collections that are a part of the kitchen artifact group of South’s classification scheme were so extensive that this thesis focused upon only class number seven, tablewares, which is specific to cutlery items.

Barbara Mattick’s (2010) creation of typologies with which to date bone toothbrushes was also heavily consulted when creating artifact typologies in this study. Per Mattick (2010:28), “a typology is a form of classification for artifacts that groups them according to their shared or similar attributes.” She also cites the following explanations from David Hurst Thomas:

Morphological types describe broad, very general characteristics such as length, width, weight, material, color, and shape. Attributes are special features, such as decoration. Like characteristics are grouped together, depending on the purpose of the archaeologist (Thomas 1989:315). Temporal types are tested stratigraphically. Nels Nelson was one of the first to do this when he analyzed the stratigraphic distribution of each morphological type of ceramics at San Cristobal, New Mexico, in 1914...his work was a major step in creating a chronology for archaeological sites in the American Southwest (Thomas 1989:315-318) [As cited in Mattick 2010:28].

Since the artifacts in the material culture study in this thesis lack context, only morphological types, as described by Mattick, were analyzed. There was no attempt to designate temporal typologies (save for the differentiation between fleets) since there is no record of stratigraphic distributions. In Mattick's creation of typologies, she first sorted the artifacts into groups based on like attributes including handle shape, imprints, country of manufacture, manufacturer and/or trademark, color, weight, and dimensions (2010:31-34). While the initial artifact categorization in this thesis followed South's model, Mattick's construction of toothbrush typologies, the differences in form, was used as a model for the creation of cutlery handle typologies.

Russel Skowronek's (1982) material culture study of artifacts from the 1733 *flota* is the only extant, scientific study of the remains of that fleet. He included a wide variety of artifact types, based upon South's (1977:95-96) classes and groups, which he then applied, primarily, to a maritime context. Skowronek's analysis stretched between and beyond "terrestrial" and "maritime" life in the eighteenth century to an overarching "frontier" theme, by comparing artifact trends in distribution, design and commonality between the 1733 *flota* shipwreck collection and the terrestrial sites in and around St. Augustine, Florida. He identified artifacts in

the following categories: architecture, clothing, furniture, kitchen, military/arms, personal items, specialized activities, and tobacco pipes (1982:34-38). Within Skowronek's kitchen artifact group were ten subcategories, or classes, including ceramic tableware, wine bottles, case bottles, pharmaceutical bottles, glassware, utensils, non-ceramic tableware, kitchenware, food preparation, and food storage (1982:34). Further narrowing the scope of study and comparison, this thesis focuses on only one of Skowronek's kitchen group classes, that of utensils which, per Skowronek, consists of "cocoa stirrers, forks, spoons, knives, ladles" (1982:34). This study continues where Skowronek's ended and surveys the table utensils (forks, knives, spoons, and broken handles) from the 1715 and 1733 artifact collections by utilizing the theoretical concept of object biographies.

## *2.5 Object Biographies*

As the fields of anthropology, archaeology, and history have adapted over the years, new methods for understanding the past have developed. Studying the past has shown that, "as people and objects gather time, movement and change, they are constantly transformed, and these transformations of person and object are tied up with each other" (Gosden and Marshall 1999:169). The concept of understanding the effects of human actions upon objects and objects upon humans in the past has lent itself to the idea of object biographies which can be defined as "the concept of sequences of production and consumption" (Ashby 2011:1). There are a variety of ways to approach an object biography, "one may present an actual biography, or one may construct a typical biographical model from randomly assembled biographical data" (Kopytoff 2013:66). An excellent outline for the creation of an artifact biography is as follows:

In doing the biography of a thing, one would ask questions similar to those one asks about people: What, sociologically, are the biographical possibilities inherent in its “status” and in the time period and culture, and how are these possibilities realized? Where does the thing come from and who made it? What has been its career so far, and what do people consider to be an ideal career for such things? What are the recognized “ages” or periods in the thing’s “life,” and what are the cultural markers for them? How does the thing’s use change with its age, and what happens to it when it reaches the end of its usefulness? [Kopytoff 2013:66-67].

By looking at an artifact in terms of the stages or phases it underwent to result in its present state, scholars can create a more comprehensive view of the entirety of cultural influences in the appearance of an artifact. In terms of the significance of artifact biographies, “...the production of commodities is also a cultural and cognitive process: commodities must be not only produced materially as things, but also culturally marked as being a certain kind of thing” (Kopytoff 2013:64). Artifact biographies are useful when analyzing unprovenienced artifacts because there is a focus on the artifact itself, as an object, instead of the specific context of an archaeological site. These biographies were used to infer details of origin, manufacture, treatment, use, and deposition of the artifacts in this study. To allow for more interpretation than the limited information currently exists, this study compiled as much information as possible about the artifacts in the selected collections and created artifact biographies of particular pieces.

## *2.6 Foodways*

The term “foodways” was coined by Jay Anderson in his 1971 doctoral dissertation. Anderson’s definition states that “foodways” is “the whole interrelated system of food



conceptualization, procurement, distribution, preservation, preparation, and consumption shared by all members of a particular group” (as cited in Deetz 1996:73). Jacqueline S. Thursby’s (2008) study of foodways and folklore was used as a basis for understanding the general history of food culture, the development of cuisine and dietary recommendations, as well as primary source examples and references from around the world, and an introduction to the scholarship of foodways. She indicated an array of potential contexts in which to find evidence of foodways such as drama, literature, art, ethnography, cultural symbols, and modern entertainment. Foodways material culture encompasses the objects, including archaeological artifacts, that are associated with the actions of procuring, storing, preserving, cooking, serving, consuming, and disposing of food. This thesis drew upon these previous studies of foodways and applied the concept to material culture to explore Spanish colonial maritime frontier life. As this remains a broad concept, and the artifacts in the 1715 and 1733 fleet collections in this group number in the thousands, this thesis focused on one specific subset of foodways, table utensils or cutlery.

## *2.7 Cutlery*

The concept and study of culinary culture is a relatively recent endeavor with most publications occurring in the last two decades, though there are studies that date to the mid-twentieth century (Counihan and Van Esterik 2013). While cultural anthropology has been the central discipline in culinary culture studies, the field is increasing its interdisciplinary range, integrating fields such as philosophy, film studies, architecture, literature, and, most relevant to this study, archaeology (Counihan and Van Esterik 2013:1). The wide array of artifacts found in colonial sites related to foodways has the potential for archaeologists to create a picture of culinary colonialism (Skowronek 1982; King 1984; Deagan 1987; James 1988; Gotelipe-Miller 1990; Franklin 2005; Gentelli 2016). The familiarity of cooking and eating implements has an

easily relatable quality that appeals to the public, making history and archaeology more interesting, which often leads to a re-examination of current culinary trends.

The evolution of eating cutlery provides a strong paradigm for the evolution of artifacts generally. There are clearly technical components to the story, for even the kind of wood in chopsticks or the kind of metal in knives and forks will have a serious impact on the way cutlery can be formed and can carry out their functions...stories associated with knives, forks, and spoons also illustrated well how interrelated are technology and culture generally. The form, nature and use of all artifacts are as influenced by politics, manners, and personal preference as by that nebulous entity, technology [Petroski 1993:20].

As supported by Petroski's statement, and the narrowest focus of the kitchen artifact group, set forth by South (1977:95), tableware, or cutlery, is the subject of the material culture study in this thesis. Cutlery, including forks, spoons, knives, and disarticulated handles, are a common part of daily life in western culture regardless of temporal or spatial separation and are relevant to the study of differing lifestyles and cultures because of their interpretable and comparable nature.

## *2.8 Conclusion*

This chapter has summarized the theoretical components of this thesis by analyzing work by previous scholars to highlight the reasons that each component was included in this study.

The overarching theme of this project, material culture studies, relates to both the artifacts themselves including their unprovenanced nature, as well as the concept of artifact biographies formulated to explain the characteristics and importance of the artifacts analyzed. This study also utilizes the concept of the frontier and frontier economy as well as the alternative economies

often seen in the study thereof. Finally, the artifacts themselves belong to a category and discipline known as foodways. The extensive nature of this category within the two fleet collections presented a need for a more focused artifact group and thus the study of cutlery. All of these theoretical concepts were employed during the research and analysis of this thesis and will be expanded upon further in the coming chapters.

## CHAPTER THREE: HISTORICAL BACKGROUND

### *3.1 Introduction*

This chapter will provide the historical background of several topics central to this thesis. Most important to this project is the understanding of Spanish colonization in the New World: the purpose, the methods, the geography, and the results which occurred by the time of the eighteenth-century fleets. This background chapter will first focus on the big picture of the early eighteenth century: geographic boundaries of Spanish territories, the rise of the Bourbon Monarchy, and trade from the New World. A history of cutlery, including the formation and development of each type of utensil, will also be provided in this chapter. Primary sources regarding both terrestrial and maritime life, specifically acknowledging passages which refer to food and foodways will be included this chapter. Finally, this chapter will conclude with a detailed background of the 1715 and 1733 fleets and the specific shipwreck sites associated with their respective cutlery collections.

### *3.2 Methodology*

The initial phase of this project focused on historical research regarding the following topics: the 1715 Tierra Firme Fleet, the 1733 New Spain *flota*, Spanish colonialism, and the history and theory of foodways. An extensive number of primary and secondary works were found in East Carolina University's J.Y. Joyner Library. Sources that could not be acquired through the library, or its inter-library loan system, were located online and downloaded for free, or were purchased. Primary sources include: colonial records, depositions, personal papers, archival documents, and published accounts. Secondary sources include: general histories, fleet-specific publications, journal articles, published archaeological reports, gray literature, and

catalogs of antique collections. These sources were studied and compared to be utilized as both a basis of knowledge and for comparison of the artifacts studied in this project.

### *3.3 Spanish Colonialism and Trade in the New World*

The first European colony in the New World was established in 1492 by representatives of the Spanish Empire on the island of Hispaniola. Spain continued to colonize the islands of the Caribbean Sea, as well as portions of North, Central, and South America for over four hundred years. New World colonies provided extensive amounts of raw materials, particularly timber, sugar, and precious metals for use and consumption in Europe. In 1561, the Spanish government decreed “that in January and August of every year two expeditions should sail from the *rio de Sevilla*, one called the Fleet of New Spain, with destination for the Antilles and the Gulf of Mexico, and the other called the Fleet of Tierra Firme for Cartagena,” where the two fleets would offload their European goods and exchange them for New World products (Lowery 1959:11). As ships were filled, one by one, with New World goods, they set sail for Havana to await the remainder of the fleet, other merchantmen, and treasure ships who would return to Spain together, in summer, hopeful to ward off any pirates by observing the practice of “safety in numbers” (Lowery 1959:12).

#### 3.3.1 Eighteenth Century Spain and the Bourbon Monarchy

The generations of Spaniards who followed the initial settlements in the New World, beginning in the late fifteenth- and early sixteenth-centuries, eventually found themselves increasingly different from those on the Iberian Peninsula. Cultural divergence occurred as settlers in the New World adapted to their environments and, knowingly or not, participated in cultural exchange with indigenous peoples. Despite the inevitable formation of a new culture and

way of life, migrant Spaniards attempted, at least for a few centuries, to cling to their European heritage and traditions (McEwan 1991). The importance placed on the European way of life, coupled with the mission to convert indigenous people both religiously and socially, led to the retention of many European characteristics in the New World colonies, including religion, government, and goods such as European-Spanish ceramics, jewelry, and clothing (McEwan 1991:34-35). Spanish soldiers and other men sent to the New World in the early days of colonization often preferred to marry Spanish women as opposed to Native Americans, but began settling for the latter as Castilian wives were very expensive (McEwan 1991:36). The importation of Spanish women to the New World, coupled with their traditional place in the domestic sphere, guided the retention of certain Spanish traditions, especially those within the home such as child-rearing, cooking, and general upkeep, which also resulted in the request for expensive goods from Spain by proper, and wealthy, Spanish wives (McEwan 1991:34-35). The expense of importing goods from Spain would have taxed the colonists financially, even those with wealth to spare, and thus led to the increase in production of Spanish quality goods, such as jewelry and silverwares, in the New World to avoid tariffs and mercantile mark-ups.

The death of King Charles II of Spain in 1700 without an heir sent the Spanish Empire into turmoil in the early decades of the eighteenth-century, resulting in the War of the Spanish Succession. Before he died, King Charles had named Philip of Anjou, a member of the French royal family of Bourbons and the grandson of Charles' half-sister Maria Theresa, as his successor (Kuethe and Andrien 2014:1). Several other European powers, including Great Britain and Portugal, feared Philip's Bourbon family having control over both France and Spain and thus lent their support to another claimant to the throne, Archduke Charles of Austria who happened to be another grand-nephew of the Spanish king via his sister Margaret Theresa (Kuethe and

Andrien 2014:1). The backing of Philip's French grandfather, King Louis XIV, allowed him to defend territory in Spain from the Austrian forces and in 1711, Archduke Charles returned to Austria to claim the throne of his recently deceased brother, Emperor Joseph (Kuethe and Andrien 2014:1-2). Great Britain thus withdrew its support of Charles at the possibility of his dominion over both Spain and Austria which led those countries involved to sign the Treaty of Utrecht in 1713, effectively ending the War of the Spanish Succession (Kuethe and Andrien 2014:2). Additionally, Britain and Spain signed the *Asiento* Treaty which granted British merchants the right to trade in Spain's New World territories (Elliott 2014:3). This arrangement permitted the British to "market slaves in the Spanish colonies and the additional right to send one 500-ton ship annually to the trade fairs held at Veracruz and Portobelo" (Kuethe and Andrien 2014:2). In addition to trading rights, Great Britain gained the territories of Gibraltar and Minorca from Spain (Kuethe and Andrien 2014:2). Under the *Asiento* treaty, the Spanish trade market and New World territories officially opened to international commerce, easing the tensions that came with acquiring goods in the New World.

### 3.3.2 Eighteenth Century Trade Goods of the New World

Spanning the two centuries that Spain held territories in the New World prior to the eighteenth century, the empire had focused its efforts on several primary trade goods. While agricultural goods made up the bulk of initial imports from the New World to Iberia, mineral resources were possibly the most valued. Agricultural exports from the colonies of the Americas and the Caribbean islands, at various times, included: bananas, cattle, cocoa, coffee, cotton, indigo, chilies, rice, sugar, and tobacco (Crosby, Jr., 2003:66, 68, 70, 87). Spanish settlers also imported many Iberian goods such as wheat, olive oil, and wine (Crosby, Jr., 2003:70). They also invested in bringing European agricultural goods to the colonies, as shown in the following

list of goods sent from Pedro Menendez Marques to the *Audiencia* of Santo Domingo in 1579, translated by Jeanette Thurber Connor (1930:225-227):

Last year I made them [Spanish colonists] sow much maize, for at this fort alone, over one thousand *fanegas* were gathered, and this season they will gather many more. There are beginning to be many of the fruits of Spain, such as figs, pomegranates, oranges, grapes in great quantity; there are many mulberries from the mulberry trees produced in this same soil, vegetables and greens in large quantities, such as beans, kidney-beans, melons, pumpkins, lettuce, cardoons, onions, and garlic.

Though some scholars have argued (Rodriguez-Alegría 2005; McEwan 1991) that Spaniards whole-heartedly attempted to cling to their proper, European traditions in the sometimes harsh, new environments of the New World, cultural exchange between colonists and indigenous peoples is seen in both the colonial documents and archaeological records and indicates that Spaniards were willing to compromise their dietary and social preferences in exchange for survival and prosperity.

In addition to agriculture, precious metals were important New World trade goods (Newquist 2011:93). Raw and manufactured precious metals in the eighteenth century were primarily mined and worked in several cities in modern day Mexico and Peru (Haring 1947). Citing mineral output as the prime aspect of the eighteenth century Mexican economy, Garner and Stefanou (1993:18-19) argue that “the determination of secular trends and growth rates for mineral production is necessary in order to develop a full picture of how all sectors of the economy were performing.” The 1715 and 1733 fleets each were loaded with cargoes including large amounts of precious metals for specie, and metallic goods (Haring 1918:227).



After discovering, and subsequently taking, innumerable objects of gold and silver from the conquered Aztecs, Hernán Cortés and his men searched for as many sources of precious metals and stones as they could find, throughout “the present-day southwestern United States, and southward to Honduras and Guatemala” (Thompson 2013:240). While some of these efforts were in vain, others led to prosperous mining centers, such as Zacatecas, Guanajuato, and Pachuca in present-day Mexico (Thompson 2013:240). As such, the Viceroyalty of New Spain (modern Mexico) was an important source for mining and working precious metals, including gold, silver, and quicksilver (mercury), where “silver was the most widely produced and closely watched mineral” (Garner and Stefanou 1993:21). Garner and Stefanou (1993:108-109) argue that “unlike agriculture, where the creation of wealth was incremental, the creation of wealth from mining could be explosive and instantaneous” which speaks to the fact, “that Mexico’s silver industry operated continuously from the middle of the sixteenth century to the end of the colonial period (1821).”

As Spain expanded its control and foundation of silver mines, the success of those mines varied throughout the territory. The Peruvian mines’ production levels peaked in the seventeenth century, decreased, and then increased again in the eighteenth century, while Mexican mines saw some fluctuation in productivity, they remained relatively prosperous throughout (Garner and Stefanou 1993:109). The mints and smiths of Mexico City relied heavily upon several prime locations in Mexico. Some of the most productive Mexican silver mining camps during the eighteenth century were Zacatecas, Tasco, Pachuca, and Guanajuato (Bakewell 1971:221-222; Garner and Stefanou 1993:113).

The town of Zacatecas was founded in the mid-sixteenth century and was home to prosperous silver mines (Bakewell 1971:14). Guanajuato, established in the mid-sixteenth

century, became increasingly prosperous throughout the eighteenth century (Bakewell 1971:184; Garner and Stefanou 1993:112-113). Mexico City's mint and the surrounding mining camps saw the most success in the mid-eighteenth century (Garner and Stefanou 1993:115). As precious metals were mined in the surrounding areas and subsequently worked onsite or in Mexico City, most finished goods, such as coins, jewelry, and other wares, were taken to Vera Cruz to be loaded onto ships and transported back to Spain (Craig 2000:7). Mexico City was the primary mint for coins in New Spain where, "no silver was to be received by the mint for conversion into coins unless it bore the official tax stamp proving the king's fifth had been paid" (Craig 2000:13).

The substantial overhead costs of production in the silver mining industry in the eighteenth century were carefully accounted for by producers (Garner and Stefanou 1993:118). The majority of the costs of operation centered around the actual extraction of ore, wages, maintenance, supplies, and transport of the ore from the deep mine shafts to the surface (Garner and Stefanou 1993:118-119). In the mid-eighteenth century, costs of operation had forced several of the mines in Zacatecas to close due to the high cost of maintenance (Garner and Stefanou 1993:119). The Spanish government eventually offered concessions to the mine owners in order to offset the costs of refining, which allowed them to continue or resume operations (Garner and Stefanou 1993:123).

Population of laborers was a primary concern for mine overseers, or *mineros*, as many mines were located in very rural areas and because of the well-known hazards of mining work, including the use of mercury in the amalgamation process and the poor construction and ventilation of the mines themselves, "the Spanish found it more and more difficult to recruit workers for the mines without the use of forced labor" (Thompson 2013:241). Other labor

shortages resulted from the initial contact between Europeans and the indigenous populations, as well as subsequent epidemics in the sixteenth and seventeenth centuries (Bakewell 1971:222-223).

Alan K. Craig (2000:41, Illustration 4.2) provides a detailed, comprehensive diagram of the process of manufacturing silver coins in the late seventeenth century at the Peruvian mine of Potosí (Figure 1). Essentially, ore was removed from earth by indigenous slaves with iron pry bars and carried to the surface where it was hand-sorted, carried to a mill, and amalgamated (Craig 2000:41; Thompson 2013:241). The amalgamated silver was smelted into bars, taxed, and assayed before being sold to a silver merchant who would, in turn, sell the silver bars to individual owners or a mint (Craig 2000:41). If the silver was sold to a mint, it would be worked into the appropriate coinage and then returned to the owner or sent to the *Caja Real*, the King's treasury, before being shipped to Spain, as a part of a large, armed, goods-laden treasure fleet (Craig 2000:41).

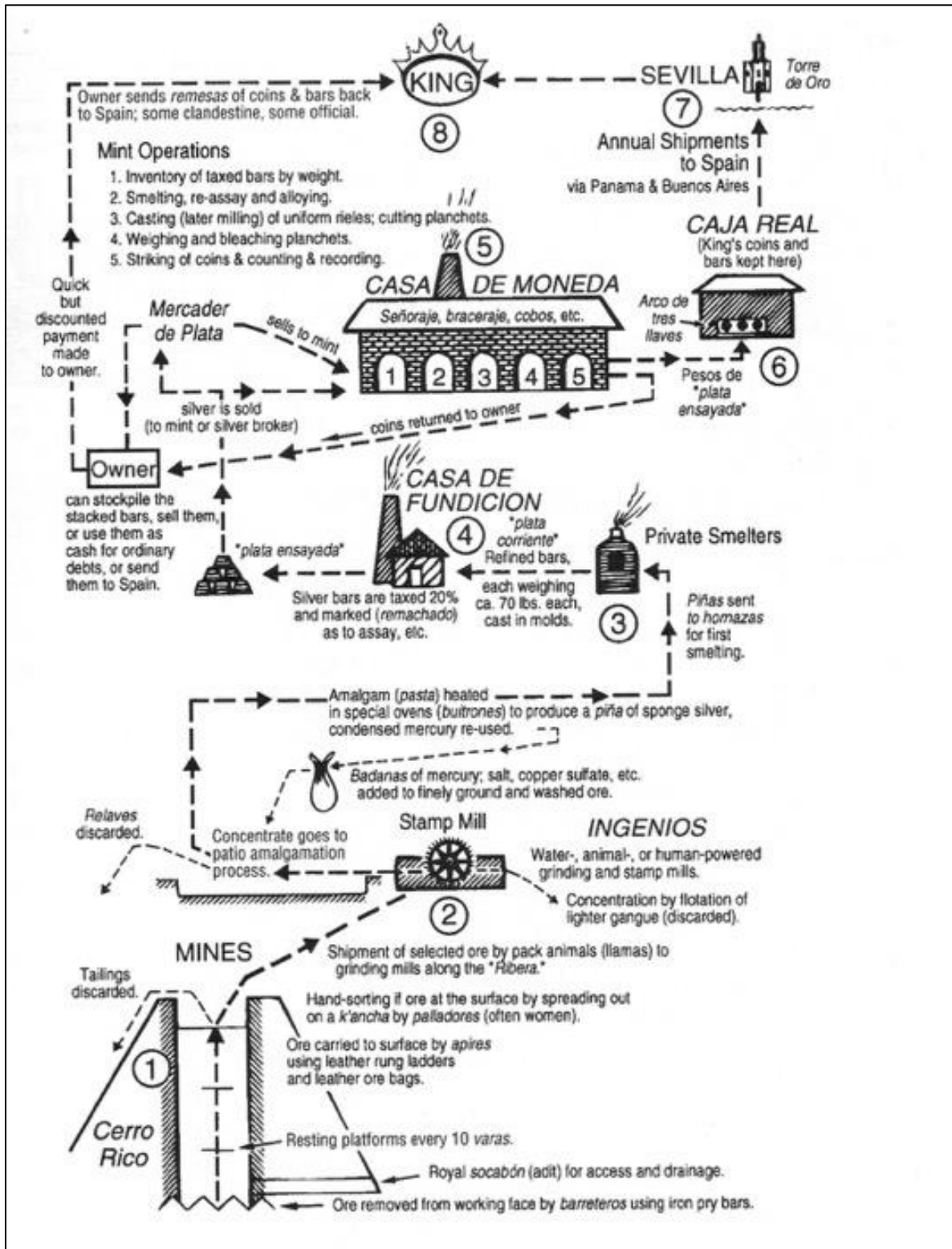


FIGURE 3. "From mountain to monarch: how silver coins were made. A schematic chart traces the process of mining silver ore at Potosí, refining it, converting it to coin and transporting the wealth to Spain. This is a composite of steps that were followed by the late seventeenth century." (Craig 2000:41, Illustration 4.2)

As the silver mining industry boomed, silversmiths became necessary to manufacture the metal into objects for local utilization as well as trade. Martha Carmona Macías (1993:22) states that “when the first Spanish silversmiths arrived in Mexico, they organized themselves in some sort of guilds and forbade all activities of the Indian precious metal workers” and those guilds were centered “on European models, but gradually the Mexican silversmith’s trade acquired its own identity.” It is unlikely that the most skilled Spanish silversmiths of the time were the primary immigrants to Mexico, as Anderson (1941:149) indicates that, “in general, the silversmiths who came to Mexico during the sixteenth century were the less skillful ones, who lacked the ability to prosper in Spain.” While the guilds formed in Mexico intended to regulate the production levels and prices, within the first fifty years of Spanish settlement in the New World, the Municipal Council of the City of Mexico was forced to implement regulations on silversmiths following public complaints of the inflated prices for their wares because of the general “wealth of the colony and the lack of competition” (Anderson 1941:70, 74).

According to Garner and Stefanou (1993:141), “the manufacturing sector had developed only limited capacity by the eighteenth century” and because of this, “Mexico was heavily dependent on overseas commerce throughout the eighteenth century as its own economy was growing.” Those silver items made in the New World were commonly mass-produced, cheap goods, while the imported goods were of higher quality, but more expensive to the local consumer (Garner and Stefanou 1993:142). Martha Carmona Macías (1993:20) states that, “utensils were also made, though to a lesser extent...moulds and hammering techniques started to make their entry...in combination with alloying, more elaborate and detailed objects could be manufactured as a result.”

### 3.3.3 Eighteenth Century Spanish Contraband

During the War of Succession, Spain was often unable to provide its New World colonies with the goods they required which forced the colonists to turn to contraband trade with merchants of other nationalities, primarily the French and British both of whom eventually earned legal trading rights during or following the conclusion of the war (Kuethe and Andrien 2014:33-34). G. Earl Sanders (1977:60) argues that, “the contraband trade was thus basically a response to a simple supply and demand situation—the colonists’ desire for goods and the foreign merchants’ desire to exploit the Spanish American market...the colonist was benefited by the lower prices and, often, better quality of illicit goods over the merchandise obtainable through legal channels.” Russell K. Skowronek (1992:110) asserts that the causes of economic strife in the Spanish colonies included, “soaring rates of inflation and population growth but also in the outward signs of class distinction demonstrated by sumptuous displays of clothing and tablewares and conspicuous consumption of exotic foods.” Sanders (1977:79) concludes that, “counter-contraband in the Indies was hampered by a variety of handicaps, among the principal of which were the extensive and difficult geography of the area, the lack of money, the absence of coordinated operations against the traders, and the precedence of Spain in its European machinations.” According to Ingrid Marion Newquist (2011:93), “historians of illicit trade often focus on major commercial commodities such as slaves, cloth, sugar, precious metals, and tobacco, to the detriment of the more minor commercial commodities that are often the more durable artifacts.” Skowronek (1992:115) states that in the study of these illicit systems via archaeology, “it is through changes in the frequency of the presence and absence of Spanish and non-Spanish empire produced or traded wares that a measure for intra-empire commercial, and military, control is discernable.”

An archaeological case study for the Spanish contraband trade in the eighteenth century is the *presidio* of Santa María de Galve, a short-lived colony in the Florida panhandle (Thompson 2012). Amanda D. Roberts Thompson (2012:49) states that “illicit activity in Santa María allowed colonists to increase their economic independence... [because of their] ...desire to increase their social standing to the actual need for specific goods.” The study of Santa María de Galve centered around the examination and distinction between locally manufactured ceramics traded from Native Americans and imported ceramics, primarily tablewares, symbolic of social hierarchy in the New World (Thompson 2012:53). Thompson (2012:64) concludes that although more ceramic diversity is seen in areas of increased wealth, it is difficult to say whether “the differences seen in the diversity of the artifacts is unquestionably the result of illicit activity” and that “illicit activity was not separate from the normal economy of Santa María de Galve but rather a part of it through the alternative economy.”

A second example of evidence of contraband in archaeology is Newquist’s (2011) study of ceramics from a monastery in Santo Domingo. The collection of ceramics from the Convento de San Francisco includes Mexican, Spanish, and non-Iberian European pieces sourced from Germany, Italy, Holland, and England (Newquist 2011:98-99). Newquist (2011:99) states that:

While the presence of non-Iberian European ceramics at the Convento de San Francisco affirms at the minimum the importation and use of foreign ceramics, analysis of these ceramics suggests that the inhabitants may have also consumed illicit materials...in the form of ceramics from Holland and England during a time [the eighteenth century] in which an embargo was placed upon trade indicates the participation of ecclesiastics in illicit trade at a convent in Santo Domingo.

St. Augustine and Santa María de Galve are also cited as comparative collections and studies for the analysis and identification of illicit or contraband trade goods in the Spanish colonies (Newquist 2011:100-101). Described in these three different studies, it seems that Spanish colonists, undersupplied by their homeland, would resort to trade with the nearest European merchants, be they French (as with Santa María de Galve), Dutch (as at the Convento in Santo Domingo) or English (as in St. Augustine), to secure the goods, particularly tablewares, that they desired.

### *3.4 History of Cutlery*

Colonization, technological advancement, and cultural exchange have brought every aspect of culinary culture to modernity. The constant presence of culinary artifacts throughout time and space makes them an interesting and easily relatable focus of study.

#### 3.4.1 Cutlery Type Development

It has yet to be determined precisely when and where the first cutlery objects came into being. It is generally accepted that the first knives developed from flint in early prehistory (Giblin 1987:2; Petroski 1993:4). The combination of one or two knives and an individual's hands remained sufficient for the serving and eating of food for thousands of years (Petroski 1993:6-7). Spoons resembling modern cutlery appear in the archaeological and historical records as early as the Roman Empire (Giblin 1987:14-15), and while they went through several developments in the medieval years, including the first "spork" (Frantzen 2014:40-41), they remained one of the most popular pieces of cutlery as one could be used to cut as well as scoop a variety of food types (Petroski 1993:15). The fork first appears in medieval history as a two-tined instrument used to hold a large piece of meat in place while it was being sliced and served with a



knife (Petroski 1993:8). The number of tines was the biggest development and improvement seen in the fork. With the addition of more tines, the fork could be used to pierce meat, but also to scoop like a spoon and transfer food to the mouth with less chance of dropping it, as described by Petroski (1993:11):

If three tines were an improvement, then four tines were even better. By the early eighteenth century, in Germany, four-tined forks looked as they do today, and by the end of the nineteenth century the four-tined dinner forks became standard in England. There have been five- and six-tined forks, but four appears to be the optimum. Four tines provide a relatively broad surface and yet do not feel too wide for the mouth. Nor does a four-tined fork have so many tines that it resembles a comb, or function like one when being pressed into a piece of meat.

As the forms of cutlery changed through time, functions did not. While forks, spoons, and knives were commonplace in wealthier contexts, those of lower means would often settle for one or two of these items. Cutlery was, overall, viewed as very personal, and until the eighteenth century, most people had their own personal set of cutlery that would be used at home and abroad (Marquardt 1997:12).

One form of cutlery included in this study, which is not particularly well known, is the cocoa frother; a wooden utensil with a long stem and a round, solid whisk at the bottom. When early Spaniards encountered Aztecs, and were introduced to their prized chocolate drinks, the preparation of a cup of chocolate involved pouring the liquid from height, not directly over the cup, to produce foam (Coe and Coe 2013:85). Instead of pouring from height, the Spanish

introduced grooved frothing tools, called *molinillos*, which were used by spinning the frother between one's hands to create the desired foam (Coe and Coe 2013:85, 120).

### 3.4.2 Medieval Cutlery Developments (~1200-1499)

The thirteenth, fourteenth, and fifteenth centuries are but a portion of the historic time period known as the Middle Ages, or medieval era. The major regions referred to in this section include England, Spain, and Germany. During this time, cutlery was extremely personal and denoted social stratification, as the more ornately decorated and inclusive of fine materials the cutlery was, the more wealth any given family must have had to spend on such things. As famines waxed and waned through the Middle Ages, religion came to the forefront of the attempts to mitigate the suffering of people throughout Europe. As Caroline Walker Bynum (2013:245-246) states:

...When we look at what medieval people themselves wrote, we find that they often spoke of gluttony as the major form of lust, of fasting as the most painful renunciation, and of eating as the most basic and literal way of encountering God. Theologians and spiritual directors from the early church to the sixteenth century reminded penitents that sin had entered the world when Eve ate the forbidden fruit and that salvation comes when Christians eat their God in the ritual of the communion table... food was... a fundamental material concern to medieval people...

Only the elite and wealthy could afford the privileges of overeating, giving food away, or their own delicate silverware (Bynum 2013:246; Frantzen 2013:173-174).

Many pieces of cutlery from this period would have been utilized in the carving and serving of large pieces of meat, a task so important that it had an official court position

(Marquardt 1997:18). Carving meat, at this time, was done using a two-tined fork, a large, specialized knife for the type of meat being carved, and skewers to steady the meat (Marquardt 1997:20-21). While large, ornate, specialized knives would have been used by the servants of nobility, the common people of the Middle Ages also used knives in everyday eating, making knives the most prominent eating utensil in this time period, following the use of one's fingers (Marquardt 1997:22). Everyday knives utilized by the lower social classes would have had simple designs, often made of steel or iron, and they had a sharp edge and a pointed end with which to spear food, as well as a handle, commonly bound with wood, brass, or bone (Marquardt 1997:22-23).

Spoons in the Middle Ages were most commonly made of wood, although silver pieces also existed for those of wealth and status (Marquardt 1997:33). Spanish royalty at the turn of the fifteenth century had tablewares including “spoons of mother-of-pearl with silver handles enameled in blue, while others were gold ornamented with pearls and sapphires, these probably intended for ceremonial purposes” (Johnson 1944:35). Wooden utensils rarely survive in the archaeological record. Likewise, very few silver spoons have survived to the present because they were often melted down and turned into specie in times of economic hardship (Marquardt 1997:33). Those silver specimens that do exist in modern collections “were usually hidden away for safe keeping during the turmoil of war and not rediscovered until long afterwards” (Marquardt 1997:33).

### 3.4.3 Renaissance Cutlery Developments (~1300-1700)

The European Renaissance, rising out of Florence in the wake of the Black Plague, led to an increase in the studies of Classics, mathematics, sciences, arts, and overall to an increase in wealth throughout the continent. With the increase in the popularity of splendid banquets, came

the development of intricate, expensive, matching sets of cutlery to be utilized in the carving and serving of food (Marquardt 1997:36). Silver and gold were used, increasingly, in combination with one another and the complex, intricate designs became more popular and more ornate as time went on (Marquardt 1997:40, 45). Spoons began to take a distinctive shape (Marquardt 1997:45) and began to incorporate other luxury materials such as ivory (62), coral, rock crystal, and Aventurine glass (59). In Spain, the cities of Seville, Albacete, Toledo, and Ronda produced precious metal works, including “quantities of cutlery for both home use and exportation” (Johnson 1944:71).

By the end of the Renaissance, all the European powers that had any cohesive maritime faction, had set up colonies in the New World. As these colonies were settled initially, large quantities of European goods were shipped to the Americas and the Caribbean islands (Penner 1991:3). While colonists faced the harsh realities that the New World had to offer, the nobility in Europe continued their traditions of decadence, wealth, and finery.

#### 3.4.4 Baroque Cutlery Developments (~1600-1750)

The Baroque period in Europe was characterized by extravagance and globalization. While many traditions prevailed, some were lost as cultures shifted and diverged. The spectacle of a banquet was not the same as it was in the Middle Ages and Renaissance, and the service of food from the kitchen to the table became more popular. Marquardt (1997:79) offers the following description: “in the course of the 18<sup>th</sup> century carving for show at the table lost all significance and the activities connected with it were transferred to the kitchen...as a result, specially crafted ornate carving cutlery became superfluous.”

Cutlery became more specialized in this period with the development of coffee or teaspoons, dedicated wedding cutlery, folding travel sets, carving forks, dinner forks, dessert

spoons, children's utensils, and double-ended spoons (Marquardt 1997:83-105). Forks of this time were standardized; as carving forks retained their maximum of two tines, dinner forks had three or four tines (Marquardt 1997:79-149). Handles for all types of cutlery became increasingly varied in terms of size, detail, and material. These included porcelain and faience that could be manufactured to make a matching set, and produced in factories en masse, though they were too small to include makers' marks (Marquardt 1997:130). Wood, bronze, and tortoiseshell were also among the popular materials used to make cutlery in the Baroque period (Marquardt 1997:138-146).

### *3.5 History of Colonial Foodways*

As explorers and colonists encountered indigenous people they began, consciously or not, to exchange cultural attributes. Native Americans had different gender roles from those in European tradition; "men hunting and fishing and the women doing the gardening...in Europe, hunting and fishing were recreational activities for the leisured classes, and agriculture was the work of mostly male farmers" (Oliver 2005:9). Agriculture of the New World introduced maize (corn), squash, sweet potatoes, peppers, pumpkins, and manioc (cassava), to the diets of European settlers (Highfield 1995:36; Oliver 2005:9). In addition to the cultural exchange of foodstuffs, colonists and indigenous people also exchanged methods of storing, cooking, and eating different foods. Along with these methods came their respective foodways items, the cooking and storage vessels, utensils, and serving wares.

#### 3.5.1 Terrestrial Foodways History and Archaeology

Enrique Rodriguez-Alegría (2005:551) argues "that both colonizers and Indians were aware of the social and political implications of their material lives and their eating practices"

and that the adoption of aboriginal foodways was a strategic maneuver to adapt to local conditions where they could not replicate their previously held European practices. North American colonists, specifically the religious pilgrims of New England, brought with them whatever they could; “clothes and shoes and dishes and furniture, food and drink and weapons and tools, farming equipment, cloth, and beads to trade to the Indians” (Penner 1991:3). The reluctance of colonists to surrender their European customs is described by Oliver (2005:3) as follows:

Through it all, most colonists and subsequent settlers endeavored to provide themselves with sufficient and familiar food, cooked and consumed in their accustomed way. They gradually adopted or adapted new ingredients to their foodways, gave up others, and created dishes that modern Americans would recognize.

Social stratification was initially much the same as it had been in Europe; the wealthier able to afford the imported tablewares from Europe and the lower classes “eating with spoons and fingers, using their knives to cut pieces of meat and to convey them to their mouths” (Oliver 2005:24). Sixteenth century books of table-manners for children give an indication of the tablewares that may have been common at the time, described by Alice Morse Earle (1898:80) as follows:

From them we learn that the only kind of table furnishings used at that time were cups to drink out of; spoons and knives to eat with; chafing-dishes to serve hot food; chargers for display and serving large quantities of food; salt-cellars and trenchers for use as plates.

Spoons in the New World colonies had rounded basins, with somewhat plain handles compared to those of Europe, “but the modern-shaped spoon was easily recognizable in them all” (Rawson 1936:217). In wealthier families, it was not uncommon for every family member to have at least one personal silver spoon, however spoons were most often made of pewter plates that had been worn-out, melted, and recast (Earle 1898:87-88).

Perhaps the most common metal-ware in the Caribbean colonies during the seventeenth and eighteenth centuries was pewter. It is often mistakenly assumed that pewter wares in the eighteenth century would have been reserved for the upper class, “however, similar items are often recovered from maritime archaeological sites” (Franklin 2005:145). In the formerly British city of Port Royal, Jamaica, the submerged area of the city has yielded the largest archaeological quantity of pewter to date (Gotelipe-Miller 1990:8). Pewter was a very durable material, and arrived in the New World colonies via trade ships, until which time that pewterers emigrated and established local manufacturing outlets (Gotelipe-Miller 1990:8). Shirley Gotelipe-Miller (1990:11) indicates that in terms of the British popularity of pewter, it had come:

... to an end by the mid eighteenth century, when the popularity of pewter tableware was eclipsed by new technological developments in glass, porcelain and fine ceramics...these were now less expensive, easier to clean, and the bright colors and pretty motifs used for decoration had greater general appeal ... pewter continued being popular well into the nineteenth century for many utilitarian objects.

Gotelipe-Miller’s (1990:24) study found that pewter pieces manufactured in the New World seemed to have been of lower quality than English wares, due either to the lack of guild supervision, quality tin, or quality training. This was likely true for the early colonial

manufacturers of other European goods, like majolica and silver, which were produced without proper guild supervision. Spain, however, took measures to ensure the quality of the silver being exported from the Americas was of a standardized, acceptable quality.

In another analysis of hollowware pewter found in Port Royal, Jamaica, Debra Lynn Winslow (2000) incorporated evidence of the development and increase in pewter in households and foodways of the early colonial period. Her study revealed that pewter began to make its way into private homes, no longer a luxury reserved for the church or the wealthy, as early as the Middle Ages, and that even those of the most meager means could afford pewter wares by the turn of the seventeenth century (Winslow 2000:45). While it did become affordable for the lower classes, those emigrating to the New World did not prioritize pewter as illustrated by Winslow's (2000:46) statement that "a 1622 list of necessary provisions for colonists to Jamestown, Virginia, included several kinds of iron cooking implements and wooden plates, dishes, and spoons but not one single piece of pewter." As the colonies developed and stabilized, pewter became a standard household item and "luxury goods included silverplate, gold, silver, and clocks" (Winslow 2000:48). A mid-eighteenth century set of dowry lists, cited by Winslow (2000:47), included "two large pewter platters, 18 pewter plates, a quart basin, four to six porringers, six spoons, a quart, and a pint pot" for each of the gentleman's three daughters. This corroborates the argument that pewter was becoming more common in the eighteenth century.

Silver production in the New World was mostly confined to modern Central and South America, where the largest silver mines in the western hemisphere were known, primarily in Mexico and Peru. In 1560, the primary cutlery manufacturing center was in Puebla de los Angeles in Mexico, which was also known for the production of scissors (Johnson 1944:71). As travel increased in the sixteenth and seventeenth centuries, Spanish silversmiths became more



popular with their manufacture of *cubiertos*, sets containing a matching fork, knife, and spoon designed in smaller size compared to normal pieces, and oft times including a sturdy leather travel case (Johnson 1944:108-109).

North American colonists adopted the fork much later, while it had been in use in Europe among the wealthy since the sixteenth century, the first fork did not arrive in America until 1630 for the governor of the Massachusetts Bay Colony, John Winthrop (Petroski 1993:16). The three-tined fork made its first appearance in the early part of the eighteenth century in America, and was often made with bone, wood, or horn handles (Rawson 1936:221). Overall it seems that American cutlery followed this delayed trend in the adoption of new forms and technologies in relation to European cutlery for quite some time.

Spanish colonists in the Americas had to face new and different climates, soils, diseases, hostile natives, and unreliable food sources (Proctor 1973; Andrews 1978; Connor 1930). In a 1578 letter from Pedro Menendez Marques, the governor of Spanish Florida, to the King of Spain, translated by Jeanette Thurber Connor (1930:87), Marques states:

I wrote your majesty in another letter that, when I arrived here, there was an order which allowed the soldiers two reals and a half each day for their ration, and that they suffered because the supplies which are brought here cost so much that with one pint of wine and a pound and a half of bread, two reals and a half are used up, and there is great need; and this even appears to me a case of conscience. It shall be done so this year, until your Majesty commands what may please you; but henceforth, if the supplies and oil and other things are brought from Spain, the full ration can be given them. And if that is not possible, I entreat your Majesty to command to be provided in this matter that which may best please you.

As the first waves of men, primarily soldiers, clergymen, laborers, overseers, and a few nobles, settled into their new lives in the colonies, it was mandated by the Spanish government that married men would return to Spain to see that their wives were transported over the Atlantic Ocean to join them or send for them within just a few years of being in the colony (McEwan 1991:34). Unattached males often worked to bring a prospective wife from Spain and start a family in the colonies. In the sixteenth and seventeenth centuries, it was traditional that a woman's responsibility to her husband was to oversee the household, including the servants and the chores, as well as bearing and raising children, exemplified by Lockhart, as quoted by Bonnie McEwan (1991:34):

Although virtually all households had Native American or African American servants actually to perform most physical tasks, Spanish wives apparently played an active role in ensuring that certain standards were upheld. They generally demanded that Spanish be spoken, that chores such as cooking, making beds, and sewing were all done in the European fashion, and that household servants be encouraged to embrace Christianity and "legitimate" marriage (Lockhart 1968:163).

As the woman's respectable place was within the household, the archaeological remains that indicate the presence of women are typically associated with their duties, including linens, tablewares, cooking pots, and utensils (McEwan 1991:34). As McEwan (1991:34) indicates, the shortage of well-born Spanish ladies with sizeable dowries in the colonies led to the eventual integration of indigenous women into marriages with Spanish men. The Spanish government encouraged the intermarriage of Spanish men and indigenous women in hopes that the unions would help stabilize relations between colonists and Native Americans (McEwan 1991:36). As

indigenous women integrated into the paternalistically Spanish households, their archaeological markers would parallel those of Spanish women in colonial households, including housekeeping, cooking, child-rearing, and textiles. Indigenous pottery appears in the contexts of known Spanish sites including the following: “ceramic cooking pots, storage vessels, and manioc griddles ... stone implements such as manos, metates, and manioc graters” (McEwan 1991:37).

Julia King’s (1984) study of seventeenth century Saint Augustine, Florida, reveals more evidence of the cultural exchange between Spanish settlers and the indigenous peoples of the New World. Her study focused on ceramic variability throughout the city, including three sites within the sixteenth and seventeenth century town boundaries. The ceramic assemblages in King’s (1984:77) study reveal multiple types of pottery, from different “nationalities”:

The 17<sup>th</sup> century ceramic assemblages from St. Augustine were found to contain Hispanic, Mexican, Timucuan and Guale aboriginal, and other European (primarily English) elements, although varying in proportion... aboriginal coarse earthenwares constituted the largest ceramic group recovered from both early and late proveniences at all sites.

Most Spanish ceramics were olive jar fragments and Majolica (tin-glazed earthenwares), both of which remained popular in Spanish settlement sites throughout the colonial period (King 1984:79). King (1984:81) cites “the isolation of Spanish Florida, the unreliable nature of the *situado*, and Spanish-Indian intermarriage” as the reasons for the increase, through time, of St. Augustine residents’ use of indigenous ceramics. Cultural exchange and divergence, each, clearly played significant roles in the European colonies of the Americas.

### 3.5.2 Maritime Foodways History

Spanish sailors during the colonial period served in crews travelling at sea for up to several months at a time without setting foot on land. All their daily activities took place within the confines of a wooden hulled ship, accompanied by, primarily, up to several hundred other men. As sustenance is required for human life, food was an important aspect of daily life for sailors. Food onboard Spanish ships was typically shipped in a container known as the Olive Jar; though contrary to its name, an olive jar's contents could have included numerous types of foodstuffs and supplies like beans, wine, oil, or tar (James Jr. 1988:43). Though men needed to eat several times per day, no one person was in charge of the preparation and serving of food for the crew, as illustrated by Perez-Mallaina (1998:81):

One office that Spanish ships in the sixteenth century systematically lacked was that of a cook. If a person wanted to eat something hot, he had to attend personally to the cookstove or pay someone for the service. In general, culinary activity was considered demeaning, and to complain to someone in the vicinity that he still carried the smell of smoke from a cookstove in his beard was usually a good excuse for a fight.

Meals on colonial Spanish ships consisted of three daily rations of food. Common sailors dined upon upturned chests, seated on the deck, with a knife as their only utensil, and food communally served on a large platter, often of wood or ceramic (Perez-Mallaina 1998:143). Sailors commonly provided their own dishes and cutlery while enlisted on a ship; a knife could be utilized as an eating utensil as well as a weapon or tool, and an individual's wine jug was used "to receive his wine ration, since that was a liquid that was too valuable to risk sharing from a common cup" (Perez-Mallaina 1998:149). Colonial documents elucidate the daily rations for a

person in the crew of Captain Pedro Menendez de Aviles' armada of 1568 included the following, as described by Perez-Mallaina (1998:141):

Mondays, Wednesdays, Fridays, and Saturdays: a pound and a half (690 grams) of biscuit, one liter of water, one liter of wine, half a peck of a mixture (*menestra*) of horse beans and chickpeas for each twelve persons (150 grams per person), and one pound of salted fish for each three persons (153.3 grams per person).

Tuesdays: a pound and a half (690 grams) of biscuit, one liter of water, one liter of wine, one pound (460 grams) of salted meat, two ounces (57.5 grams) of cheese.

Each month: one liter of oil and something more than half a liter of vinegar per person.

A biscuit in the context of Spanish sailors' diets was "an unleavened bread subjected to a double process of cooking, which preserved it from deterioration for a long time...one had to soak it for several minutes, either in water or in wine..." (Perez-Mallaina 1998:141). The sailors also supplemented their diets with whatever they could gather from the ocean as they travelled.

We can be certain that, among his belongings, a mariner almost never omitted a fishing line and some fishhooks, so that he could dedicate himself to fishing in some of his free time. The available texts also make plain that from the ship's boats, and with the help of harpoons, the men fished for sharks and other large fish, which provided a considerable reinforcement of fresh food [Perez-Mallaina 1998:145].

Higher level officers enjoyed both the luxury of bringing more specialized cooking devices and employing cooks to prepare food for them, as described by Perez-Mallaina (1998:152-153):

The captain and master Pedro de Mata had a basket with porcelain plates and Triana pottery, and he drank from a gilded silver cup. More common were plates and jars of metal, either tin, copper, or pewter (an alloy of zinc, lead, and tin). Thus, for example, Juan Sebastian Elcano carried the following pieces of dishware and cooking equipment on his second expedition to the Moluccas: three copper kettles, a tin pot (*puchero*), four tripods to support earthen pots over the fire, a grill, three iron frying pans, eight tin plates, one jar, two large cups, and three spoons.

Captains, officers, and pilots would have had the opportunity to partake of higher quality food, on higher quality wares. They would have been the only persons onboard to have dined at a proper table, with a comfortable chair, and fine tableware:

Their wine was certainly better than the cheap watered-down variety that was offered to the sailors. From time to time the superior officers could indulge themselves with a roasted chicken, and they regularly ate dried fruits and delicacies for dessert: preserved quince, fruit conserved in syrup, figs and raisins, and so on [Perez-Mallaina 1998:142—143].

Access to and quantity of fresh, clean drinking water for the hard-working crew was certainly lacking on colonial Spanish ships. As desalination was not perfected until later, potable water had to be brought on ships before departure from port, and stored in the hold along with other foodstuffs and whatever cargo was being transported (livestock, slaves, raw materials, manufactured goods, etc.). Perez-Mallaina (1998:144) explains the dire circumstances that surrounded fresh water onboard Spanish sailing ships:

Even adding a liter of wine to the liter of water provided in the rations, this quantity was small. A man of some seventy kilograms who consumes around thirty-five hundred calories a day should normally ingest between two and three liters of water; in tropical climates, where the production of sweat can cause the loss of a liter of moisture an hour, he ought to consume ten liters a day.

This lack of proper hydration, no doubt, coincided with at least some degree of nutritional deficit. Overall the life of a sailor onboard a ship in any Spanish fleet was not an easy one, even aside from the perilous sea conditions that ended the voyages of the 1715 and 1733 fleets.

### *3.6 1715 Fleet Site Backgrounds*

Modern salvage of the 1715 fleet shipwrecks was initiated by Kip Wagner who led the charge to find the locations of several of the shipwrecks by organizing the Real Eight Corporation (Smith 1996:96). Because the exact identities of each shipwreck in the 1715 fleet are unknown, “salvors nicknamed the wrecks, sometimes after the closest shore features” (Smith 1996:96). In these early salvage contracts the State of Florida “retained 25 percent of the salvaged materials” (Smith 1996:96). The shipwreck site groups discussed below are those associated with the artifact collections’ cutlery pieces, which are described in Chapter Four. The Florida BAR site numbers denote the county (Indian River, Monroe, and St. Lucie) location and the number given to each site, commonly in order of discovery.

#### 3.6.1 8IR00000

The site group denoted 8IR00000 is a general collection of artifacts associated with 1715 fleet, found within Indian River County, Florida, but beyond that their provenience is unknown

because they lack contextual relationships to a specific recorded site. None of the artifacts that are included in this group have biographies from their moment of deposition during the hurricane until the time their recovery and donation to the state collections. Some of the items in this group have distinctive features and so biographies regarding pre-depositional details will be presented in Chapter Five.

### 3.6.2 8IR00019 “Corrigan’s Wreck”

Several of the ships in the 1715 fleet have been located, many in the mid-twentieth century by treasure hunters in Florida (Peterson 1972:263). According to Bob “Frogfoot” Weller (2001:13), a well-known treasure hunter primarily associated with the 1733 fleet, the *Capitana Regla* of the 1715 fleet is the shipwreck site that was located off the property of Hugh Corrigan. The site has become known as “Corrigan’s Wreck” and is identified in the Florida state records as 8IR00019. Larry Murphy (1977:2) stated that the shipwreck at this site may have been a Tierra Firme ship, but that “Real 8 Corporation believed in 1972 the wreck to be that of Ubilla’s *Capitana*...it has also been thought to be Echeverz’s *Almiranta*...considerable archaeological and historical research remains to be done before the ship can be identified accurately as a particular vessel of the 1715 fleet.” Like many of its sister shipwrecks, this site cannot be positively identified and, according the state records, it does not have clear boundaries. Tom Gore (1994b) stated the following:

There are three base maps to cover the area of this site. Corrigan’s, Corrigan Middle and Green Cabin. Bill Ellam has [is] one of the salvors who has worked extensively on this site. He has swam the area using underwater metal detectors, from the middle of Corrigan’s area, recovering and tracking artifacts, into the middle area, on well into Green



Cabin area, recovering both 1715 and 1618 material...along a definite trail, recovering artifacts for a distance of nearly 3 miles, and possibly further.

The lack of scientific methodology implemented in the survey of this site could very well have led to mistakes in attribution of artifacts to particular sites. While the three-mile expanse described by Ellam to Gore could be all the same shipwreck, it is also possible that there are multiple shipwrecks in the same immediate area, even on top of one another, which may not be recognized or distinguished during haphazard treasure hunting for valuable artifacts.

Several salvaging companies have worked the site of 8IR00019 including, “Real Eight, Treasure Salvors, Bob Marx, and a lot of Salvors Inc. subcontractors” (Gore 1994b). Weller (2001:13) himself claims to have “recovered a large number of silver coins and artifacts during the 1984 salvage season.” Early treasure hunters reported finding coins, musket shot, glass, cutlery objects, ceramics, jewelry, and armament (Murphy 1977:11-12). The archaeological site form (Gore 1994a:2) describes the site integrity as having “major overall disturbance,” and that a threat to the site integrity is “future prop wash excavation.”

Other artifact types associated with site 8IR00019 include iron (cannons and anchors), glass, ceramics, and precious metals and includes the fact that the shipwreck itself, as well as the contents, is estimated to have been scattered over at least three miles (Gore 1994a:2). The cutlery artifacts in this study that are attributed to the 8IR00019 site include silver, wood, and bone handle fragments, forks, and spoons in various conditions.

### 3.6.3 8IR00023 “Cabin Wreck”

The second site collection of the 1715 fleet is numbered 8IR00023, nicknamed the “Cabin Wreck” for the small cabin located on the beach opposite the shipwreck and was

identified by Weller (2001:14) as *Almiranta San Roman*. Florida archaeologists, however, note that this shipwreck is thought to be the *capitana* of the 1715 fleet, *Nuestra Señora de la Regla* (Clausen 1965a; Gore and Vickery 1993). This ship, site 8IR00023, wrecked in 1715, hitting a succession of reefs as it neared the shoreline and the “majority of wreck material was found between first and second reef, light scattering of small artifacts and treasure inshore of first reef (Real Eight cabin has been moved back 3 times since the 60s, beach has eroded that much” (Gore and Vickery 1993). The scattering of artifacts toward shore could indicate Spanish salvage efforts and the dropping of items while swimming to shore, or the movement of those items by wave and sea action over the years. State archaeologist Carl J. Clausen (1965b) also noted in the Underwater Archaeological Site Record that there was “some marine growth and sharks almost always...visibility usually poor depending on season and weather.” Poor visibility and the presence of sharks on the site may have, in fact, protected it from the extensive treasure hunting activities that plagued other sites.

This site, like 8IR00019, was included in the salvage contract for Kip Wagner’s Real Eight Corporation which has worked the site over the years, into the 1990s (Gore and Vickery 1993). The Crossed Anchors Salvage group worked the site in 1993 and retrieved “gold earrings and brooches containing 441 diamonds, 21 gold rings, gold toothpicks, and other artifacts” (Weller 2001:14). The Florida Master Site File also indicates that cannon balls, pewter plates, glass fragments, eating utensils, silver wedges, bar shot, olive jar sherds, Guadalajara ware, sheet lead, and majolica have been recovered from this site (Clausen 1965a). The items included in the 1715 cutlery collection attributed to site 8IR00023 include pieces such as spoons, forks, broken handles, and knives.

#### 3.6.4 8IR00027 “Rio Mar Wreck”

The final Indian River County site collection in the 1715 fleet, nicknamed the “Rio Mar Wreck” for its proximity to the Rio Mar Golf Course, is denoted in the Florida Master Site File as 8IR00027 and credited as the *Capitana Carmen* by Weller (2001:13), and by Clausen (1968a:3) as “may be the capital ship of Echeverz’ fleet?”. The estimated one-thousand-ton galleon “has been worked extensively since the early 60s” (Gore 1994c:3) and is marked by damage from treasure hunters. Gore (1994d) stated the following regarding site 8IR00027:

Fisher built a barge with three engines and lowers and moved it to the site in 1967. He recovered a large amount of gold jewelry, gold coins, gold nuggets, ships hardware, etc. This site was also worked by Bob Marx and the “Griffon”. Again the overkill of the power of the “Griffon” was and did do extensive damage to the site. Although there was no wood structure visible on the site, the “Griffon” dug large holes, and many of the large iron cannons slid from their original positions and some were even left lying in upright positions in huge craters dug by Marx and the “Griffon.”

Mel Fisher’s team who “recovered 149 gold coins, some gold bars, and two beautiful gold crosses with pearl posts” (Weller 2001:13). Unfortunately for the treasure hunters, for much of their time working the site of 8IR00027, “the price of gold was low, and it took to [sic] much time for divers to recover the small pieces” but the damage was already done (Gore 1994d). The 8IR00027 site group artifacts in this project include spoons, forks, and handle fragments.

#### 3.6.5 8SL00017 “Douglass Beach Wreck”

The final shipwreck included in the 1715 collection is the one with the least historical information. Site 8SL00017 is described as “scattered remains of one of the smaller 1715 fleet

vessels, possibly a patache of the flota portion of the Armada” (Clausen 1964). Though under a salvage lease, treasure hunters on site were not required to keep track of their activities to any certain standards. This is exemplified by the following recollection by Tom Gore (1985):

On board McAllister’s boat, talked with Richard McAllister, regarding activities. I asked him if he needed any field notes or paper work. He informed us that he wasn’t using our paper work and kept his own records but not for us. He said someday he might give the State his records, but for now he was doing “things his way.”

The Florida Master Site File (Gore 1995:2) notes that this site has suffered severe disturbance, but included cultural material such as wood, metal, ceramics, precious metal, glass, and ballast. James Pepe (2000) noted that he thought “the significance of this site has probably been destroyed by salvage (marine treasure-hunting) operations over the years.” The artifacts from the 8SL00017 site included in this project consist of the sole toothpick in this study, as well as fork, spoon, and handle fragments.

### *3.7 1733 Fleet Site Backgrounds*

The first of the 1733 *flota* shipwrecks, *Capitana El Rubí*, was found in the first half of the twentieth century by Art McKee, a well-known Florida treasure hunter (Peterson 1972:263-264). Upon working the site, McKee found extensive amounts of treasure and cargo preserved (Peterson 1972:264). By the late 1960s, all but five (*El Populo*, *San José*, *Angustias*, *El Floridana*, and *San Fernando*) of the shipwrecks of the 1733 fleet had been found and worked by treasure hunters. Since then, *El Populo*, *San José*, and *Angustias* have been located and worked over. Unlike the 1715 collection, the 1733 site numbers correspond with a specific ship but, even at that, there is still no contextual evidence for artifacts within each site. There are five

shipwreck sites, all in Monroe County, represented in the 1733 cutlery artifact collection: 8MO101 (*San Jose*), 8MO104 (*San Pedro*), 8MO131 (*Angustias*), 8MO133 (*El Lerrí*), and 8MO146 (*Capitana*). Reports of the cargo manifests from these ships are included in Appendix G.

### 3.7.1 8MO101 *San José*

According to Dennis English (1974:2), the site noted by the state as 8MO101 is the *não San José y las Animas*, owned by Don Jose del Duque y Munoz and captained by Cristobal Fernandez Franco. Construction of this 326-ton ship was completed in New England between 1727 and 1728 and it was outfitted with at least twenty-seven cannons (Weller 2001:88-89). During its time in the *flota*, however, *San José* was privately owned and there is no known record of the number of guns it carried, although similar ships held 10-12 (English 1974:2). Spain purchased *San José* from Britain in 1730 and the contract of sale included the stock of English dinner service onboard (Weller 2001:89). On the fateful voyage, *San José* “carried 30,435 pecos in silver specie and bullion, plus sugar, chocolate, indigo, cochineal, dyewoods, cocoa, hides, ceramic-ware, tobacco, vanilla, and various types of drugs” (English 1974:3). When the initial salvage was undertaken in 1733, the recovered specie amounted to more than was originally declared, which led several merchants to admit to smuggling and most offered to pay the double-tax fines to have their money returned (Weller 2001:33).

Contract salvage began in the summer of 1968 (English 1974:3) though local salvage and surveys existed in the years prior (Clausen 1968:1). During its time as a contract salvage site, numerous salvors collected material from *San José* including “cannon; flintlocks; pewter ware; brass buttons & buckles; dead eyes; sherds; silver coins; cannon balls; whole pottery; etc.” (Clausen 1968b:1). Dennis English (1974:3) also noted that “there is much wood from the ship

yet remaining; this has been recovered with sand to prevent further deterioration.” The remaining sections of wood hull are critical to understanding the construction methods employed in the building of this ship and others like it.

In the late 1960s, Tom Gurr and his crew began recovering artifacts from the *San José* site, including Chinese porcelain, cannons, the ship’s rudder, silver dinner plates, a barber’s kit in its original leather carrying case, and a matching set of cutlery with an English maker’s mark as well as a marked date of 1722 (Weller 2001:100-101). The following year, Gurr conflicted with the state conservation board over the exact placement of the site regarding the line between state and international waters and the state laid claim to all the artifacts he had recovered as he had obtained them illegally, without a state salvage permit (Weller 2001:103-105). Gurr and several of his associates faced legal troubles until 1975 when the United Supreme Court ruled in favor of the treasure hunters’ claim to the state-international waters boundary (Herman 1974:8). According to Weller (2001:112), “the *San José* has never been worked completely...the sand would alternately cover and uncover the site, giving the local treasure community a case of treasure fever.” While other treasure hunters continued to work the site, and recover artifacts through the end of the 1970s, Weller (2001:113) believes that the items recovered indicate that “this was in all probability a ‘bounce’ spot of the *San José* as it struck the bottom before finally sinking there at the edge of Hawk Channel. The passengers’ baggage holds the key to future treasure finds on the *San José*, scattered shorewards as much as four miles,” back into Florida state waters.

Despite being noted as having “much of its value...now been lost due to the commercial nature of the recovery” (Clausen 1968b:5), the site of *San José* was nominated for the National Register of Historic Places (NRHP) in 1974 (English). It was officially listed on the NRHP in

1975 (Smathers). The artifacts in this study from the *San José* collection include silver, wooden, pewter, and brass pieces, fork and spoon fragments, two complete spoons, and several cocoa frothers.

### 3.7.2 8MO104 *San Pedro*

The *não San Pedro* was owned by Don Gaspar de Larrea Berdugo, captained by Don Gaspar Lopez de Gonzales and is denoted as site 8MO104 (Weller 2001:19). The Dutch-built ship was loaded with New World goods, including silver, jewels, vanilla, cochineal, various animal hides, and lumber, as well as items from the Pacific trade routes, including ivory, porcelain, spices, and gold jewelry, when it departed the Caribbean bound for Spain (Scott-Ireton and Mattick 2001:8). Following the wrecking event during the hurricane of 1733, the captain and crew aboard *San Pedro* recovered most of the cargo and specie from the ship's hold and the salvaged goods soon revealed to the Spanish that "more treasure was recovered than had been registered on official manifests (evidence of the widespread smuggling that plagued the Indies fleets)" (Scott-Ireton and Mattick 2001:4).

In the 1950s, Arthur McKee, Jr., secured a state commercial salvage lease that included the sites of *San Pedro*, *Capitana El Rubí*, and *El Infante*, though his salvage work primarily focused on *Capitana* (Weller 2001:175). Carl Clausen (1966:2) stated that "when I first visited the site in 1966 it appeared that the treasure hunters had turned the whole wreck over at least once." According to Bob Weller (2001:176), "they were working on the *Infante* and *Capitana*, and these wreck sites were producing a quantity of artifacts and coins...there are a number of wrecks in the area, and it's possible that they actually did not know they had the site of the *San Pedro*." This is yet another indication of the issues that arise when treasure hunters scour sites without the scientific methodology. The reservation and delay that sometimes accompanies

scientific endeavors is a testament to the copious amounts of research, reasoning, and accumulation of evidence to identify a site, and maintain the separation of evidence that relates to a separate site. Thousands of coins were removed from *San Pedro* during salvage activities in the 1960s and 1970s, but as more profitable wrecks were found, “the amount of coins being recovered from *San Pedro* diminished and salvage operations were shifted to the unworked wrecks” (Scott-Ireton and Mattick 2001:4).

Aside from treasure hunting, the *San Pedro* site has received attention from the state and the academic communities through the years. The Underwater Archaeological Research Station surveyed *San Pedro* amongst other sites, in 1977 (Scott-Ireton and Mattick 2001:4). The BAR coordinated with Florida State University and Indiana University underwater archaeology field school to survey the site in 1988 (Scott-Ireton and Mattick 2001:4). The shipwreck site of *San Pedro* was both nominated (Scott-Ireton and Mattick 2001) and approved for inclusion on the National Register of Historic Places (Harris 2001) in May of 2001.

Weller (2001:176, 181, 185-186) states that the primary artifact type recovered on the *San Pedro* shipwreck site was silver coins, but that treasure hunters also unearthed cannons, religious artifacts, cooking wares including a tea kettle and an olive jar. The Underwater Archaeological Site Record indicates that collected material included ceramics, glass, bricks, fastenings, and rigging (Clausen 1966:2). The only artifact in this study attributed to the site of the *San Pedro* shipwreck is an iron knife blade.

### 3.7.3 8MO131 *Angustias*

*Nuestra Señora de las Angustias y San Raphael* was a *não* owned by Jose Sanchez Madrid, captained by Francisco Sanchez Madrid, and is attributed to the Florida site number 8MO131 (Weller 2001:19). Built in England, *Angustias* was nearly 330 tons and, according to



Scott-Ireton and Mattick (2006a:8), “*Angustias* sailed in the rear echelon of the New Spain *flota* with the *almiranta El Gallo Indiano* and *Sueco de Arizón*...all her people were saved, as well as most of the cargo and ship’s supplies.” Due to the positioning of *Angustias* near shore and in shallow water, the Spanish crew salvaged most of the cargo in the days that followed the storm. One of the survivors of *Angustias*’ wreck, Joseph Ignacio de Toca Velasco wrote an epic poem detailing his experiences during and after the shipwreck and it was only after a careful translation of that poem in the early 1970s that modern treasure hunters realized the ship had not been refloated (Scott-Ireton and Mattick 2006a:8).

Modern salvage began in 1972 and continued for several years to come (Scott-Ireton and Mattick 2006a:6). The *Angustias* site has been surveyed several times by the State of Florida, in 1977, 1988 in conjunction with Florida State and Indiana Universities, and in 2004 under a grant from the National Oceanic and Atmospheric Administration (NOAA) (Scott-Ireton and Mattick 2006a:6). Although Roger C. Smith (2008:2) remarked that the site was “almost totally salvaged,” *Angustias* was among the 1733 Spanish *flota* sites that were listed on the NRHP in 2006 (Cobb).

Rosary beads, a gold coin, ceramic sherds, cannons, and anchors were recovered on and around the site (Weller 2001:221). Subsequent recoveries included goods from Asia such as porcelain and jade, a silver dinner bell, more coins, “a silver buckle and a pewter spoon with an ivory handle” (Weller 2001:223). Such a spoon does not exist in the BAR collection and is an example of the disparity that exists between the original, post-Spanish salvage site contents, and the pieces that are currently a part of the official, state collection. The only artifact attributed to the *Angustias* shipwreck site in this study is a wooden knife handle fragment.

### 3.7.4 8MO133 *San Felipe/El Lerri*

Florida site number 8MO133 is known as *San Phelipe/Felipe* or *El Lerri*, and was a *não* owned by Marqués de Cañada and captained by Don Joseph del Villar y Andrade (Weller 2001:19). *El Lerri* was built in England and had a registered cargo that consisted mostly of agricultural goods including “sugar, purgative, snuff, cochineal, indigo, vanilla beans, chocolate, and (probably) wooden trays or washing tubs...some worked silver was listed on the official manifest, but if there was any cargo of bullion or specie, it did not appear in the document” (Beeker and Mattick 1994:11). During the 1733 hurricane, *El Lerri* grounded in shallow water, less than twenty feet deep, near present-day Lower Matecumbe Key (Weller 2001:198-199). There was no loss of life associated with the wrecking of *El Lerri* and “the salvors in their efficiency, recovered components of the registered treasures, as well as a substantial amount of unregistered treasure” (Beeker and Mattick 1994:12-13).

The State of Florida Underwater Archaeological Research Section included *El Lerri* in their extensive surveys conducted in 1977 and 1988 (Beeker and Mattick 1994:7). It was also the focus of Indiana University field schools in 1992 and 1993 (Beeker and Mattick 1994:7). While it had been worked by treasure hunters, the authors of *El Lerri*'s NRHP nomination (Beeker and Mattick 1994:15) stated that “The San Felipe [*El Lerri*] also has great potential to yield information concerning social stratification among the passengers, officers, and crew.” The site of *El Lerri* was official listed on the NRHP in August of 1994 (Percy). Modern salvage efforts led to the recovery of artifacts such as silver, cannons, ballast stones, and an anchor (Weller 2001:199). The cutlery artifacts from the site of *El Lerri* include fork and spoon fragments, as well as a broken pewter handle.

### 3.7.5 8MO146 Capitana El Rubí

The final site in this study is 8MO146, the *Capitana El Rubí*, which served as the *Maestre de Plata y Permisi3n* and carried both the squadron treasurer, Don Balthasar de la Torre, and Royal Commissioner and king's emissary, Don Alonso Barragan (Weller 2001:18). During the hurricane, "*El Rubi* grounded in shallow water...badly leaking before she ran aground, became totally submerged, rolling on her starboard side, facing seaward during the storm...[survivors] managed to recover a majority of the cargo" (Scott-Ireton and Mattick 2006b:5). Though Weller (2001:128) claims that little of *Capitana's* cargo was successfully recovered from the wreckage by Spanish salvors, the salvage tally cited in the NRHP nomination form (Scott-Ireton and Mattick 2006b:6) included over 5,000,000 *pesos* in silver coins, over 700,000 *pesos* in silver bars, nearly 2,000 boxes of silver coins, and 550 copper slabs as well as indigo and cochineal.

The first modern finds from *Capitana* were recovered by Art McKee in the 1930s (Scott-Ireton and Mattick 2006b:6). Treasure hunting endeavors have occurred intermittently since the discovery of *Capitana* where "methods employed included the use of airlifts, water jets, and dynamite to remove ballast and sand to enable salvors to gain access to the deeper portions of the wrecksite" (Scott-Ireton and Mattick 2006b:7). Over the years, other treasure hunters have taken a range of artifacts from the site of *Capitana*, including coins, an ivory compass, a gold-plated buckle, religious medallions, cannon and musket balls, silver buttons and buckles, a boarding ax, and flintlock pistols (Weller 2001:129-131). Scott-Ireton and Mattick (2006b:7) state that "by the 1970s, the rummaged wrecksite had begun to sink into the sand, and by the late 1980s had become completely buried." The Florida Keys National Marine Sanctuary granted a permit to Caribbean Shipwreck Research Institute, Inc., in 1993, who worked the *Capitana* site until 2001

and used propwash deflectors to recover “more than 1,600 tagged artifacts” some of which were reburied on the site and some were conserved (Scott-Ireton and Mattick 2006b:7). Bob Weller’s (2001:131) assessment of the site’s current state, and the future, is as follows:

Today more than six feet of sand covers the top of the [ballast] mound, and as quickly as the overburden is moved away by dusters mounted on the stern of the salvage boats, the sand drifts back in overnight. Artifacts, once plentiful, are being lost forever as they sink deeper into the ocean bottom. The one bright spot is the possibility that baggage and cargo which was washed over the side still lies to shoreward. As mentioned before, it will never *all* be found.

The shipwreck site of *Capitana El Rubi* was listed on the NRHP in 2006 (Cobb). The only artifact in the Florida BAR collection associated with the *Capitana* site is a corroded knife blade. This can be attributed to the extensive salvage by Spanish crew immediately following the shipwreck.

### *3.8 Conclusion*

This chapter has discussed the purpose, process, and results of Spanish colonization in the New World prior to the time of the eighteenth-century fleets’ wrecking events. A history of the development of cutlery was offered to give background knowledge, in terms of form and function, to the artifacts that will be discussed later in this thesis. An examination primary sources regarding both terrestrial and maritime life in terms of their content and use was also included in this chapter. Finally, this chapter concluded with a detailed overview of the circumstances surrounding the wrecking events of both the 1715 and the 1733 fleets and the activities that have taken place regarding those shipwrecked fleets in recent years.

## CHAPTER FOUR: ARCHAEOLOGICAL DATA

### *4.1 Introduction*

At the heart of archaeology are the physical remains of people and the material culture they left behind. Entire civilizations are known to modern scholars based solely on the archaeological evidence of their existence. This chapter will discuss the artifacts analyzed as part of this material culture study. Beginning with a brief review of the origin and fate of the 1715 and 1733 Spanish fleets, it will describe the respective fleet collections in whole, as well as the specific artifacts selected for study in this thesis. Following the presentation of the statistical data related to the artifacts, this chapter will describe the handle typologies, stamps, and other features that have been identified within the collections.

### *4.2 Overview of the Archaeological Collections*

The archaeological artifact assemblages associated with the 1715 Tierra Firme Fleet wrecks and the 1733 New Spain *flota* wrecks utilized in this study, are maintained by the Florida Bureau of Archaeological Research (BAR). The collections are currently housed, jointly, in the laboratory at Mission San Luis de Apalachee and in the conservation laboratory of the Museum of Florida History, both in Tallahassee, Florida. All the cutlery artifacts studied in this project were stabilized and conserved by the Florida BAR staff when they were originally accessioned. While some are broken, and some are degraded due to their marine context, many are also in very good condition including original surface, size, and markings.

All the artifacts in these respective assemblages were recovered by treasure hunters in the waters along the Florida coast and in the Florida Keys. The artifact assemblages for these two collections include a wide array of artifact types. Both fleets' respective shipwreck sites have yielded coins, armaments, jewelry, architectural features, kitchen wares, and personal

possessions. More information on these artifact classifications can be found in South (1977) and Skowronek (1982). A total of 259 individual artifacts were chosen and requested for study as a part of this thesis. Due to several factors, 78 artifacts were eliminated and 173 items were ultimately analyzed; 139 of the artifacts were from the 1715 Tierra Firme fleet, and the remaining 34 were from the 1733 New Spain *flota*. Artifacts were eliminated from the analysis based on the following reasons:

1. Item was on loan to another organization or museum.
2. Item had been deaccessioned.
3. Item did not match description in the catalog (or the catalog description was unclear) and was not relevant to the topic of study.
4. Item was pulled accidentally and not originally from a 1715 or 1733 shipwreck site.

### *4.3 Cutlery Types*

There are six identified cutlery artifact types in the two collections in this study. Of the total 173 cutlery artifacts analyzed during this project, 79 were broken handles [45.6%], 39 were identified as forks [22.5%], 34 were spoons [19.6%], 12 were specialized cocoa frothers [6.9%], 8 were knives [4.6%], and one was a toothpick [0.8%]. The 1715 fleet accounts for most the artifacts in this study, 80% [N=139], while the remaining 20% [N=34] are attributed to the 1733 fleet shipwrecks. The following counts are associated with the 1715 fleet: 71 handles, 36 forks, 30 spoons, 1 knife, 0 cocoa frothers, and 1 toothpick. The 1733 fleet artifact type counts are as follows: 12 cocoa frothers, 8 handles, 7 knives, 4 spoons, and 3 forks. Appendix B illustrates the terminology associated with different sections of each artifact type.

#### *4.4 Typology Descriptions*

Bridging both fleet collections, twelve unique handle design types have been identified and their general characteristics are shown in Figure 4. Of the recognized types, at least ten are consistent with known cutlery designs of the time. The first handle design is a Fiddle-type end with a central ridge running lengthwise from working-end to terminal-end. Two types of spade-shaped handle terminals are included in the artifact collection. Cross-section shape differentiates the spade-shaped handles: Spade I has a diamond shaped handle and Spade II is flat. There are three similarly shaped terminal designs that share an oval theme; Oval I is slanted at the terminal with a spherical handle shape, Oval II is a flat handle with a rounded terminal, and Oval III is flat on the underside of the handle, but has a raised, oval-ended section running the length of the middle of the topside. Another terminal type is one that shows a Floral (flower or leaf) motif. There is also a type with a Figurine on the terminal end of the handle. The Twisted handle terminal encompasses twisted handles manufactured either by casting or twisted by hand. There are two variations of a Trefid handle terminal which are differentiated by the curvature (Trefid I) or pointed (Trefid II) nature of the outside tips. Finally, the Dog-Nosed terminal type has curved outer edges at the handle terminal, but with the pronounced nip in the middle differentiating it from being a third piece to the “Trefid” category.

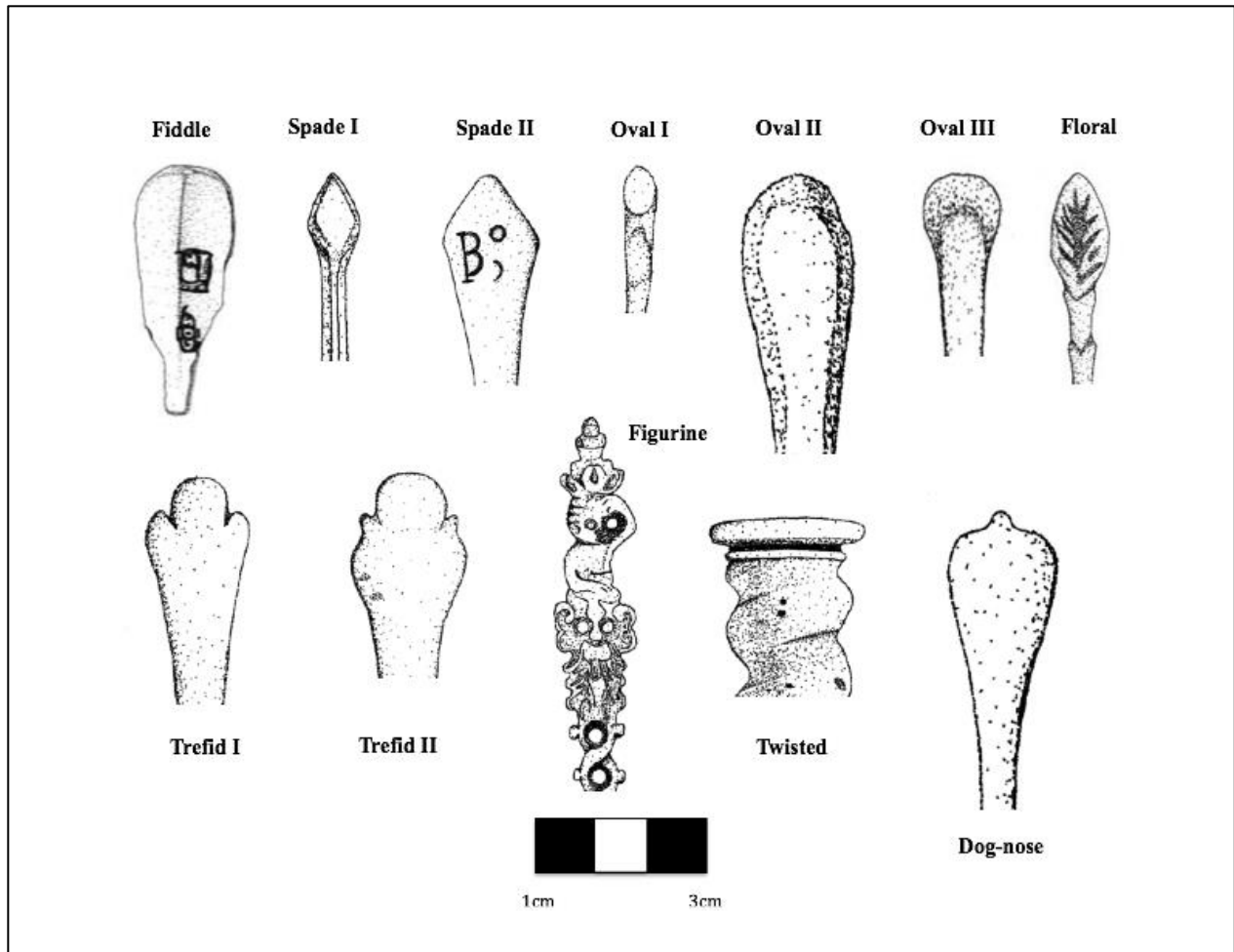


FIGURE 4. Variation of handle terminals (Illustrated by Kristina J. Fricker, 2017).

#### 4.5 Degree of Completion

The overwhelming majority of pieces in this study are fragmentary, 90% [N=156]. In the 1715 fleet collection, 124 individual pieces (89% of that collection) were fragmentary, leaving only 15 complete [11%]. The 1733 collection contains 3 complete pieces, while the remaining 31 artifacts [91%] are fragmentary. The degree of completion was determined based on the method illustrated in Figure 5. 100% complete means that both the terminal and working ends are completely shown. 95% complete means that most of the working end and terminal ends are complete and that the cutlery type was determinable. 75% complete means that nearly all the handle was preserved but most of one end is missing. 25% complete means that either just the



terminal, a section of handle, or just the working end was preserved. Anything more than the very ends, but less than a complete handle, and with an attachment was deemed 50% complete. Of the total artifacts studied, 19% [N=34] of the pieces were 95% complete or more, while 58% [N=101] of the fragmented pieces are 50% complete or less.

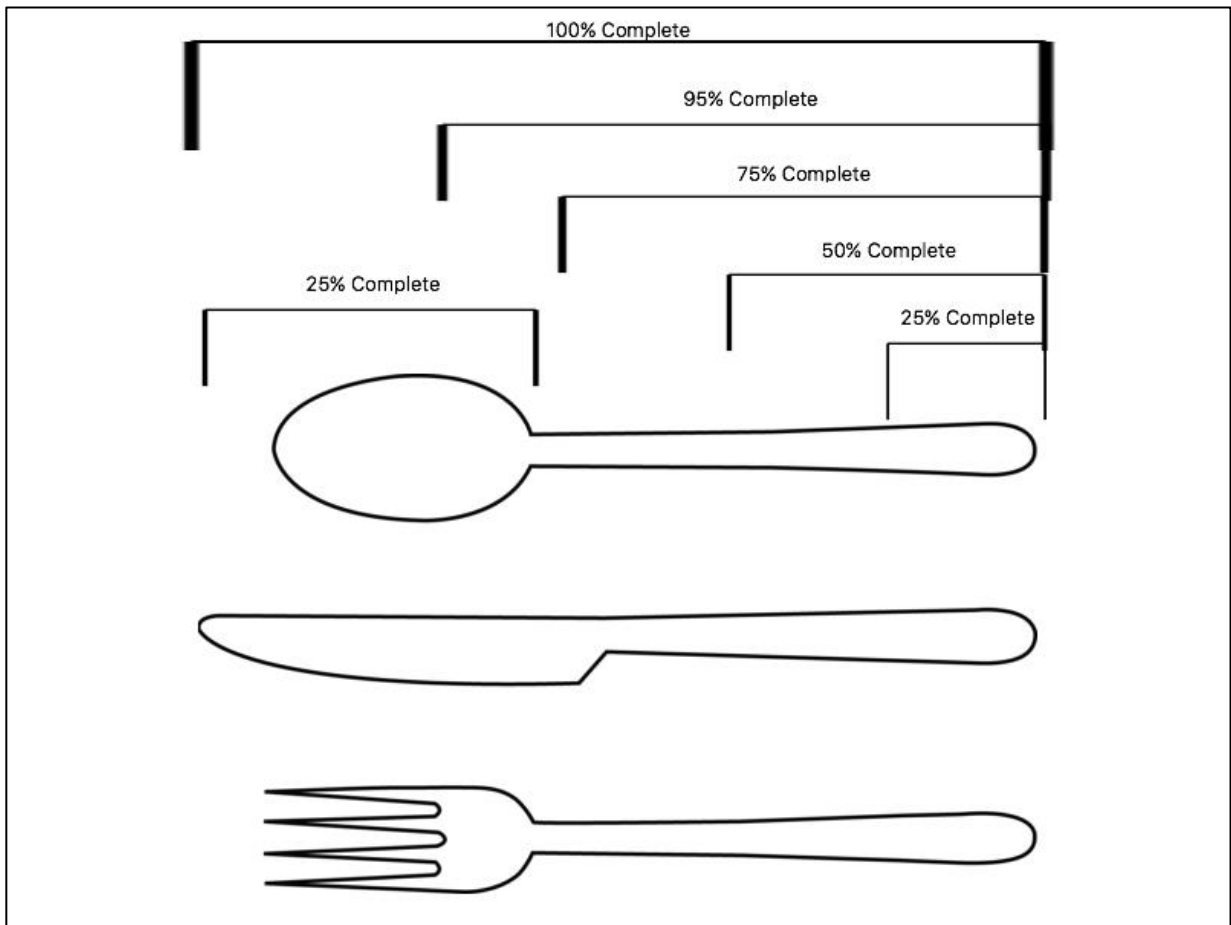


FIGURE 5. Degrees of Completion in Cutlery Pieces. (Image by author, 2017).

#### 4.6 Materials

The most common material composition of the artifacts in this study is silver [66%; N=115]. The remaining identified metals are gilt gold, copper, and pewter, each of which represent 1% [N=2] of the total artifacts between both fleets. Seventeen [9.8%] of the total

artifacts studied were made of wood and seven [4%] were made of bone or ivory. Twenty-eight [16%] artifacts were made of an unidentified material.

The 1715 material distribution is as follows: 81% [N=112] silver, 1% [N=2] gold, 1% [N=1] copper, 5% [N=7] bone or ivory, and 12% [N=17] unidentified or other metal. The 1733 distribution is as follows: 8% [N=3] silver, 2% [N=1] copper, 5% [N=2] pewter, 50% [N=17] wood, and 32% [N=11] unidentified or other metal. Unidentified or other metals have either not been identified by the Florida BAR, or are still encrusted with marine debris and the material has yet to be revealed. Metallic identification is not intended to be a part of this thesis.

#### *4.7 1715 Artifact Collection*

There are six site numbers associated with the cutlery artifacts of the 1715 collection: 8IR00000, 8IR00019 (Corrigan Wreck), 8PB234 (Jupiter Inlet Wreck), 8IR00023 (Green Cabin Wreck), 8IR00027 (Rio Mar Wreck), and 8SL00017 (Douglass Beach Wreck). It should be noted that although these artifacts are listed in groups associated with a site number, they are still considered unprovenienced because of the lack of information about their context. The purpose of grouping the following artifacts by site number is to remain consistent with the BAR catalog descriptions and site attributions. Images of individual artifacts from the 1715 collection can be found in Appendix C.

##### 4.7.1 8IR00000 (General 1715 Fleet)

The 8IR00000 group has 27 artifacts: 6 forks, 1 spoon, and 20 handles. None of the artifacts in this group are complete, and 78% [N=21] of these are 50% complete or less. Nineteen of the twenty handles, five of the six forks, and the spoon are made of silver. The remaining handle and fork are unidentified in terms of their material. The artifacts that are part of the

8IR00000 group are shown with their corresponding materials and completion percentages in Table 3.

Only one fork in the 8IR00000 group is unidentified in terms of its material [94.36.814.2] because it is still encrusted with calcium carbonate deposits and marine debris. The greenish color of the calcium carbonate build-up on this fork suggests that the underlying metal may, in fact, be silver. Of the remaining five forks, four of them share the same squared base characteristic [94.36.824.1-3; 94A.036.00644.0001; 94A.036.000819.0001; 94A.036.000823.001] while the final fork has a round base [94A.036.000813.0001]. Only one of the forks in this group [94A.036.000823.0001] has a complete terminal, which is part of the Spade I typology. This fork also has the vague remnants of a stamp in the middle of the spade terminal. One fork [94A.036.000644.0001] has a rattail attachment and one visible fragmentary stamp, but the stamp is not identifiable.

The single spoon in this group [94A.036.000821.0001] is still encrusted with calcium carbonate deposits and marine debris. The green coloration of the calcium carbonate build-up suggests that the metal beneath may be silver. From the shape that can be discerned, it is a medium sized, oval shaped spoon bowl. At this time, no attachment type is visible.

All the handles from the 8IR00000 group are shown with their respective catalog numbers and measurements in Table 1. Several handles have very distinctive features. Handle 94A.036.000839.0001 is still covered in calcium carbonate and marine debris, but has a clearly visible rattail attachment for whatever utensil of which it was originally a part. It also has a vaguely Trefid shaped terminal, though that cannot be verified until it has been cleaned. Two handle fragments [94A.36.829.6; 94.36.829.8] are too small to yield any typological information.

Four of the handles in group 8IR00000 fall into the Spade terminal typology. Three are of the Spade I type [94A.036.000818.0001; 94A.036.000820.0001; 94A.036.000822], all with less than 25% of the original utensil surviving. The final handle in this typology for group 8IR00000 is a Spade II terminal [94.36.839.3] and is also 25% complete.

Six handles in group 8IR00000 have the Oval terminal shape. Four are Oval I type [94.36.738.2; 94.36.829.9; 94A.036.000807; 94A.036.000815], one is an Oval II type [94.36.829.1], and one is an Oval III type [94.36.829.2]. All these handles are less than 75% complete and made of silver.

There are two handle fragments in the 8IR00000 group [94A.036.000831.0001; 94.36.829.7] that have Fiddle handle terminals and both have stamps. The clearest stamp, on both examples, is a Mexico City tax mark. The other two stamps, again visible on both handles, are a bird (hall-mark of quality) and the letters “OSA--EZ” [94.36.829.7], or “SA--Z” [94A.036.000831.0001]. The latter stamp indicates the name of the assayer who certified the piece, and the hall-mark is a “mark identifying the hall, or assay office, where silver was taken for assay, but now applied to any standard or tax mark on precious metals other than the maker’s mark” (Truman 1999:197). Images of these stamps can be seen in Appendix C.

Four handles [94.36.738.1; 94A.036.000817.0001; 94.36.829.4; 94.36.829.5] in group 8IR00000 are preserved at the proximal end (nearest to the working end) and have easily discernable rattail attachments. The most complete of these pieces, 94A.036.000817.0001, has fragments of the working end attached and is most likely a spoon, though that distinction has not officially been made.

The final handle in this group, 94A.036.000843.0001, is a silver handle with a Figurine terminal. There is an anthropomorphic figure with an ornate headpiece at the very end, with its

arms curved, one pointing to the head and one to the waist. Below this section (towards the working end) is an animalistic figure that resembles a monkey face. The rest of the handle is very dainty, with ornately crisscrossed threads.

TABLE 3. 1715 Fleet -- Site 8IR00000 Artifact Distribution

BAR Catalog Number	Type	Percent Complete	Material	Overall Length	Handle Width	Length of Working End	Width of Working End	Tine Count	Weight
94A.036.000821.001	Spoon	25%	Silver/marine debris	60mm	--	60mm	40mm	--	--
94.36.814.2	Fork	50%	Unknown/marine debris	118.4mm	7.6mm	51.9mm	3.6mm	4	3.8oz
94.36.824.1-3	Fork	25%	Silver	114.2mm	3.8mm	36.5mm	3.4mm	4	0.6oz
94.36.823.1	Fork	95%	Silver	147.59mm	3.36mm	37.25mm	3.44mm	4	0.8oz
94.36.813.1-3	Fork	25%	Silver	99.47mm	6.5mm	39.8mm	2.95mm	4	0.2oz
94.36.819.1	Fork	25-50%	Silver	81.2mm	4.6mm	32.2mm	2.4mm	4	0.5oz
94.36.644.1	Fork	25%	Silver	80mm	3.5mm	10.8mm	2.4mm	4	0.5oz
94.36.822.1	Handle	25%	Silver	24.13mm	3.86mm	--	--	--	.08oz
94.36.831.1	Handle	25%	Silver	42.4mm	9mm	--	--	--	0.5
94.36.843.1	Handle	50%	Silver	93.45mm	9.55mm	--	--	--	0.6oz
94.36.807.1	Handle	75%	Silver	91.5mm	5.48mm	--	--	--	0.5oz
94.36.815.1	Handle	50%	Silver	62.82mm	4.6mm	--	--	--	0.2oz
94.36.817.1	Handle	75%	Silver	96.85mm	4.85mm	--	--	--	0.3oz
94.36.818.1	Handle	25%	Silver	42.3mm	4.57mm	--	--	--	0.1oz
94.36.820.1	Handle	25%	Silver	49.63mm	3.8mm	--	--	--	0.2oz
94.36.829.1	Handle	50%	Silver	76.75mm	4.5mm	--	--	--	0.2oz
94.36.829.2	Handle	75%	Silver	99.82mm	5.95mm	--	--	--	0.5oz
94.36.829.3	Handle	25%	Silver	35.27mm	7.89mm	--	--	--	0.1oz
94.36.829.4	Handle	25%	Silver	62.44mm	3.12mm	--	--	--	0.2oz
94.36.829.5	Handle	50%	Silver	76.88mm	5.37mm	--	--	--	0.3oz
94.36.829.6	Handle	25%	Silver	21.75mm	3.95mm	--	--	--	0.1oz
94.36.829.7	Handle	25%	Silver	36.83mm	13.45mm	--	--	--	0.4oz
94.36.829.8	Handle	25%	Silver	43.67mm	5.45mm	--	--	--	0.1oz
94.36.829.9	Handle	25%	Silver	42.69mm	4.32mm	--	--	--	0.2oz
94.36.738.1	Handle	75%	Silver	62.7mm	4.75mm	--	--	--	0.1oz

BAR Catalog Number	Type	Percent Complete	Material	Overall Length	Handle Width	Length of Working End	Width of Working End	Tine Count	Weight
94.36.738.2	Handle	25-50%	Silver	55.35mm	3.85mm	--	--	--	0.1oz
94.36.839.1	Handle	95%	Unknown/marine debris	116.72mm	0.9mm	--	--	--	1.1oz

#### 4.7.2 8IR00019 (Corrigan's Wreck)

Site 8IR00019 has five forks, five spoons, and seven handles. In this group, only two of the spoons are complete [02.156.2.1; 72.21.53.1]. Four forks [93A.641.000135.0001-2; 93A.641.000146.0001; 94A.022.008918.0001; 94A.022.008919.0001] and three spoons [08.329.1.1; 15A.019.076549.0001; 93A.641.000136.0001] are 95% complete. Four of the handles [93A.641.000112.0001; 93A.641.000113.0001; 93A.641.000114.0001; 93A.641.000115.0001] are 75% complete, and the rest of the artifacts in this group [06A.152.7.1; 72A.015.000266.0001] are 50% complete or less. All the handles, four of the forks, and all the spoons are made of silver. One fork [93A.641.000135.0001-2] is made of gold. The artifact distribution for items in the 8IR00019 site group are shown in Table 4.

The only gold fork in this artifact group [93A.641.000135.0001-2] has a square-based working end and a Figurine handle type. Much of the gilt on the handle has disappeared but the base metal underneath retains the S-shaped arm positioning which makes the figurine distinguishable on this piece. Between the figurine and the working end of this fork is a twisted section common in this typology.

Two of the silver forks in this group [72A.015.000266.0001; 93A.641.000146.0001] have square-based working ends, and two [94A.022.008918.0001; 94A.022.008919.0001] have round-based working ends. The two square-based forks share a decorative tulip just below the working end. One of these forks [72A.015.000266.0001] has three stamps on the base of the

working end: a Mexico City tax mark, a bird (hall-mark of quality), and the letters “GOSA.”

Both round-based forks are a part of the Oval II typology.

Of the five spoons in artifact group 8IR00019 three [02A.156.000002.0001; 15A.019.076549.0001; 72A.021.000053.0001] have medial ridges on the anterior, distal end of the terminal, but only one [72A.021.000053.0001] has the Fiddle shaped terminal that is most common with the medial ridge. The spoon with the Fiddle terminal [72A.021.000053.0001] also has three stamps on the inner side of the spoon bowl: a Mexico City tax mark, a bird (hall-mark of quality), and the letters “OSA” above “EZ.” Artifact 15A.019.076549.0001 has an oval shaped terminal with a medial ridge and one stamp, a Mexico City tax mark, as well as an uncommonly wide (1.5cm) rattail attachment on the back of the preserved portion of the spoon bowl. Artifact 02A.156.000002.0001 has a more bulbous oval end to its terminal and a rattail attachment on the posterior of the spoon bowl. The final two spoons of artifact group 8IR00019 [08.329.1.1; 93A.641.000136.0001] both have Twisted handles, but the nature of the twist is different in each. Artifact 08.329.1.1 has a wider, or looser, twist in its handle that is present throughout the entirety of the piece, and has a rattail attachment to its spoon bowl. Artifact 93A.641.000136.0001 also has a rattail attachment to its spoon bowl, but the twisted section of the handle is only on the distal-most half and is a much smaller, tighter twist.

Of the seven handles in artifact group 8IR00019, one [06A.152.7.1] is 25% complete and has a terminal shape that falls in the typology of Trefid I. Four handles [93A.641.000112.0001; 93A.641.000113.0001; 93A.641.000114.0001; 93A.641.000115.0001] are all part of the Twisted typology. They are all very large in comparison to the rest of the artifacts analyzed in this study in length (over 90mm), diameter (over 9mm), and weight (over 5.5oz). All four of these handles also have a stamp or engraved design on the butt of the terminal, in varying degrees of

preservation and clarity. The clearest of these [93A.641.000112.0001] resembles a heraldic symbol and can be seen in Appendix H. The final two handles [72.21.46.1; 07.203.21.1] are both made of bone. Artifact 07.203.21.1 is in two pieces which match each other like two sides of the same original item. Each side has a number of holes in it that might indicate that they would have originally been part of a knife with a tang, that was connected to the two decorative pieces of bone. Artifact 72.21.46.1 is a round, nearly complete handle with a separate piece forming the butt of the handle. It is hollow and has some discoloration in one area as well as a long crack down one side.

TABLE 4. 1715 Fleet -- Site 8IR00019 Artifact Distribution

BAR Catalog Number	Type	Percent Complete	Material	Overall Length	Handle Width	Length of Working End	Width of Working End	Tine Count	Weight
72A.015.000266.0001	Fork	25%	Silver	65mm	4.5mm	26mm	3.1mm	4	0.4oz
93A.641.000146.0001	Fork	95%	Silver	130.06mm	3.4mm	25.65mm	2.8mm	4	0.7oz
94A.022.008919.0001	Fork	95%	Silver	109.3mm	3.7mm	--	2mm	4	0.4oz
93A.641.000135.0001	Fork	95%	Gold	137.6mm	5.9mm	24.2mm	3.5mm	4	0.8oz
94A.022.008918.0001	Fork	95%	Silver	122.25mm	4.6mm	8.6mm	2.7mm	4	0.5oz
02A.156.000002.0001	Spoon	100%	Silver	144.65mm	7.9mm	28.2mm	25.6mm	--	1.6oz
72A.021.000053.0001	Spoon	100%	Silver	148.25mm	5.75mm	59.9mm	39.1mm	--	1oz
08.329.1.1	Spoon	95%	Silver	168mm	4.95mm	62mm	33.8mm	--	0.9oz
15A.019.076549.0001	Spoon	95%	Silver	144.65mm	7.9mm	28.2mm	25.6mm	--	1.6oz
93A.641.000136.0001	Spoon	95%	Silver	126.4mm	3.4mm	--	--	--	0.4oz
06A.152.7.1	Handle	25%	Silver	27.7mm	5.3mm	--	--	--	0.08oz
93A.641.000112.0001	Handle	75%	Silver	98mm	11mm	--	--	--	6.1oz
93A.641.000113.0001	Handle	75%	Silver	91.2mm	11.5mm	--	--	--	6oz
93A.641.000114.0001	Handle	75%	Silver	96.15mm	9.36mm	--	--	--	5.6oz
93A.641.000115.0001	Handle	75%	Silver	97.26mm	9.5mm	--	--	--	5.6oz
07.203.21.1	Handle	75%	Bone	81.31mm	16.73mm	--	--	--	0.59oz
72.21.46.1	Handle	75%	Bone	78.72mm	17.31mm	--	--	--	0.83oz



#### 4.7.3 8IR00023 (Green Cabin Wreck)

The site 8IR00023 group contains 11 forks, 9 spoons, 17 handles, and 1 knife. Five of the forks and two of the spoons are complete. One handle, one spoon, one knife, and two forks are 95% complete. Eight handles, two forks, and two spoons are 75% complete. The remaining eight handles, two forks, and four spoons are 50% complete or less. All the forks, twelve of the handles, and six of the spoons are made of silver. Four handles are made of bone or ivory. The remaining handle and three spoons are made of an unidentified material, while the knife is made of iron. The artifact catalog numbers associated with the 8IR00023 group are shown, with their respective completion percentages, measurements, and materials, in Table 5.

The five complete forks in artifact group 8IR00023 all have square-based working ends. Three of the complete forks [06A.151.000008.0001; 72A.015.000235.0001; 93A.671.000135.0001] have terminal ends that fall into the Oval I type. One of the complete forks [72A.015.000236.0001] is a part of the Trefid I type and has a stamp, at the distal end, of the letters “TVRA” in a perfect rectangle. The final complete fork [93A.671.000164.0001] is very small in comparison to the others and has a terminal end that fits in the Twisted typology, though the twisted section is relatively small.

One of the forks that is 95% complete [72A.015.000265.0001-3] has a Trefid I type handle terminal and a square-based working end. The second nearly complete fork [72A.015.000778.0001] still has some corrosion, but is clearly made of silver, has a rounded-base working end, and an Oval I type handle terminal. Two forks [06.151.2.1; 72A.015.000297.0001] in artifact group 8IR00023 are 75% complete. Artifact 72A.015.000297.0001 is broken at the root of its tines, has a square-based working end, and is a part of the Oval I typology. Artifact 06.151.2.1 is broken in the middle of its handle and at the

root of three of its tines, the fourth is still attached. This fork has a square-based working end and has three stamps: Mexico City tax mark and a bird (hall-mark of quality) on one side, and the letters "MASCA" on the opposite side. The final two forks are quite fragmentary. Fork 72A.015.000300.0001 is broken in the middle of its handle and again near the working end, all four of its tines are broken as well, though two remain with the rest of the artifact. This fork has a square-based working end and no extant terminal. The final fork, 72A.015.000315.0001 has a square-based working end; it is broken in the middle of its handle and all four tines are broken at the root.

There are nine spoons in the 8IR00023 site artifact group. Two are 100% complete [93.671.141.1; 93.671.109.1] and both are made of silver. Artifact 93.671.141.1 is in one piece, it has an elongated spoon bowl, a Fiddle-shaped terminal, and three partial stamps on the fiddle section. One stamp is clearly the Mexico City tax mark, the other two are too fragmentary to be identified. Artifact 93.671.109.1 is broken across the spoon bowl, which is also elongated, and it has a Dog-Nosed shaped terminal. Spoon 72A.015.000296.0001 is 95% complete; its spoon bowl is fragmented, and has a handle terminal in the Oval I typology. Two of the artifacts in this group [72A.015.000308.0001; 72A.15.241.1-2] are 75% complete; both spoon bowls are missing but a clear rattail attachment and bowl fragments are preserved. The 72A.015.000308.0001 spoon has a handle terminal that is part of the Oval I typology. The 72A.15.241.1-2 has a Floral terminal type handle.

The remaining four spoon samples in the 8IR00023 site group are 25% complete or less. Artifacts 06.151.12.1 and 04A.119.000002.0001 have complete spoon bowls with attachment points and are both made of silver. Artifact 72A.015.000242.0001 has a preserved attachment point with a partial spoon bowl. While the last spoon sample, 72A.015.000318.0001, has no

preserved attachment point, all the other spoons in this group have rattail attachments to the spoon bowls.

There are seventeen handle artifacts in the 8IR00023 site group. Two of the handles [01A.100.000002.0001; 72A.015.000317.0001] are made of silver, and are a part of the Floral terminal typology. Six handles [72A.015.000779.0001; 72A.015.000245.0001-A; 93A.671.000132.0001; 72A.15.241.1-2; 72A.015.000323.0001; 72A.015.000267.0001] fall into the 75% complete range and are all made of silver. Two of those handles [72A.015.000323.0001; 72A.015.000267.0001] are nearly identical in form: hollow with clear soldering lines running the length of the handle, a bulbous terminal, and a small knob at the very end. Four handles [72A.015.000245.0001-B; 72A.015.000319.0001; 72A.015.000320.0001; 02A.155.000006.0001] share the Spade I typology, all are made of silver. Artifacts 72A.015.000779.0001 and 72A.015.000307.0001 are a part of the Spade II typology. One handle in this group [93A.671.000132.0001] is a part of the Figurine typology. The four bone handles [72.15.01.708A-B; 72.15.01.708C; 72.15.31, 72.15.269.1] have similar Oval II type terminals, although two of them [72.15.01.708C; 72.15.269.1] are noticeably more flattened. All four are hollow, suggesting they would have encased the tang portion of the utensil of which they were originally a part. The last handle [72A.015.000251.0004] is a part of the Fiddle typology and has two partial stamps: the Mexico City tax mark and the letters “GOSA,” above a partial “LE.”

The final artifact in the 8IR00023 site group is an iron knife [93.671.6517.1]. While the knife has deteriorated in several spots, the original form is clear. The knife is complete from tip to butt and likely would have had a casing of some kind (wood, leather, bone, etc.) around the tang. The length of this artifact, over one foot long, slightly more than a third of a meter,

indicates that it was most likely a knife used for preparing or cooking food as it is consistent with the dimensions of a modern chef's knife.

TABLE 5. 1715 Fleet -- Site 8IR00023 Artifact Distribution

BAR Catalog Number	Type	Percent Complete	Material	Overall Length	Handle Width	Length of Working End	Width of Working End	Tine Count	Weight
72A.15.242.1	Spoon	25%	Silver	55mm	5mm	38mm	30mm	--	--
72A.15.318.1	Spoon	25%	Silver	39mm	--	39mm	32.5mm	--	--
93.671.141.1	Spoon	100%	Silver	188mm	6mm	71mm	37mm	--	1.9oz
93.671.109.1	Spoon	100%	Silver	195mm	8mm	76mm	37mm	--	2.1oz
72.15.296.1	Spoon	95%	Unknown	141.6mm	4mm	44.7mm	40mm	--	0.8oz
72.15.308.1	Spoon	75%	Unknown	118.25mm	4.5mm	--	--	--	0.5oz
04.119.2.1	Spoon	25%	Unknown	70mm	6.9mm	62mm	37.8mm	--	0.6
06.151.12.1	Spoon	25%	Silver	85.5mm	6.5mm	68.3mm	37mm	--	0.8oz
75.15.241.1	Spoon	75%	Silver	44mm	3mm	--	--	--	0.2oz
06.151.8.1	Fork	100%	Silver	151.4mm	5mm	33.4mm	3.4mm	4	1.1oz
06.151.2.1	Fork	75%	Silver	122.8mm	3.8mm	35.3mm	3mm	4	0.9oz
93.671.135.1-2	Fork	100%	Silver	150.5mm	5.25mm	31.6mm	3.2mm	4	1oz
72.15.235.1	Fork	100%	Silver	145.29mm	4.9mm	28.9mm	3.3mm	4	1oz
72.15.236.1	Fork	100%	Silver	157.34mm	6.8mm	33.7mm	2.6mm	4	0.8oz
72.15.778.1	Fork	95%	Silver	127mm	5.5mm	--	3.8mm	4	1oz
72.15.315.1	Fork	25%	Silver	47.46mm	4.7mm	--	3.1mm	4	0.3oz
72.15.297.1	Fork	75%	Silver	120mm	3.8mm	--	--	--	0.6oz
72.15.300.1	Fork	50%	Silver	97.4mm	4.6mm	24.8mm	2.9mm	4	0.4oz
72.15.265.1-3	Fork	95%	Silver	107.8mm	0.6mm	28.05mm	2.47mm	4	0.6oz
93.671.164.1	Fork	100%	Silver	46.2mm	2mm	7.4mm	1.4mm	4	0.08oz
72.15.317.1	Handle	50%	Silver	64.5mm	3.3mm	--	--	--	0.1oz
72.15.307.1	Handle	50%	Unknown	64.25mm	5mm	--	--	--	0.2oz
72.15.319.1	Handle	50%	Silver	64.5mm	3.5mm	--	--	--	0.3oz
72.15.779.1	Handle	75%	Silver	111.6mm	6mm	--	--	--	0.6oz
72.15.245.1-A	Handle	75%	Silver	97.3mm	5.2mm	--	--	--	0.4oz
72.15.245.1-B	Handle	25%	Silver	35.65mm	3.45mm	--	--	--	0.2oz
72.15.251.4	Handle	25%	Silver	49.75mm	5.25mm	--	--	--	0.6oz

BAR Catalog Number	Type	Percent Complete	Material	Overall Length	Handle Width	Length of Working End	Width of Working End	Tine Count	Weight
93.671.132.1	Handle	75%	Silver	89.6mm	4.8mm	--	--	--	0.7oz
02.155.6.1	Handle	25%	Silver	33.11mm	3.14mm	--	--	--	0.08oz
01.100.2.1	Handle	95%	Silver	112mm	4.83mm	--	--	--	0.3oz
72A.015.320.1	Handle	25%	Silver	29mm	6mm	--	--	--	--
72.15.01.708A-B	Handle	25%	Bone	76.8mm	14.32mm	--	--	--	0.66oz
72.15.01.708C	Handle	25%	Bone	76.7mm	17.8mm	--	--	--	0.8oz
72.15.31	Handle	25%	Bone	78.52mm	12.84mm	--	--	--	0.97oz
72.15.269.1	Handle	50%	Bone	87.37mm	15.46mm	--	--	--	1.19
72A.015.000323.0001	Handle	75%	Silver	105.46mm	20.9mm	--	--	--	3.35oz
72A.015.000267.0001	Handle	75%	Silver	105.61mm	20.67mm	--	--	--	3.28oz
93.671.6517.1	Knife	95%	Iron	378mm	10.09mm	275mm	46.39mm	--	6.64oz

#### 4.7.4 8IR00027 (Rio Mar Wreck)

The group of artifacts associated with 8IR00027 includes one fork, five spoons, and three handles. All the items in the 8IR00027 group are 50% complete or less. The fork, two handles, and three of the spoons are made of silver. The remaining handle and one spoon are made of copper. The last spoon is an unidentified metal. The artifact catalog numbers for those pieces in the 8IR00027 group are shown in Table 6.

The single fork [72A.018.000206.0001] in artifact group 8IR00027 is fragmented at the working end, with the base, three of the four tines, and a small portion of the handle preserved. This fork has a square base and a tulip-shaped decoration at the proximal of the handle. Originally this fork would have had four tines though only three remain.

Five artifacts [93.643.38.1; 72A.018.000219.0001; 72A.018.000174.0002; 72A.018.000174.0003; 72A.018.000217.0001] in the 8IR00027 group are identified as spoon remains. Three of these artifacts have only the spoon bowl, or a portion of the bowl, preserved. Artifact 93.643.38.1 is the only complete spoon bowl in this group. It is silver and has a small

portion of the rattail attachment remaining on the posterior of the spoon bowl. Artifact 72A.018.000219.0001 is the second-most complete spoon bowl in this group. It is broken near the bottom of the spoon bowl, near the attachment point. No attachment is preserved and the piece is made of copper. The third fragmentary spoon bowl is item 72A.018.000217.0001, which is made of silver and preserved only around the rattail attachment point, approximately 26mm across. The other two spoons in this artifact group [72A.018.000174.0002; 72A.018.000174.0003] are both silver and have part of both their spoon bowls and handles preserved. Artifact 72A.018.000174.0002 is the less complete of the two and has a rattail attachment. Artifact 72A.018.000174.0003 is the most complete spoon in artifact group 8IR00027, with a large portion of its handle, the rattail attachment, and a portion of the spoon bowl remaining. The terminal is not preserved and thus it was not placed in a handle typology.

There are three fragmentary handles in group 8IR00027 [72A.018.000168.0001; 72A.018.000168.0002; 72A.018.000263.0001]. One handle [72A.018.000263.0001] is a small copper handle fragment, less than 3.5cm in length. This handle fragment falls into the Oval II terminal typology. The other two handles are more substantial in both length and weight. Artifact 72A.018.000168.0001 is a hollow handle made of two pieces (top and bottom) soldered together along a central seam. There is a bulbous curve at the terminal with a small knob at the very end. This handle most closely matches the Oval II typology, but resembles the “pistol grip” style described by Hume (1969:182). The final handle [72A.018.000168.0002] is hexagonally shaped in the mid-section, with a series of three flattened, disc-like, layered knobs at either end. The handle is hollow, but there is no way to tell which end may have attached to the working end and which is the distal end. The similarity of the two ends suggests that this may have been the

middle of a larger piece, with two more pieces (one on each end) needed to complete the item; because of this, there is no terminal typology for this piece.

TABLE 6. 1715 Fleet -- Site 8IR00027 Artifact Distribution

BAR Catalog Number	Type	Percent Complete	Material	Overall Length	Handle Width	Length of Working End	Width of Working End	Tine Count	Weight
72A.018.000206.0001	Fork	25-50%	Silver	66.3mm	4mm	24mm	2.8mm	4	0.2oz
72A.018.000263.0001	Handle	25%	Copper	32.4mm	8.6mm	--	--	--	0.08oz
72A.018.000168.0001	Handle	50%	Silver	98.5mm	23.9mm	--	--	--	2.46oz
72A.018.000168.0002	Handle	50%	Silver	71.9mm	16.8mm	--	--	--	2.45oz
93.643.38.1	Spoon	25%	Silver	65mm	5.6mm	58mm	41.6mm	--	0.4oz
72A.018.000219.0001	Spoon	25%	Copper	50mm	--	50mm	38.7mm	--	0.3oz
72A.018.000174.0002	Spoon	25%	Silver	69mm	9mm	24mm	30mm	--	--
72A.018.000174.0003	Spoon	50%	Silver	106mm	6mm	66mm	18mm	--	--
72A.018.000217.0001	Spoon	25%	Silver	30mm	6mm	32mm	26mm	--	--

#### 4.7.5 8SL00017 (Douglass Beach Wreck)

The final site associated with the 1715 fleet, designated number 8SL00017, contains 13 forks, 10 spoons, 24 handles, and 1 toothpick. Five forks, the toothpick, and one spoon are complete. 32 of the artifacts in group 8SL00017 are 50% complete or less. All but one of the handles [N=23], all the forks [N=13], and four of the spoons in this group are made of silver. The remaining handle and six spoons are made of unidentified materials. The toothpick is made of bone or ivory. The artifact catalog numbers with their respective completion percentages and materials are shown in Table 7.

Five of the forks [93A.674.32.1; 93A.674.37.1; 93A.677.121.1; 93A.673.90.1-5; 72A.13.96.1] in artifact site group 8SL00017 are 100% complete. Two of the complete forks share the Trefid I terminal typology, but one of them [93A.673.90.1-5] has a round-based

working end while the other [93A.677.121.1] has a square-based working end. Another of the complete forks in this group [93A.674.37.1] has a square-based working end and a Trefid II type terminal. The fourth complete fork [93A.674.32.1] has a round-based working end and an Oval II type terminal. The final complete fork [72A.13.96.1] in artifact site group 8SL00017 has a square-based working end and a Spade I type terminal. This fork has three stamps on the base of the working end; a Mexico City tax mark, the letters “GOSA,” and a bird (hall-mark of quality). One of the incomplete forks [07.204.1.1] is 50% complete and has a Spade II terminal typology. Another 50% complete example [72A.013.000664.0001] is broken in roughly the middle of the handle and has a square-based working end. This fork also has three stamps: the Mexico City tax mark, bird (hall-mark of quality), and the letters “OSA.”

The fragmentary forks [72A.13.622.1; 05A.101.066496.0001; 72A.014.001560.0001; 72A.014.001359.0001; 72A.014.001493.0001; 72A.013.000700.0001] are all comprised of a partial working end and a fragmented handle. Only one of the fork fragments [72A.013.000700.0001] has a round-based working end, all the others have square-based working ends. Artifact 72A.13.622.1 has two visible stamps on the base of the working end: the Mexico City tax mark and a partial bird (hall-mark of quality). All the fragmentary forks have partial tines but none of them have a single complete tine. Four of these forks [05A.101.066496.0001; 72A.014.001359.0001; 72A.014.001493.0001; 72A.013.000700.0001] have clearly flattened handles, while the remaining two [72A.014.001560.0001; 72A.13.622.1] have rounded handles. There are no terminal typologies for any of these pieces as they are fragmentary and no terminals are preserved.

There is one complete spoon [93.673.65.1] in the 8SL00017 artifact group which is made of an unknown material, although it has a brassy finish and coloration. This spoon has a rattail



attachment to the nearly perfectly oval-shaped bowl and a Dog-Nose style terminal. The next most complete spoon [72A.014.001519.0001] is between 25% and 50% complete; it is unknown of what material this spoon was made, though there is still some calcium carbonate build-up on the bowl. The back of the spoon bowl is cleaner and shows a silver or pewter metal and a rattail attachment. The handle of spoon 72A.014.001519.0001 is broken approximately two centimeters from the attachment and there is no terminal end in the catalog that corresponds to the break in this piece. Artifact 94A.019.007997.0001 is a complete spoon bowl (save for a small hole in the middle of the bowl) of an unknown material, though it appears to be silver or pewter. There is no attachment point and the spoon is broken at the base of the spoon bowl, no remnants of a handle are associated with this artifact. This spoon bowl is very similar in shape to that of artifact 93.673.65.1, but of a very different material.

The remaining spoons [93A.677.000092.0001; 05A.101.065860.0001; 72.13.365.1-A-B-C; 72A.013.000625.0001; 72A.013.000627.0001] in this study are all less than 25% complete. Two of these pieces [93A.677.000092.0001; 05A.101.065860.0001] are made of silver, have rattail spoon bowl attachments, and are fragmented towards the tip of the bowl. Artifact group 72.13.365.1-A-B-C is a group of spoon bowl fragments that share the same catalog number in the BAR records, but have been denoted as separate items in this study. All three of these fragments are made of an unknown metal and still have attached marine debris to their surfaces. Two of the pieces in this group [72.13.365.1-A; 72.13.365.1-B] are stuck together, one nested within the other, and, while the measurements of all three pieces match (within a tenth of a millimeter), they were each measured and recorded separately. The third spoon fragment in this group [72.13.365.1-C] is separated from the other two and is in two pieces, but the two pieces fit together. Spoon 72A.013.000625.0001 is a fragmentary spoon with a faint rattail attachment

visible on the back of the bowl. It is made of an unknown metal and is still encrusted with marine debris. The final spoon artifact in this group [72A.013.000627.0001] is the most fragmentary. It is made of silver and has a clearly preserved rattail attachment point, but most of the spoon bowl including all of the outer edges is missing.

The disarticulated handles that are a part of the artifact site group 8SL00017 represent a range of sizes and terminal typologies. One of these handles [72A.014.001583.0001] is a part of the Figurine typology. It shares the humanoid figure with the “S” positioned arms that the previously mentioned Figurine handles have. One handle [93A.617.000157.0001] is representative of the Trefid I typology and two handles [72A.014.001489.0001; 82A.170.008527.0001] are a part of the Trefid II typology. One handle [93A.673.000081.0001] has a Floral terminal typology. There is one example of the Oval I type [72A.013.000372.0001] and three examples of Oval III [05A.101.065866.0001; 72A.014.001567.0001; 72A.014.001576.0001]. Two handles in this artifact site group [93A.677.000103.0001; 93A.635.000544.0001] have Twisted terminals. Five handles are a part of the Spade I typology [93A.677.000095.0001; 72A.013.000699.0001; 72A.014.001492.0001-A, 93A.635.000545.0001; 03A.102.000003.0001] and five are a part of the Spade II typology [72.13.364.1-5]. The five handles that have Spade II terminals all share the same stamp or carving in the middle of the spade at the distal end: “B°,”. The three remaining handles in the 8SL00017 site artifact group [72A.014.001492.0001-B; 07.204.2.1; 72A.013.000056.0001] are broken below the working end and above the terminal, so neither the cutlery type nor the terminal style can be concluded.

The final artifact in the 8SL00017 site group is the bone or ivory toothpick [93.673.103.1]. The toothpick is complete and has a decorative figurine on the distal, terminal

end. This figurine appears to be male, with a beard and a crown on his head. Below the head is a body seemingly clad in robes with no appendages visible.

TABLE 7. 1715 Fleet -- Site 8SL00017 Artifact Distribution

BAR Catalog Number	Type	Percent Complete	Material	Overall Length	Handle Width	Length of Working End	Width of Working End	Tine Count	Weight
72A.13.625.1	Spoon	25%	Silver	61mm	4mm	57mm	37mm	--	--
72A.13.627.1	Spoon	25%	Silver	48mm	5mm	39mm	20mm	--	--
94.19.7997.1	Spoon	25%	Unknown	66mm	10.5mm	62mm	38.9mm	--	0.7oz
93.677.92.1	Spoon	25%	Silver	58mm	4.2mm	55.8mm	4.30	--	0.3oz
93.673.65.1	Spoon	100%	Unknown	178mm	7mm	66mm	39.5mm	--	1.4oz
72.14.1519.1	Spoon	25-50%	Unknown	89mm	5.75mm	62mm	40.25mm	--	0.9oz
72.13.365.1-A	Spoon	25%	Unknown/marine debris	52mm	--	52mm	32mm	--	--
72.13.365.1-B	Spoon	25%	Unknown/marine debris	52mm	--	52mm	32mm	--	--
72.13.365.1-C	Spoon	25%	Unknown/marine debris	55mm	--	55mm	32mm	--	--
05.101.65860.1	Spoon	25%	Silver	57mm	9.75mm	51.7mm	40.4mm	--	0.4oz
07.204.1.1	Fork	50%	Silver	90.37mm	3.14mm	6.8mm	2.3mm	4	0.2oz
93.674.32.1	Fork	100%	Silver	170.6mm	5.8mm	38.1mm	3.1mm	4	1.5oz
93.674.37.1	Fork	100%	Silver	155mm	7.9mm	22mm	3.2mm	4	1.3oz
72.14.1560.1	Fork	25%	Silver	65.8mm	4.9mm	28.6mm	3.1mm	4	0.5oz
72.13.664.1	Fork	50%	Silver	107.3mm	3.6mm	31.4mm	3.6mm	4	0.7oz
72.13.700.1	Fork	25%	Silver	53mm	7mm	13.25mm	3.5mm	4	0.6oz
72.14.1359.1	Fork	25-50%	Silver	64.25mm	6.8mm	13.75mm	3.6mm	4	0.4oz
72.14.1493.1	Fork	25%	Silver	74.6mm	8mm	36.9mm	3.6mm	4	0.3oz
05.101.66496.1	Fork	25-50%	Silver	68.9mm	8.05mm	12.95mm	3.3mm	4	0.5oz
93.677.121.1	Fork	100%	Silver	143mm	7.7mm	33.15mm	3.4mm	4	1oz
72.13.622.1	Fork	25%	Silver	44.1mm	3.1mm	--	2.3mm	4	0.2oz
93.673.90.1-5	Fork	100%	Silver	166.96mm	6mm	41.3mm	3.1mm	4	1.1oz
72.13.96.1	Fork	100%	Silver	150mm	4.5mm	42.45mm	3.9mm	4	1.3oz
93.673.103.1	Toothpick	100%	Bone/ivory	100.9mm	11mm	63mm	2.73mm	--	0.15oz
03.102.3.1	Handle	25%	Silver	42.65mm	3.9mm	--	--	--	0.1oz
72.14.1567.1	Handle	75%	Unknown	78mm	5mm	--	--	--	0.1oz
07.204.2.1	Handle	25%	Silver	38.8mm	4.2mm	--	--	--	0.1oz
72.13.56.1	Handle	25-50%	Silver	48.68mm	3.25mm	--	--	--	0.2oz
72.14.1576.1	Handle	75%	Silver	99.6mm	3.25mm	--	--	--	0.4oz
72.14.1583.1	Handle	50%	Silver	62.5mm	6.95mm	--	--	--	0.4oz
72.14.1489.1	Handle	75%	Silver	111.94mm	6.5mm	--	--	--	0.7oz
72.13.364.1	Handle	25-50%	Silver	63.9mm	5.9mm	--	--	--	0.3oz
72.13.364.2	Handle	50%	Silver	82.4mm	5.6mm	--	--	--	0.5oz

BAR Catalog Number	Type	Percent Complete	Material	Overall Length	Handle Width	Length of Working End	Width of Working End	Tine Count	Weight
72.13.364.3	Handle	50%	Silver	81.6mm	5.58mm	--	--	--	0.4oz
72.13.364.4	Handle	75%	Silver	108.65mm	6mm	--	--	--	0.5oz
72.13.364.5	Handle	75%	Silver	107.8mm	6.1mm	--	--	--	0.5oz
72.14.1492.1-A	Handle	25%	Silver	45.3mm	3.58mm	--	--	--	0.1oz
72.14.1492.1-B	Handle	25%	Silver	48.8mm	3.1mm	--	--	--	0.1oz
93.617.157.1	Handle	50%	Silver	62.75mm	6.99mm	--	--	--	0.2oz
82.170.8527.1	Handle	50%	Silver	62.2mm	8.25mm	--	--	--	0.4oz
93.635.545.1	Handle	25%	Silver	48.2mm	4.6mm	--	--	--	0.2oz
93.635.544.1	Handle	25-50%	Silver	46.5mm	4.7mm	--	--	--	0.1oz
93.677.103.1	Handle	75%	Silver	102.16mm	2.9mm	--	--	--	0.2oz
93.677.95.1	Handle	75%	Silver	100.75mm	3.3mm	--	--	--	0.3oz
93.673.81.1	Handle	25%	Silver	48.15mm	5.06mm	--	--	--	0.2oz
05.101.65866.1	Handle	25%	Silver	34.5mm	3.8mm	--	--	--	0.08oz
72.13.699.1	Handle	75%	Silver	86.3mm	4.8mm	--	--	--	0.5oz
72A.13.372.1	Handle	25%	Silver	45mm	6mm	--	--	--	--

#### *4.8 1715 Collection Decorative Features*

The artifacts in the 1715 fleet collection have varying degrees of completion, as has already been illustrated, which means that there is a wide range of attributes that have been preserved. These attributes are demonstrated in Table 8. The most common working end attachment for utensils in the 1715 fleet collection is the rattail [N=35], followed by a single-mold [N=15], a single mold with a tulip design [N=8], a soldered attachment [N=7], and a single mold with a rattail decoration [N=5]. Fifty-six of the items in the 1715 collection do not have an attachment point preserved.

The fork bases in the 1715 fleet artifact collection are either rounded or squared, but this does not appear to have had any impact on which attachment method they had. Twenty-seven of the forks in this collection had square-based working ends. Eight of the forks in this collection had round-based working ends. All the forks in the collection are represented by these numbers, none were recorded that did not have a working end base form.

All the variations of handle types were represented in the 1715 fleet artifact collection. The predominant design was the Spade I [N=16] followed by the Oval II [N=15] and Oval I [N=13]. The Twisted type and the Spade II each had nine artifacts as a part of their typology. The Trefid I type included seven examples, and Floral and Fiddle, each with five. The Figurine type had six examples and the Oval III typology had four examples. The Trefid II category had only three examples of that form. Finally, the Dog-Nosed handle terminal is the most unique, with only two artifacts representing the type.

TABLE 8. 1715 Fleet Collection -- Artifact Decorative Features

BAR Catalog Number	Type	Material	Working End Attachment	Fork Base Shape	Stamp(s)	Handle Type
94A.036.000839.0001	Handle	Unknown/marine debris	Rattail	--	--	Trefid I
94A.036.000843.0001	Handle	Silver	--	--	--	Figurine
94.36.829.3	Handle	Silver	--	--	--	Spade II
94A.036.000818.0001	Handle	Silver	--	--	--	Spade I
94A.036.000820.0001	Handle	Silver	--	--	--	Spade I
94A.036.000822.0001	Handle	Silver	--	--	--	Spade I
94.36.738.2	Handle	Silver	--	--	--	Oval I
94.36.829.9	Handle	Silver	--	--	--	Oval I
94A.036.000807.0001	Handle	Silver	--	--	--	Oval I
94A.036.000815.0001	Handle	Silver	--	--	--	Oval I
94A.036.000831.0001	Handle	Silver	--	--	Mexico City tax mark; bird (hall-mark); "SA-Z"	Fiddle
94.36.829.7	Handle	Silver	--	--	Mexico City tax mark; bird (hall-mark); "OSA-EZ"	Fiddle
94.36.829.2	Handle	Silver	--	--	--	Oval III
94.36.829.1	Handle	Silver	--	--	--	Oval II
94.36.829.4	Handle	Silver	Rattail	--	--	--
94.36.829.5	Handle	Silver	Rattail	--	--	--
94A.036.000817.0001	Handle	Silver	Rattail	--	--	--
94.36.738.1	Handle	Silver	Rattail	--	--	--
94.36.829.8	Handle	Silver	--	--	--	--
94A.36.829.6	Handle	Silver	--	--	--	--
94A.036.000823.0001	Fork	Silver	Single mold	Square	--	Spade I
94A.036.000819.0001	Fork	Silver	Single mold	Square	--	--
94A.036.000813.0001	Fork	Silver	Single mold	Round	--	--
94A.036.000644.0001	Fork	Silver	Rattail	Square	Fragmentary	--

BAR Catalog Number	Type	Material	Working End Attachment	Fork Base Shape	Stamp(s)	Handle Type
94.36.814.2	Fork	Unknown/marine debris	--	Square	--	Spade I
94.36.824.1-3	Fork	Silver	Single mold/tulip	Square	--	--
94A.036.000821.0001	Spoon	Unknown/marine debris	--	--	--	--
06A.152.7.1	Handle	Silver	--	--	--	Trefid I
94A.022.008919.0001	Fork	Silver	Single mold	Round	--	Oval II
94A.022.008918.0001	Fork	Silver	Single mold	Round	--	Oval II
93A.641.000146.0001	Fork	Silver	Single mold/tulip	Square	--	Spade I
72A.015.000266.0001	Fork	Silver	Single mold/tulip	Square	Mexico City tax mark; bird (hall-mark); "GOSA"	--
93A.641.000112.0001	Handle	Silver	--	--	Shield/coat of arms	Twisted
93A.641.000113.0001	Handle	Silver	--	--	Shield/coat of arms	Twisted
93A.641.000114.0001	Handle	Silver	--	--	Shield/coat of arms	Twisted
93A.641.000115.0001	Handle	Silver	--	--	Shield/coat of arms	Twisted
93A.641.000135.0001-2	Fork	Gold	Single mold	Square	--	Figurine
15A.019.076549.0001	Spoon	Silver	Molded Rattail	--	partial Mexico City tax mark	Oval II
02A.156.00002.0001	Spoon	Silver	Rattail	--	--	Oval II
72A.021.000053.0001	Spoon	Silver	Molded Rattail	--	Mexico City tax mark; bird (hall-mark); "OSA-EZ"	Fiddle
08.329.1.1	Spoon	Silver	Rattail	--	--	Twisted
93A.641.000136.0001	Spoon	Silver	Rattail	--	--	Twisted
72A.015.000296.0001	Spoon	Unknown	Rattail	--	--	Oval I
93A.671.000109.0001	Spoon	Silver	Molded Rattail	--	--	Dog-nose
06.151.12.1	Spoon	Silver	Rattail	--	--	--
93.671.141.1	Spoon	Silver	Molded Rattail	--	Mexico City tax mark; bird (hall-mark)	Fiddle
04A.119.000002.0001	Spoon	Silver	Rattail	--	--	--
72A.015.000242.0001	Spoon	Silver	Rattail	--	--	--
72A.015.000318.0001	Spoon	Silver	--	--	--	--
72A.015.308.0001	Spoon	Unknown	Rattail	--	--	Oval I
72A.15.241.1	Spoon	Silver	Rattail	--	--	Floral
72A.015.000265.0001-3	Fork	Silver	Single mold	Square	--	Trefid I
93A.671.000135.0001	Fork	Silver	Rattail	Square	--	Oval I

BAR Catalog Number	Type	Material	Working End Attachment	Fork Base Shape	Stamp(s)	Handle Type
72A.015.000235.0001	Fork	Silver	Rattail	Square	--	Oval I
06A.151.000008.0001	Fork	Silver	Rattail	Square	--	Oval I
72A.015.000297.0001	Fork	Silver	Rattail	Square	--	Oval I
72A.015.000300.0001	Fork	Silver	Rattail	Square	--	--
06.151.2.1	Fork	Silver	Rattail	Square	Mexico City tax; bird (hall-mark); "MASCA"	--
72A.015.000778.0001	Fork	Silver	Single mold	Round	--	Oval II
72A.015.000315.0001	Fork	Silver	Rattail	Square	--	--
72A.015.000236.0001	Fork	Silver	Soldered	Square	"TVRA"	Trefid I
93A.671.000164.0001	Fork	Silver	Single mold	Square	--	Twisted
72A.015.000307.0001	Handle	Unknown	--	--	--	Spade II
72A.015.000245.0001-A	Handle	Silver	--	--	--	Floral
72A.015.000245.0001-B	Handle	Silver	--	--	--	Spade I
72A.015.000317.0001	Handle	Silver	--	--	--	Floral
01A.100.000002.0001	Handle	Silver	Rattail	--	--	Floral
93A.671.000132.0001	Handle	Silver	--	--	--	Figurine
72A.015.000779.0001	Handle	Silver	--	--	--	Spade II
72A.015.000319.0001	Handle	Silver	--	--	--	Spade I
72A.015.000320.0001	Handle	Silver	--	--	--	Spade I
02A.155.000006.0001	Handle	Silver	--	--	--	Spade I
72A.015.000251.0004	Handle	Silver	--	--	Mexico City tax mark; "GOSA"	Fiddle
93.643.38.1	Spoon	Silver	Rattail	--	--	--
72A.018.000219.0001	Spoon	Copper	--	--	--	--
72A.018.000174.0002	Spoon	Silver	Rattail	--	--	--
72A.018.000217.0001	Spoon	Silver	Rattail	--	--	--
72A.018.000174.0003	Spoon	Silver	--	--	--	--
72A.018.000206.0001	Fork	Silver	Single mold/tulip	Square	--	--
72A.018.000263.0001	Handle	Copper	--	--	--	Oval II
93.673.65.1	Spoon	Unknown	Molded rattail	--	--	Dog-nose
94A.019.007997.0001	Spoon	Unknown	Single mold	--	--	--
93A.677.000092.0001	Spoon	Silver	Rattail	--	--	--
72A.014.001519.0001	Spoon	Unknown	Rattail	--	--	--
05A.101.065860.0001	Spoon	Silver	Rattail	--	--	--
72.13.365.1-A	Spoon	Unknown/marine debris	Rattail	--	--	--
72.13.365.1-B	Spoon	Unknown/marine debris	--	--	--	--
72.13.365.1-C	Spoon	Unknown/marine debris	Rattail	--	--	--
72A.013.000627.0001	Spoon	Unknown	Rattail	--	--	--
72A.013.000625.0001	Spoon	Unknown/marine debris	Rattail	--	--	--
93.677.121.1	Fork	Silver	Soldered	Square	--	Trefid I
93.673.90.1	Fork	Silver	Single mold	Round	--	Trefid I
93A.674.000037.0001	Fork	Silver	Soldered	Square	--	Trefid II

BAR Catalog Number	Type	Material	Working End Attachment	Fork Base Shape	Stamp(s)	Handle Type
93A.674.000032.0001	Fork	Silver	Single mold	Round	--	Oval II
72A.013.000096.0001	Fork	Silver	Single mold/tulip	Square	Mexico City tax mark; bird (hall-mark); "GOSA"	Spade I
07.204.1.1	Fork	Silver	Single mold	Round	--	Spade II
72A.13.622.1	Fork	Silver	Single mold/tulip	Square	Mexico City tax mark; bird (hall-mark)	--
05A.101.066496.0001	Fork	Silver	Soldered	Square	--	--
72A.014.001560.0001	Fork	Silver	Single mold	Square	--	--
72A.014.001359.0001	Fork	Silver	Soldered	Square	--	--
72A.014.001493.0001	Fork	Silver	Soldered	Square	--	--
72A.013.000664.0001	Fork	Silver	Single mold/tulip	Square	Mexico City tax mark; bird (hall-mark); "OSA"	--
72A.013.000700.0001	Fork	Silver	Single mold	Round	--	--
72A.014.001583.0001	Handle	Silver	--	--	--	Figurine
72A.014.001489.0001	Handle	Silver	--	--	--	Trefid II
82A.170.008527.0001	Handle	Silver	--	--	--	Trefid II
93A.617.000157.0001	Handle	Silver	--	--	--	Trefid I
93A.673.000081.0001	Handle	Silver	--	--	--	Floral
72A.014.001567.0001	Handle	Unknown	--	--	--	Oval III
72A.013.000372.0001	Handle	Silver	--	--	--	Oval I
05A.101.065866.0001	Handle	Silver	--	--	--	Oval III
72A.014.001576.0001	Handle	Silver	--	--	--	Oval III
93A.677.000103.0001	Handle	Silver	Rattail	--	--	Twisted
93A.635.000544.0001	Handle	Silver	--	--	--	Twisted
93A.677.000095.0001	Handle	Silver	Rattail	--	--	Spade I
72A.013.000699.0001	Handle	Silver	Single mold/tulip	--	--	Spade I
72A.014.001492.0001-A	Handle	Silver	--	--	--	Spade I
93A.635.000545.0001	Handle	Silver	--	--	--	Spade I
03A.102.000003.0001	Handle	Silver	--	--	--	Spade I
72.13.364.1	Handle	Silver	--	--	"B <sup>o</sup> "	Spade II
72.13.364.2	Handle	Silver	--	--	"B <sup>o</sup> "	Spade II
72.13.364.3	Handle	Silver	--	--	"B <sup>o</sup> "	Spade II
72.13.364.4	Handle	Silver	--	--	"B <sup>o</sup> "	Spade II
72.13.364.5	Handle	Silver	--	--	"B <sup>o</sup> "	Spade II
07.204.2.1	Handle	Silver	Single mold/tulip	--	--	--
72A.013.000056.0001	Handle	Silver	--	--	--	--
72A.014.001492.0001-B	Handle	Silver	Soldered	--	--	--
72.21.46.1	Handle	Bone	--	--	--	Oval II
07.203.21.1	Handle	Bone	--	--	--	Oval II
72.15.01.708A-B	Handle	Bone	--	--	--	Oval II
72.15.01.708C	Handle	Bone	--	--	--	Oval II



BAR Catalog Number	Type	Material	Working End Attachment	Fork Base Shape	Stamp(s)	Handle Type
72.15.31	Handle	Bone	--	--	--	Oval II
72.15.269.1	Handle	Bone	--	--	--	Oval II
72A.015.000323.0001	Handle	Silver	--	--	--	Oval II
72A.015.000267.0001	Handle	Silver	--	--	--	Oval II
93.671.6517.1	Knife	Iron	--	--	--	--
72.18.168.1	Handle	Silver	--	--	--	Oval II
72A.018.000168.0002	Handle	Silver	--	--	--	--
93.673.103.1	Toothpick	Bone	--	--	--	Figurine

#### 4.9 1733 Artifact Collection

The 1733 artifact collection, is comprised of 34 individual pieces. As with the 1715 collection, the division of these artifacts into site number groups was done to remain consistent with BAR cataloguing. For comparisons made later in this chapter and in Chapter Five, the artifacts from each fleet will be treated as collections and not divided between the individual site groups. Images of individual artifacts from the 1733 collection can be found in Appendix D.

##### 4.9.1 8MO101 (*San Jose*)

Site group 8MO101 had the most pieces in this study of the 1733 fleet [N=27]: one fork [93.605.1753], three spoons [93A.605.104; 93.605.398.1; 93.605.1933.1], four knives [93A.605.37.1; 93.672.19.1; 93.613.02; 93.613.135.1], seven handles [93A.605.38; 93A.605.105; 93A.605.945; 93.605.571; 93.605.574; 93A.605.1542; 93A.605.1543] and twelve cocoa frothers. Of the pieces in the 8MO101 group, two spoons [93.605.1933.1; 93.605.398.1] and one knife [93.613.135.1] are complete. Artifact measurements, completion percentages, and materials are shown in Table 9.

Four of the handles [93.605.571; 93.605.574; 93A.605.1542; 93A.605.1543] in the 8MO101 site group are made of wood. The wooden handles all have similarly oval shaped handles although two of them [93.605.574; 93A.605.1543] are noticeably more bulbous at the

terminal. Three handles [93A.605.38; 93A.605.105; 93A.605.945] are unidentified in terms of material and are all broken about halfway up the handle from the terminal. All seven handles are a part of the Oval II typology.

The complete knife [93.613.135.1] has a carved wooden handle, a brass bolster, and an iron blade. The second knife sample [93.613.02] is a calcium-carbonate cast of an iron knife blade that has since deteriorated. One of the items noted as a knife [93A.605.37.1] is only preserved as far as the handle and is made of brass. This knife handle has a series of holes that suggest there may have been a casing of some sort around it and that the remaining portion is the tang. The last knife [93.672.19.1] is fragmentary and only included here because of its citation in the BAR catalog as a knife fragment. It appears to be a copper alloy of some kind, indicated by the exterior coloring. This piece is very small and it is doubted that it is indeed a knife.

One of the spoons [93.605.398.1] is made of pewter and is in one complete, continuous piece. This spoon has two clear marks and one unclear mark. On the back, middle section of the handle are two stamps, an "H" and an "X". Also on the back of this spoon, on the bowl, there is a small section of original surface preserved which shows a series of large, linear marks that have not been discerned. This spoon also has a perfectly drilled hole through the handle near the terminal. The other complete spoon [93.605.1933.1] is made of silver and the handle is broken approximately three centimeters below the attachment point. Both spoons have relatively perfectly shaped oval bowls. The final spoon [93A.605.104] has a complete bowl and is broken below the attachment point. This spoon is unknown in terms of its material. Unlike the two complete spoons, the bowl of this item is much more pointed at the tip and much smaller in dimensions.

The single fork in this group [93.605.1753] is made of silver and has three tines. Two tines are broken and missing, while the third is broken in half but both pieces remain with the sample. The fork is broken below the base approximately one centimeter from the attachment.

The final artifact type in the 8MO101 site group is the cocoa frother. Twelve pieces comprise this artifact group [94.014.1; 93.605.12; 93.605.13; 93.605.14; 93.605.15; 93.605.16.1; 93.605.17.1; 93.605.19.1-A; 93.605.19.1-B; 93.605.356; 93.605.544-A; 93.605.544-B]. All of these artifacts are made of wood and all are classified as 25% complete as only the whisk end of the cocoa frother is preserved, none have a stem or handle. The majority of the pieces in this group are a single item, though fragmentary, but two [93.605.19.1; 93.605.544] are comprised of two separate pieces. Artifact 93.605.544-B is a piece of wood resembling a handle of some sort, but it does not readily match with 93.605.544-A, the frother whisk. Artifacts 93A.605.14 and 93A.605.12 are the most fragmentary, respectively, with only a portion of their cocoa whisk preserved. Artifacts 93A.605.13 and 93A.605.15 are small, but adequately preserved. Five of the cocoa frothers [93A.605.356; 93.014.1; 93.605.16.1; 93A.605.17.1; 93A.605.19.1] have nearly their entire whisk preserved, despite the fact that 93A.605.19.1 is in two pieces. Artifact 93A.605.19.1 is broken long-ways down the middle of the whisk, not from side to side. The two pieces that are a part of this artifact fit together to form one whisk, which is the largest of any other in this study at approximately 60mm, while others average closer to 33mm.

TABLE 9. 1733 Fleet -- Site 8MO101 Artifact Distribution

BAR Catalog Number	Type	Percent Complete	Material	Overall Length	Handle Width	Length of Working End	Width of Working End	Tine Count	Weight
93A.605.38	Handle	25%	Unknown	82.7mm	6.6mm	--	--	--	0.7oz
93A.605.105	Handle	25%	Unknown	75.5mm	7.2mm	--	--	--	0.7oz
93A.605.945	Handle	25%	Unknown	86.4mm	16.8mm	--	--	--	0.59oz
93.613.135.1	Knife	100%	Wood/silver	237mm	18.7mm	137mm	22mm	--	2.5oz
93.613.02	Knife	25%	CaCO3/Iron	154mm	8.6mm	146mm	25.8mm	--	3.24oz
93A.605.37.1	Knife	25%	Brass	76mm	8.5mm	--	--	--	0.4oz

BAR Catalog Number	Type	Percent Complete	Material	Overall Length	Handle Width	Length of Working End	Width of Working End	Tine Count	Weight
93.672.19.1	Knife	25%	Copper	74.8mm	9.8mm	--	--	--	0.28oz
93.605.398.1	Spoon	100%	Pewter	195mm	20.8mm	76mm	41.4mm	--	2.2oz
93.605.1933.1	Spoon	100%	Silver	213.5mm	18mm	71mm	38.6mm	--	2.1oz
93A.605.104	Spoon	25%	Unknown	65.3mm	5.6mm	53.3mm	27.9mm	--	0.41oz
93.605.1753	Fork	25%	Silver	42.8mm	6.2mm	30.2mm	4.2mm	3	0.3oz
93.605.571	Handle	25%	Wood	99.28mm	16.27mm	--	--	--	1.68oz
93.605.574	Handle	25%	Wood	88.33mm	16.09mm	--	--	--	0.84oz
93A.605.1542	Handle	25%	Wood	83.07mm	13.57mm	--	--	--	0.74oz
93A.605.1543	Handle	25%	Wood	87.66mm	14.42mm	--	--	--	0.88oz
93.605.544A	Cocoa Frother	25%	Wood	40.7mm	--	--	38.6mm	--	0.3oz
93.605.544B	Cocoa Frother	25%	Wood	76.75mm	--	--	17.95mm	--	0.23oz
93A.605.12	Cocoa Frother	25%	Wood	33.6mm	--	--	32.6mm	--	0.27oz
93A.605.13	Cocoa Frother	25%	Wood	44.52mm	--	--	37.78mm	--	0.47oz
93A.605.14	Cocoa Frother	25%	Wood	43.6mm	--	--	33.24mm	--	0.33oz
93A.605.15	Cocoa Frother	25%	Wood	45.95mm	--	--	21.77mm	--	0.75oz
93A.605.16	Cocoa Frother	25%	Wood	34.2mm	--	--	39.35mm	--	1.04oz
93A.605.17	Cocoa Frother	25%	Wood	33.4mm	--	--	35.3mm	--	0.99oz
93A.605.19.1A	Cocoa Frother	25%	Wood	38.72mm	--	--	46.79mm	--	1.1oz
93A.605.19.1B	Cocoa Frother	25%	Wood	38.74mm	--	--	55.72mm	--	1.24oz
94.014.01	Cocoa Frother	25%	Wood	33.04mm	--	--	45mm	--	1.03oz
93A.605.356	Cocoa Frother	25%	Wood	33.97mm	--	--	35.72mm	--	0.87oz

#### 4.9.2 8MO133 (*El Lerrri*)

8MO133 had a total of four items: two forks [75.08.270; 75.8.420], one spoon [75.08.274], and one handle [75.8.404.1], all of which are less than 50% complete. The only silver item was one of the forks [75.8.420] which is broken off at the base of the working end, above the attachment point, and has all four of the tines broken (two separately, and two

connected to each other) above the base. The other fork fragment [75.08.270] is broken at the base and all four of the tines have broken at the root. The fragmentary handle [75.8.404.1] was identified as pewter and is highly degraded. The spoon [75.08.274] is also very degraded and is classified as an unknown material. Artifact measurements for the pieces in this site group are shown, along with materials and completion percentages, in Table 10.

TABLE 10. 1733 Fleet -- Site 8MO133 Artifact Distribution

BAR Catalog Number	Type	Percent Complete	Material	Overall Length	Handle Width	Length of Working End	Width of Working End	Tine Count	Weight
75.08.270	Fork	25%	Unknown	1.9mm	--	1.9mm	2.1mm	4	0.2oz
75.8.420	Fork	25%	Silver	61mm	--	51.5mm	4mm	4	0.65oz
75.08.274	Spoon	25%	Unknown	97.7mm	9mm	60mm	45.8mm	--	0.95oz
75.8.404.1	Handle	25%	Pewter	55.5mm	21.1mm	--	--	--	0.4oz

#### 4.9.3 8MO104 (*San Pedro*), 8MO131 (*Angustias*) and 8MO146 (*Capitana*)

Finally, three of the 1733 artifact groups contain only one item and all three are knife fragments. All three of these knives' measurements, materials, and completion percentages are provided in Table 11. Site 8MO104 has a single knife in its cutlery group, which is between 25% and 50% complete. The knife from this site is noted as catalog number 75.07.115 and is a fragmented blade that has been completely cleaned and conserved by the BAR. It is unknown the exact material from which this piece was made.

Site number 8MO131's single artifact is a wooden knife fragment that is 50% complete. This artifact, catalog number 93.614.071, is comprised of the distal end of a knife handle and has an array of holes throughout that indicate the original presence of rivets as attachment points. There are striations on one side of the handle which, in combination with the holes, indicates that this was only a portion of a handle possibly the tang or encasement.

8MO146 is represented in this study by one knife which is 25% complete. This knife is designated as BAR catalog number 93.616.75.1 and is a cast of the original blade, which has since deteriorated.

TABLE 11. 1733 Fleet -- Sites 8MO104, 8MO131, and 8MO146 Artifact Distributions

BAR Catalog Number	Type	Percent Complete	Material	Overall Length	Average Width	Length of Working End	Width of Working End	Tine Count	Weight
93.616.75.1	Knife	25%	CaCO3/Iron	450mm	150mm	--	--	--	6oz
75.07.115	Knife	25-50%	Unknown	129.2mm	24.7mm	--	--	--	2oz
93.614.071	Knife	50%	Wood	101.43mm	24.39mm	--	--	--	.37oz

#### 4.10 1733 Collection Decorative Features

Few of the artifacts in the 1733 collection have survived in their entirety, or with crucial points preserved, but all are shown in Table 12. Two of the spoons with surviving attachment points [75.8.274; 93A.605.104] indicated a single mold was used in production. One spoon [93.605.1933.1] shares the molded appearance, but also has a rattail design on the back of the bowl. One spoon [93.605.398.1] appears to have had its bowl soldered to the handle. All three of the forks in the 1733 artifact collection have round-based working ends. The predominant handle type is the Oval II typology [N=9]. There are no clear stamps on the pieces in this collection, though carving appears in two examples [93.605.398.1; 93.613.135.1] but is not consistent between the two.

TABLE 12. 1733 Fleet Collection -- Artifact Decorative Features

BAR Catalog Number	Type	Material	Working End Attachment	Fork Base Shape	Stamp(s)	Handle Type
93.616.75.1	Knife	CaCO3/Iron	--	--	--	--
75.8.420	Fork	Silver	--	Rounded	--	--
75.8.270	Fork	Unknown	--	Rounded	--	--
75.8.404.1	Handle	Pewter	--	--	--	Fiddle
75.8.274	Spoon	Unknown	Single mold	--	--	--
93A.605.105	Handle	Unknown	--	--	--	Oval II
93A.605.945	Handle	Unknown	--	--	--	Oval II
93A.605.38	Handle	Unknown	--	--	--	Oval II
93.605.1753	Fork	Silver	--	Rounded	--	--

BAR Catalog Number	Type	Material	Working End Attachment	Fork Base Shape	Stamp(s)	Handle Type
93A.605.37.1	Knife	Brass	--	--	--	Oval II?
93.613.02	Knife	CaCO3/Iron	--	--	--	--
93.672.19.1	Knife	Copper	--	--	--	Spade II
93A.605.104	Spoon	Unknown	Single mold	--	--	--
93.605.398.1	Spoon	Pewter	Soldered	--	"X" on back, terminal	Oval II
93.605.1933.1	Spoon	Silver	Molded rattail	--	--	Spade II
75.07.115	Knife	Unknown	--	--	--	--
93.613.135.1	Knife	Wood/silver	--	--	Carved wood handle	--
93.605.571	Handle	Wood	--	--	--	Oval II
93.605.574	Handle	Wood	--	--	--	Oval II
93A.605.1542	Handle	Wood	--	--	--	Oval II
93A.605.1543	Handle	Wood	--	--	--	Oval II
93A.605.12	Cocoa Frother	Wood	--	--	--	--
93A.605.13	Cocoa Frother	Wood	--	--	--	--
93A.605.14	Cocoa Frother	Wood	--	--	--	--
93A.605.15	Cocoa Frother	Wood	--	--	--	--
93A.605.16	Cocoa Frother	Wood	--	--	--	--
93A.605.17	Cocoa Frother	Wood	--	--	--	--
93A.605.19	Cocoa Frother	Wood	--	--	--	--
94.014.01	Cocoa Frother	Wood	--	--	--	--
93A.605.356	Cocoa Frother	Wood	--	--	--	--
93.605.544	Cocoa Frother	Wood	--	--	--	--

#### 4.11 Handle Design Typologies

The artifact collection in this study has yielded a variety of handle designs, twelve types have been recognized and compared with contemporaneous pieces and studies. The distribution of handle designs between the two fleets is shown in Table 13, and the crosstabulation of cutlery types from the 1715 and 1733 collections by handle designs are shown in Tables 14 and 15, respectively. Due to different degrees of completion, there were 114 artifacts (85% of the entire

collection) with a handle terminal sufficiently preserved to designate the item as a member of a typology.

#### 4.11.1 Fiddle

The Fiddle-type end is well represented by six examples in the total artifact study. Five examples come from the 1715 fleet and one comes from the 1733 collection. All the Fiddle-type artifacts from the 1715 collection also have Mexico City tax marks, bird hall-marks, and some variation of the “GOSALEZ” assayer stamp. Only two of these pieces are part of complete artifacts and both are spoons. Both spoons with Fiddle shaped handle terminals were manufactured by being cast in a mold or hammered, and have a “vestigial” rattail design that was not utilized in the actual attachment of the spoon bowl to the handle. The Fiddle-type handle in the 1733 collection is a broken handle and was made of pewter.

#### 4.11.2 Spade

There are two variations of spade-shaped terminal handle designs included in the artifact collection. Cross-section shape differentiates these forms: Spade I is diamond shaped and Spade II is flat. The 1715 fleet collection includes 16 examples of the Spade I type and 9 examples of the Spade II type. Most of the Spade I examples [N=12] were broken handles and the rest were forks [N=4]. All four of the Spade I handled forks had square-based working ends. Three of the four appear to have been cast in single molds, the fourth is still encrusted with marine debris and thus a manufacture method could not be ascertained. The Spade II examples were primarily broken handles [N=8] and the remaining one was a fork. Five of the Spade II type handles had matching stamps (“B°,”) on the terminal. The Spade II handled fork was most likely cast in a single mold with a round-based working end.



The 1733 fleet collection included only two examples of a Spade II handle, one was a knife and one was a spoon. The Spade II handled spoon was cast in a mold or hammered with a “vestigial” rattail design. The knife with the Spade II terminal was very small and little information could be gathered from it.

#### 4.11.3 Oval

There are three similarly shaped terminal designs that share an oval theme. The first is a slanted oval with a spherical handle shape, the second is a flat handle with a rounded terminal, and the third is flat on the underside of the handle, but has a raised, oval-ended section running the length of the middle of the topside. The 1715 fleet collection includes 13 Oval I-type handles, 15 Oval II handles, and 4 Oval III examples. The Oval I-type artifacts include four forks, four spoons, and five broken handles. All four forks with the Oval I type terminal were made with a rattail attachment and had square-based working ends. Nine of the spoons with the Oval I terminal were manufactured with rattail attachments and one was cast in a mold or hammered with a “vestigial” rattail design. The Oval II type pieces include four forks and eleven broken handles. The forks with the Oval II terminal had round-based working ends but were made by being cast in a mold. The Oval III type pieces are all broken handles.

The 1733 fleet collection includes only Oval II terminal types [N=9]. Seven of those examples were broken handles, one was a knife, and one was a spoon. The 1733 spoon with an Oval II type handle was one of the few items made of pewter and the handle was soldered to the working end. The knife was made of brass and was manufactured by being cast in a mold.

#### 4.11.4 Floral

There are five total examples that show a Floral (flower or leaf) motif and all are from the 1715 fleet. Four were broken handles and one was a spoon. The Floral handled spoon had a rattail attachment to the working end. The Floral design of the spoon resembles a type of flower-bud, a rose or a tulip. The three handles with Floral-type terminals all resemble leaves.

#### 4.11.5 Figurine

There are five examples of cutlery with a Figurine shown on the terminal end of the handle. All five of these pieces are a part of the 1715 collection. Three of the Figurine terminals were broken handles and one was a fork. Four of the Figurine terminals have the same humanoid image with arms in an “S” position; one over the head and one at the waist. The Figurine type fork is the only item in this study that was made of gold; it was also made in a mold, and had a square-based working end. The final Figurine type artifact is the toothpick, also the only one of its kind in this study.

#### 4.11.6 Twisted

The twisted handle terminal has nine examples in total, all are from the 1715 artifact collection. Two examples of Twisted terminals were spoons, and one fork. Both the spoons had rattail attachments connecting the working end to the handle. The fork was made in a single piece from a mold, and had a square-based working end. The remaining six Twisted items were handles. Four of the Twisted handles had matching stamps or marks on the butt of the handle that resemble a coat of arms and can be seen in Appendix H.

#### 4.11.7 Trefid

There are two variations of a Trefid designed handle terminal which are differentiated by the curvature (Trefid I) [N=7] or pointed nature (Trefid II) [N=3] of the outside tips. All the Trefid type handles were a part of the 1715 fleet collection. Four of the Trefid I type artifacts were forks and the remaining three were handle fragments. Two of the forks with a Trefid I type handle terminal also had a soldered attachment between the square-based working end and the handle. The other two Trefid I-type forks were made by casting in a mold; one had a round-based working end and the other had a square-base. One of the Trefid II artifacts was a fork and the other two were broken handles. The Trefid II terminal fork had a square-based working end and a soldered attachment point.

#### 4.11.8 Dog-Nose

Finally, there are two pieces with Dog-Nosed terminals, both from the 1715 collection. Both the Dog-Nosed terminal artifacts are spoons. Both these spoons were made by being cast in a mold or hammered and include the “vestigial” rattail design.

TABLE 13. Crosstabulation of Handle Typology by Fleet

Fleet	Fiddle	Spade I	Spade II	Oval I	Oval II	Oval III	Floral	Figurine	Twisted	Trefid I	Trefid II	Dog-Nose
1715	5	16	9	13	15	4	5	5	9	7	3	2
1733	1	--	2	--	9	--	--	--	--	--	--	--
Total	6	16	11	13	26	4	5	5	9	7	3	2

TABLE 14. Crosstabulation of Handle Typology by Cutlery Types in the 1715 Collection

Cutlery Type	Fiddle	Spade I	Spade II	Oval I	Oval II	Oval III	Floral	Figurine	Twisted	Trefid I	Trefid II	Dog-Nose
Fork	--	4	1	4	4	--	--	1	1	4	1	--
Spoon	2	--	--	4	--	--	1	--	2	--	--	2
Knife	--	--	--	--	--	--	--	--	--	--	--	--
Handle	3	12	8	5	11	4	4	3	6	3	2	--
Toothpick	--	--	--	--	--	--	--	1	--	--	--	--
Total	5	16	9	13	15	4	5	5	9	7	3	2

TABLE 15. Crosstabulation of Handle Typology by Cutlery Types in the 1733 Collection

Cutlery Type	Fiddle	Spade I	Spade II	Oval I	Oval II	Oval III	Floral	Figurine	Twisted	Trefid I	Trefid II	Dog-Nose
Fork	--	--	--	--	--	--	--	--	--	--	--	--
Spoon	--	--	1	--	1	--	--	--	--	--	--	--
Knife	--	--	1	--	1	--	--	--	--	--	--	--
Handle	1	--	--	--	7	--	--	--	--	--	--	--
Total	1	0	2	0	9	0	0	0	0	0	0	0

#### 4.12 Stamps

Approximately 13% [N=22] of the artifacts in the assemblage studied have stamps of some kind. Stamp location varies between the working end, the medial section of the handle, and the handle terminal. Mint, tax, and assayer marks are visible on several pieces, giving a corroboration of time and place of origin for many of these items. The crosstabulation of stamp design and cutlery type in the 1715 fleet collection is shown in Table 16.

Twenty-three of the twenty-four artifacts with stamps are included in the 1715 fleet collection. Eleven of these pieces have Mexico City tax marks, their distribution is as follows: five forks, three spoons, and three handles. Nine of the items with Mexico City marks have the same bird hall-mark stamp; their distribution is as follows: five forks, two spoons, and two handles. Seven of the pieces with both Mexico City and bird stamps have some portion of the “GOSALEZ” assayer stamp. The distribution of artifacts with a portion of the “GOSALEZ” stamp is as follows: three forks, one spoon, three handles. One of the forks with a Mexico City tax mark and bird hall-mark stamp has the letters “MASCA,” which, likely belongs to Francisco Mascareñas, a Mexican master silversmith noted by Anderson (1941:384) as having taken his silversmith’s examination in July of 1725. There are five silver handle fragments that all have matching “B<sup>o</sup>,” stamps on one side of their terminals. As it was popular to carry one’s personal cutlery with them while travelling in the eighteenth century (Marsden 1985; Perez-Mallaina 1998; McNamara 2012), it is likely that the marks on the aforementioned pieces indicate the

owner’s name. It is also possible that the singular letters are makers’ marks, but no record of these specific marks has yet been found. Four handles stand out from the rest in this study due to their size and shape, as well as the stamp on the butt-end of each one. These four handles share (in varying degrees of preservation) a shield or coat of arms stamp, shown in Appendix H. While it has been compared to several colonial coats of arms, the image has not been identified as any particular heraldic symbol. The final stamp in the 1715 cutlery artifact collection is on a silver fork and contains the letters “TVRA.” The meaning of this stamp has not been found in any historical records thus far.

While several pieces from the 1715 collection have stamps, only one piece in the 1733 fleet collection has a stamp: a pewter spoon with the letter “X” on the back of the handle at the terminal end. There are many potential explanations for this stamp: it could be a mark of ownership, weight, or manufacture. This particular piece and its mark will be discussed in more detail in Chapter Five.

TABLE 16. Crosstabulation of Stamps and Cutlery Type in the 1715 Collection

<b>Cutlery Type</b>	<b>Mexico City (MC)</b>	<b>MC/bird</b>	<b>MC/bird/ GOSALEZ</b>	<b>“B°,”</b>	<b>Coat of Arms</b>	<b>TVRA</b>	<b>MASCA</b>
<b>Fork</b>	5	5	3	--	--	1	1
<b>Spoon</b>	3	2	1	--	--	--	--
<b>Knife</b>	--	--	--	--	--	--	--
<b>Handle</b>	3	2	3	5	4	--	--
<b>Total</b>	11	9	7	5	4	1	1

#### 4.13 Linear Breaks

Breaking a piece of cutlery in a straight line, with a tool such as pliers, is a potential method for trading solid metals in lieu of minted specie. There were 55 artifacts in the entire studied assemblage with linear breaks. The frequency of these breaks within the two fleets is

shown in Table 17. The 1715 fleet cutlery collection contained 51 pieces with linear breaks [37% of the collection]. Of the artifacts with linear breaks in the 1715 fleet collection, 6 were forks, 17 were spoons, and 28 were handles. Two of these items, a spoon and a broken handle (that did not match with one another), were copper; six of the pieces were made of an unidentified material, and the rest were silver.

The 1733 fleet, however, only contained four examples of artifacts with linear breaks. Three of these artifacts were handles and one was spoon. One of the handles was made of pewter and the remaining three artifacts were made of, yet, unidentified metals. The linear breaks of artifacts in this study appear intentional and not as it is unlikely that they would have resulted from natural causes during the wrecking process or from sea-bed shifting after the fact. Selected images of artifacts with linear breaks are shown below (Figures 6, 7, and 8) and photos of all artifacts with this trait are included in Appendix G.

TABLE 17. Crosstabulation of Cutlery Type with Linear Breaks by Fleet

<b>Fleet</b>	<b>Fork</b>	<b>Spoon</b>	<b>Knife</b>	<b>Handle</b>
<b>1715</b>	6	17	--	28
<b>1733</b>	--	1	--	3
<b>Total</b>	6	18	--	31



FIGURE 6. Artifact Number 94.36.829.7 – Linear Break



FIGURE 7. Artifact Number 72A.015.000318.0001 – Linear Break



FIGURE 8. Artifact Number 05A.101.065860.0001 – Linear Break

#### *4.14 Conclusion*

This chapter has discussed the different types of cutlery items analyzed in this study, the variety of materials, and degrees of completion. Each fleet's collection was recounted by listing each site group, according to the Florida BAR records, and the artifacts within those respective groups. The decorative features present in each collection were described as well as the different terminal typologies in this study. Stamps and linear breaks were also discussed and described in

terms of their design and quantities. Tables which correspond to each site group are given with their respective groups, and images of artifacts from each fleet can be found in their respective appendices.



## CHAPTER FIVE: INTERPRETATIONS

### *5.1 Introduction*

The previous chapters of this thesis have discussed the theoretical framework employed in this study, the historical background of both Spanish colonialism and the development of cutlery, and the artifacts of the 1715 and 1733 fleet collections, respectively. This chapter will incorporate information from all three of these areas to make interpretations about the artifacts in this study. The chapter will consist of comparisons between the two fleets, to contemporary archaeological and museum collections, and to contemporary artwork. The remainder of this chapter will consist of artifact biographies of fifteen items; ten from the 1715 fleet collection and five from the 1733 fleet collection. Finally, this chapter will interpret the artifacts presented in this thesis in relation to the various frontier models described earlier.

### *5.2 Comparison of 1715 and 1733 Collections*

Cutlery pieces from the 1715 and 1733 Spanish fleet collections analyzed in this project included forks, spoons, knives, cocoa frothers, broken handles, and a toothpick. Of the 173 pieces analyzed, 139 were attributed to the 1715 fleet and 34 were attributed to the 1733 fleet. Each fleet collection included forks, spoons, knives, and handles, but the 1715 fleet collection included a toothpick and the 1733 fleet collection included cocoa frothers. The overwhelming majority of the artifacts in this study were made of silver; 120 artifacts in the 1715 collection and 3 artifacts in the 1733 collection. Most of the 1733 artifacts, conversely, were made of wood [N=17], which may indicate contemporary salvage priorities in which shipwrecked merchants and crewmen would prefer to recover silver and gold items over wood. This may also be because shiny metals would have been easier for freediving crew members to see and differentiate rather

that wooden items that might blend in with the ship's timbers. Represented by only a few artifacts each were the other materials seen in these collections including pewter, gold, copper, and bone. Approximately 15% of the pieces in this study remain unidentified in terms of material composition. The fact that the two most common materials in these two collections were silver and wood is unsurprising given the accessibility of both resources within the Spanish colonies. The rarity of gold can be attributed to the preference of that metal for specie, jewelry, and other luxury items. The rarity of pewter is expected because it was more commonly used in the British territories, but may have shown up in the 1733 fleet collection due to the British origin of several of the 1733 ships.

There were 34 spoons in the overall collection, 30 in the 1715 fleet collection and 4 in the 1733 fleet collection. There were eight knives total, one in the 1715 fleet collection and seven in the 1733 fleet collection. Of the 39 forks in the total studied, the 1733 fleet had 3, all of which had round-based working ends. The 1715 fleet had 36 forks, 8 with round-based working ends, 27 square-based working ends, and one fork with the working end still obscured by marine debris. Each fleet collection also included several disarticulated handles; 71 in the 1715 collection and 8 in the 1733 collection. It is possible that fewer artifacts exist in the 1733 collection than the 1715 fleet collection because the former was more extensively salvaged by the Spanish immediately following the wrecking process and so there was less remaining on the shipwreck sites, even before modern treasure hunters began impacting the sites.

The two fleets share three handle terminal designs in common: Fiddle, Spade II, and Oval II. In addition to the fact that these three handle types are shared between the 1715 and 1733 fleets, they are the only handle types represented in the 1733 fleet. It is unsurprising that, having a larger quantity of artifacts in the collection, the 1715 fleet shows a larger diversity in the handle

terminal types. The three handle terminals shared by the 1715 and 1733 Spanish fleet collections are also quite common as far as eighteenth-century cutlery designs are concerned, which will be discussed in the next section. This can, again, be attributed to the fact that the Spanish salvage efforts regarding the 1733 fleet were far more successful than those of the 1715 fleet.

### *5.3 Comparison to Other Collections*

As an analysis of unprovenienced artifacts, this study relies heavily on comparisons with contemporaneous collections to help understand the form and function of the items in this project. Similar items from contemporaneous time periods and cultures may help speak to the meaning of these pieces which lack archaeological context. This section will focus upon archaeological and museum collections that share artifact types, as well as historical, political, and geographic context with the artifacts of the 1715 and 1733 Spanish fleet shipwrecks.

The Lighthouse Archaeological Maritime Program (LAMP) conducted a survey in 2009, and excavations in 2010 and 2011, of a site near St. Augustine, Florida, which has been dubbed the “Storm Wreck” (McNamara 2012). While the exact identity and date of the Storm Wreck are yet unknown, the unique styles of cutlery and other cooking and tablewares give general indications as to the nationality and era of this shipwreck (McNamara 2012). The spoons from the Storm Wreck share several consistencies with the artifacts of the 1715 and 1733 collections. While the Storm Wreck collection boasts several spoons (Figure 9), none of them have maker’s marks, though they include Fiddle and Dog-nose handle terminal designs, as well as rat-tail attachment points (McNamara 2012:38-39). One spoon in particular has a distinctive drop attachment, as opposed to the rat-tail, and “appears to have been cut, perhaps deliberately to shorten the spoon” (McNamara 2012:39). The variation in spoon designs in the Storm Wreck collection is attributed to several factors, according to McNamara (2012:39):

...they were acquired individually and reflects ownership by a variety of individuals. Each specimen bears individual markings of recognition and ownership such as bent or truncated handles, and scratched markings. During the 18th century, it was standard practice for travelers and sailors to carry their own dining utensils. The spoons were probably not stored with the ship's cooking and eating utensils, but with the persons who owned them, or in their personal storage spaces.



FIGURE 9. "Storm Wreck" spoons (Cox 2012:45).

While not a Spanish ship or a ship located in Spanish territory, the Dutch East Indiaman *Amsterdam* shares many artifact attributes with those in the 1715 and 1733 collections. Records indicate that *Amsterdam* was intentionally beached off Sussex in the British Isles during a storm in 1749 carrying over three hundred crew, military, and passengers, bound for Batavia, in the Dutch East Indies, now known as Indonesia (Marsden 1985:36-37). In the months following the wreck, the captain and crew salvaged as much as they could of the ship's cargo and their personal belongings, but the waterlogged ship quickly sank into the muddy seabed (Marsden 1985:64, 66). It was not long before the locals learned of the cargo of silver ingots still buried among the wreckage and mounted salvage missions of their own, eventually succeeding in the retrieval some of the silver (Marsden 1985:67). Attempts to locate the remainder of the "treasure" in the *Amsterdam* wreck occurred throughout the eighteenth, nineteenth, and twentieth centuries, recovering bit by bit the items from onboard the ill-fated ship (Marsden 1985:86-92).

The first archaeological excavations of the *Amsterdam* site commenced in 1969-1970 and 1984 after extensive planning and background research (Marsden 1985). Evidence of foodways onboard was illustrated by the recovery of many artifacts including glass bottles for wine and spirits, as well as glass cups, ceramic jugs and storage jars, cauldrons, and tankards (Marsden 1985:126-129, 132-133). The *Amsterdam* site also yielded a sizeable collection of cutlery artifacts including complete and fragmentary spoons and knife handles (Marsden 1985:138-139). The knife handles were made of wood, ivory, or horn and had bronze rings at the attachment points (Marsden 1985:138). The spoons from the *Amsterdam* collection vary in terms of size, shape, and method of manufacture but, remarkably, all of them have some type of marking, maker or owner, on either the spoon bowl or the handle (Marsden 1985:138). Due to surviving passenger lists, researchers have attributed a number of these markings to their individual owners

including the merchant-owner Andries van Bockom and his wife Pieterella Bockom Schook, second mate Jurriaan Bartels, gun captain Christoffel Jasper, and a seaman named Jan Aalders (Marsden 1985:138). The makers' marks also corresponded with known Dutch pewterers from various cities in Holland (Marsden 1985:138). Even though the *Amsterdam* site was pillaged for centuries, archaeologists subsequently conducted systematic investigations, recovered artifacts, and created accurate site maps of the shipwreck in the late twentieth century. The evidence that the shipwreck *Amsterdam* yielded has increased the knowledge base of mid-eighteenth century Dutch maritime life and trade and is an example of both a comparative study and a worthwhile investigation of a site that had been picked over by people looking for "treasure" for several centuries.

Many of the artifacts from the *Amsterdam* shipwreck are very similar to artifacts from the 1715 and 1733 collections (Figure 10). The wooden knife handles are consistent with handles in both Spanish fleet collections. While spoons from the *Amsterdam* collection are mainly pewter, and those from the Spanish collections are mainly silver, the designs, sizes, and attachment points are consistent between the three collections.

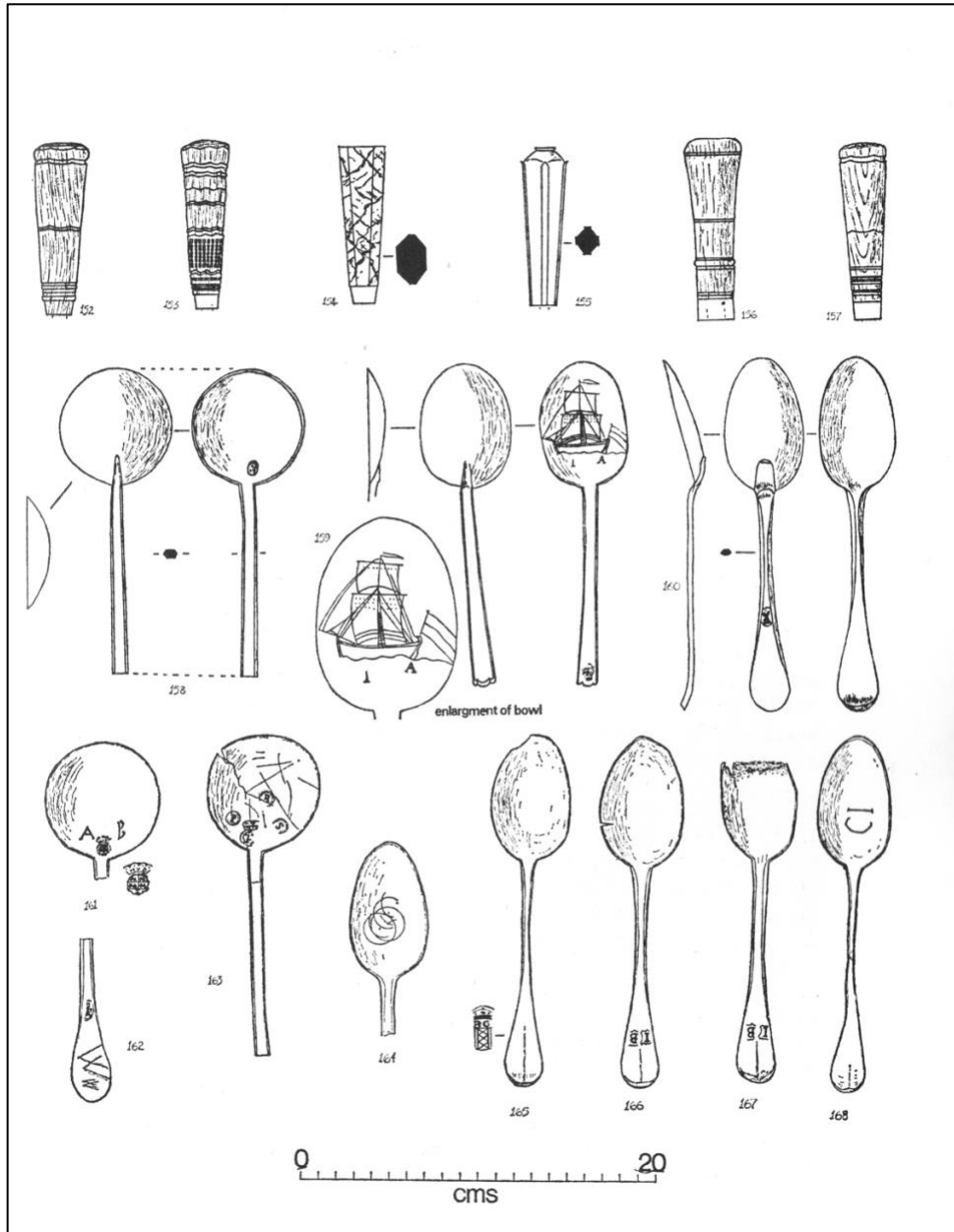


FIGURE 10. *Amsterdam* collection handles and spoons (Marsden 1985:139).

In 1758 the French privateer frigate *Machault* was launched and later converted to a supply ship for the Canadian colony (Sullivan 1986:11). Two years after being launched, *Machault* was included in a small French fleet that was intended to deliver supplies to forces in Canada during the French and Indian War (Sullivan 1986:7). A British squadron intercepted the flagship, *Machault*, along with the rest of the French fleet, at Restigouche, which resulted in the

resounding defeat of the French and the sinking of *Machault* (Sullivan 1986:7). Parks Canada excavated the *Machault* shipwreck uncovering a wide array of artifacts associated with trade, munitions, daily life, and personal belongings (Sullivan 1986:7).

The only cutlery remains reported in Catherine Sullivan's (1986:91) published collection of *Machault* artifacts were knife handles made of wood, bone, or horn. While Sullivan (1986:91) states that "nearly everyone in the 18<sup>th</sup> century carried his or her own personal knife for eating" she makes no mention of other cutlery types such as forks or spoons, and the only other mention of utensils in the *Machault* artifact collection were those used for cooking; a copper skimmer and an iron skewer (Sullivan 1986:57). Aside from the lack of variety in cutlery artifacts in the *Machault* collection, Sullivan's (1986) report is otherwise comprehensive and detailed, not only in terms of the artifacts recovered from the site, but the historical context of each artifact, its uses, method of manufacture, and the quantity of each type onboard, most of which indicated trade rather than military action.

The knife handles vary in material and design but several of the pieces are consistent with handles from the 1715 and 1733 Spanish fleet collections. Both the Spanish fleet collections and the *Machault* collection share similar materials (bone and wood) as well as designs (Figure 11). The placement of rivet holes on knife handle fragments are consistent between all three collections, indicating a standardized method for riveting knife handles and tangs together that extended through most of the eighteenth century.





FIGURE 11. *Machault* collection knife handles (Sullivan 1986:91).

The Boca Chica Channel Wreck, which sank sometime after 1772 (based on a coin found on the site), is of unknown origin, but presumed to be French, Spanish, or Cuban based on the remains (Naval Historical Center Underwater Archaeology Branch [NHCUAB] 2003:1-2). A large portion of the artifacts recovered from the Boca Chica Channel Wreck included cookware and cutlery. Artifacts included in this assemblage range from “fragments of a Spanish *El Morro* glazed earthenware cooking pot” (NHCUAB 2003:77) common in Spanish utilitarian settings, to a silver four-tined fork (98), and “one nearly complete Rouen style blue-on-white faience plate” (79). The entire site was not excavated and “no artifacts were recovered that could be defined as personal possessions, other than the coin... other areas of the wreck site might yield personal possessions which might be more indicative of ethnicity” (NHCUAB 2003:102). The four-tined fork in the Boca Chica Channel Wreck collection (NHCUAB 2003:154) shares several consistent

features with the forks in the 1715 collection. This fork is, as previously mentioned, four-tined, has a round-based working end and has an Oval II handle terminal (Figure 12). These similarities may indicate a common “parent culture” of the individuals aboard both the ship that became the Boca Chica Channel Wreck and the 1715 Tierra Firme Fleet ships.



FIGURE 12. Boca Chica Channel Wreck collection, silver fork (NHCUAB 2003:154).

In August of 1779, the privateer *Defence* sank in an inlet along the coast of Maine (Switzer 1983:43). One hundred and ninety-four years later, maritime archaeologists investigated the wreckage in the hopes of learning more about eighteenth century seafaring. Six years of field work, from 1975 to 1981, yielded a wealth of knowledge about the ship’s construction and wrecking process, as well as an extensive collection of eighteenth century artifacts (Switzer 1983:44-46). According to David C. Switzer (1983:46), “most prolific in terms of variety are those artifacts associated with provision storage, food preparation, and messing activities...17 pewter spoons with three distinct spatula and bowl shapes spanning styles from the early through mid eighteenth century.” Switzer’s team determined that the pewter spoons in the *Defence* collection must have been produced one of two ways; either poured into a mold or hammered into shape by a craftsman (Switzer 1983:46). In addition to the pewter spoons, the collection

includes wooden spoons, “one a fairly faithful copy of a pewter counterpart,” as well as a bone knife handle (Switzer 1983:46). Other galley artifacts included buckets, cookstoves, pans, mugs, teapots, and wine bottles (Switzer 1983:46-47). The spoons in the artifact collection of the *Defence* shipwreck are consistent with those seen in both the 1715 and 1733 Spanish fleet collections. The handle terminal shape, rattail attachment point, and spoon bowl shape are very similar (Figure 13), if not identical, based on their illustration and description given by Switzer (1983:46).

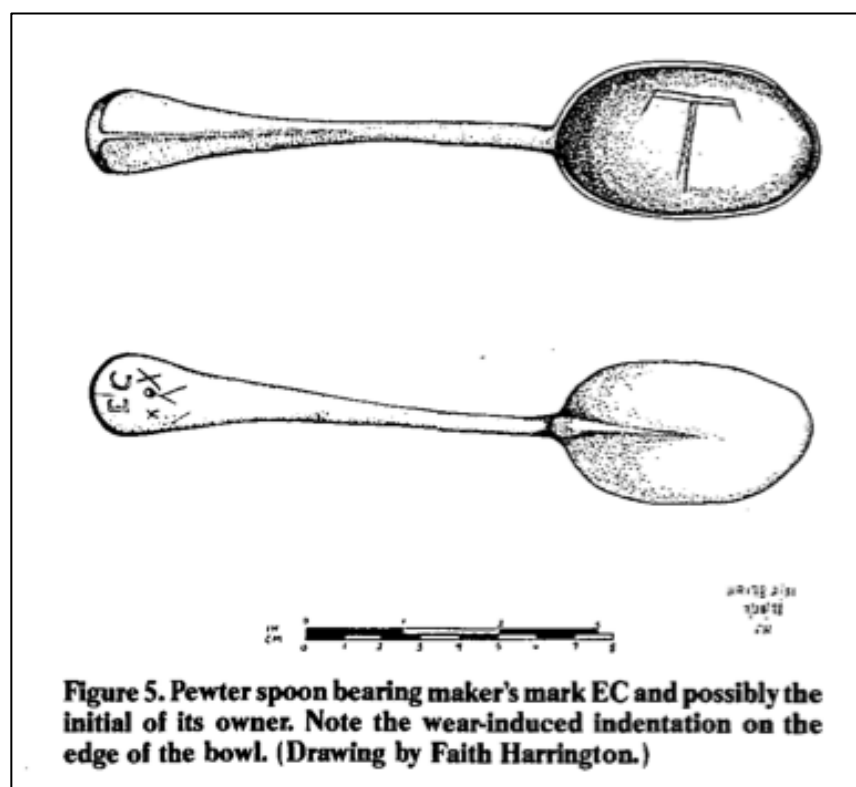


FIGURE 13. *Defence* collection spoon (Switzer 1983:46).

While not an archaeological site, or strictly an archaeological collection, the Museum of Fine Arts in Boston is home to a large collection of colonial American silver pieces catalogued in Kathryn C. Buhler's (1972) two volume collection. This collection spans from 1655 to 1825 and includes a variety of objects such as mugs, chafing dishes, platters, cutlery, teapots, and jewelry

(Buhler 1972). There are three primary handle terminal designs in Buhler's (1972) collection that are consistent in both form and time period with those in the 1715 and 1733 artifact collections: Dog-nose, Trefid, and Oval II. For the purposes of comparing the Museum of Fine Arts, Boston, collection to the pieces in the 1715 and 1733 fleet collections, only the cutlery items in the former collection that dated to before 1733 were analyzed.

The earliest cutlery example in the Boston collection is dated to 1680 and is a pair of spoons with Trefid I shaped terminals (Buhler 1972:40). Four other spoons match this terminal type and are dated to 1685, 1690 (Figure 14), 1690-1700, and 1695, respectively (Buhler 1972:16, 44, 81, 97). Apart from the pair of spoons from 1680, the remaining Trefid I terminal spoons also share a common rattail attachment to the back of the spoon bowl (Buhler 1972:40, 16, 44, 81, 97).

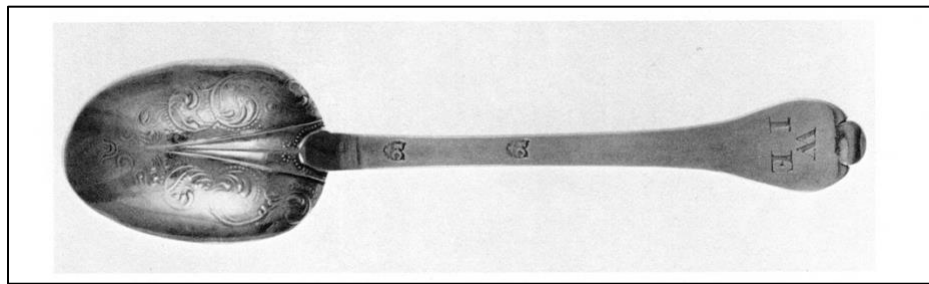


FIGURE 14. Museum of Fine Arts Boston Collection, 1690 Trefid I spoon (Buhler 1972:44).

Slightly overlapping the time period of the Trefid I style is the Dog-nose handle terminal (Figure 15). The earliest examples of Dog-nose terminals in Buhler's (1972:29, 56-57) study are dated to ca. 1700 and exemplified by three spoons and a fork. The remaining pieces with Dog-nose terminals include a pair of forks dated to ca. 1710, a spoon dated to ca. 1709, and a spoon dated to ca. 1710 (Buhler 1972:113, 124, 135). All five of the spoons with Dog-nose handle terminals also had rattail attachment points, while all three of the forks were two-tined and were

made from a single piece of silver, not soldered between the handle and working end (Buhler 1972:29, 56-57, 113, 124, 135).

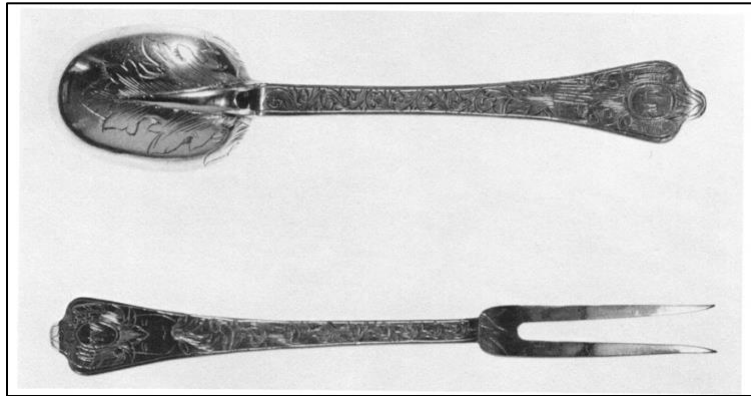


FIGURE 15. Museum of Fine Arts Boston Collection, Dog-nose utensil set (Buhler 1972:56).

The final handle terminal style in the Boston collection is the Oval II (Figure 16). All the Oval II pieces in this collection date to well after the final piece of the two previous designs. The earliest example of an Oval II terminal in the Boston collection is a pair of spoons which date to ca. 1720 (Buhler 1972:165). Including that pair of spoons, four other spoons date to the 1720s (Buhler 1972:174, 183, 203). Four spoons in the Boston collection with Oval II terminals date to the 1730s (Buhler 1972:133, 137, 204, 207) and one dates to as late as 1740 (1972:184). Roughly half of the Oval II terminal pieces have rounded drop attachments while the others have the traditional rattail attachments. In sum, the Boston collection of silver described by Buhler (1972) consists of six Trefid I style terminal pieces dated to 1680-1700, eight Dog-nose terminal pieces dated to 1700-1710, and eleven Oval II pieces dated between 1720 and 1740.

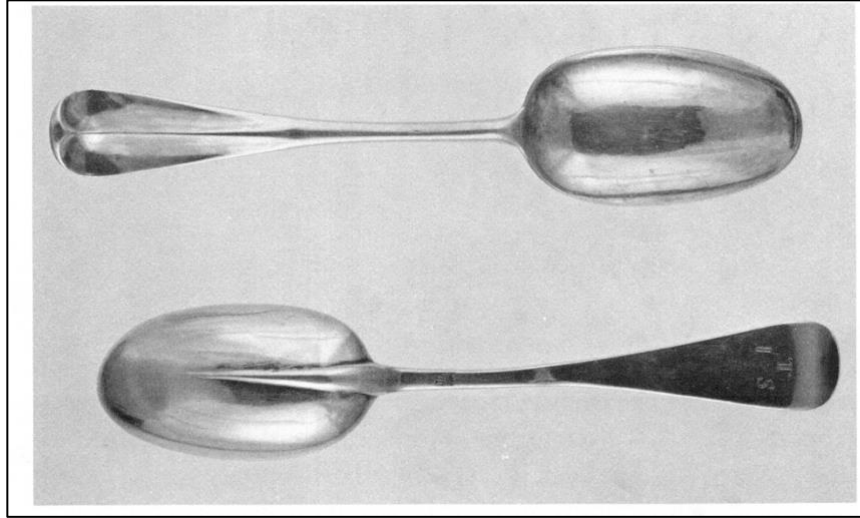


FIGURE 16. Museum of Fine Arts Boston Collection, Oval II spoons (Buhler 1972:165).

Leona Davis Boylan's (1974) survey of Spanish colonial silver focused on collections from different museums in New Mexico. Boylan's (1974:1) study was intended to "establish the existence of a regional...style of Spanish Colonial silver" as well as "describe and classify the Spanish Colonial silver in five museum collections." Boylan (1974:4) divided the artifacts in her study into three primary classifications: ecclesiastic, domestic, and accessories, which means only a small portion of her study is relevant to be compared to the cutlery of the 1715 and 1733 Spanish fleet collections. Two spoons in Boylan's (1974:130) study are cited as salt spoons, and are very small in size, but share the Trefid I handle terminal design (Figure 19). The eighteenth-century examples of cutlery in Boylan's (1974:127, 129-130) study include a serving spoon and fork with Oval II type handle terminals (Figure 17); eight round-based, four-tined forks with Oval II [N=6] or Spade II [N=2] handle terminals (Figure 18); one spoon with an Oval II terminal (Figure 19); and one spoon and a square-based, four-tined fork from Guatemala with matching Fiddle terminals (Figure 19).

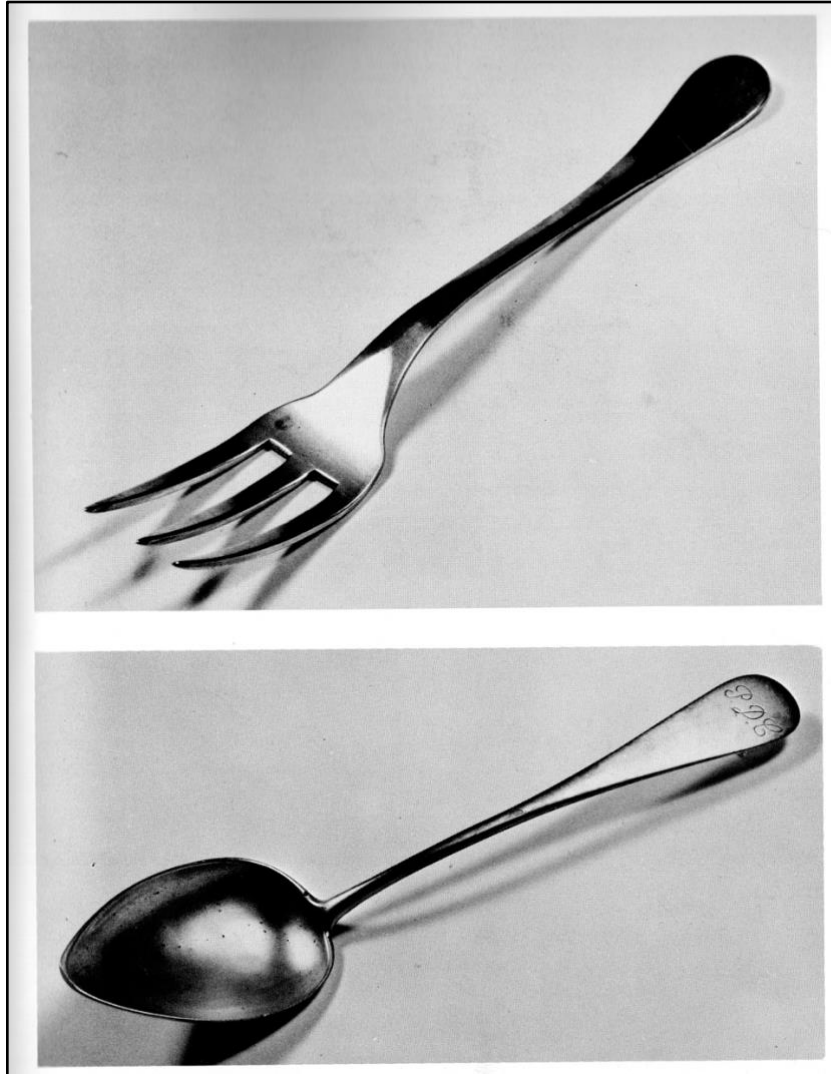


FIGURE 17. Oval II terminal serving spoon and fork (Boylan 1974:127)

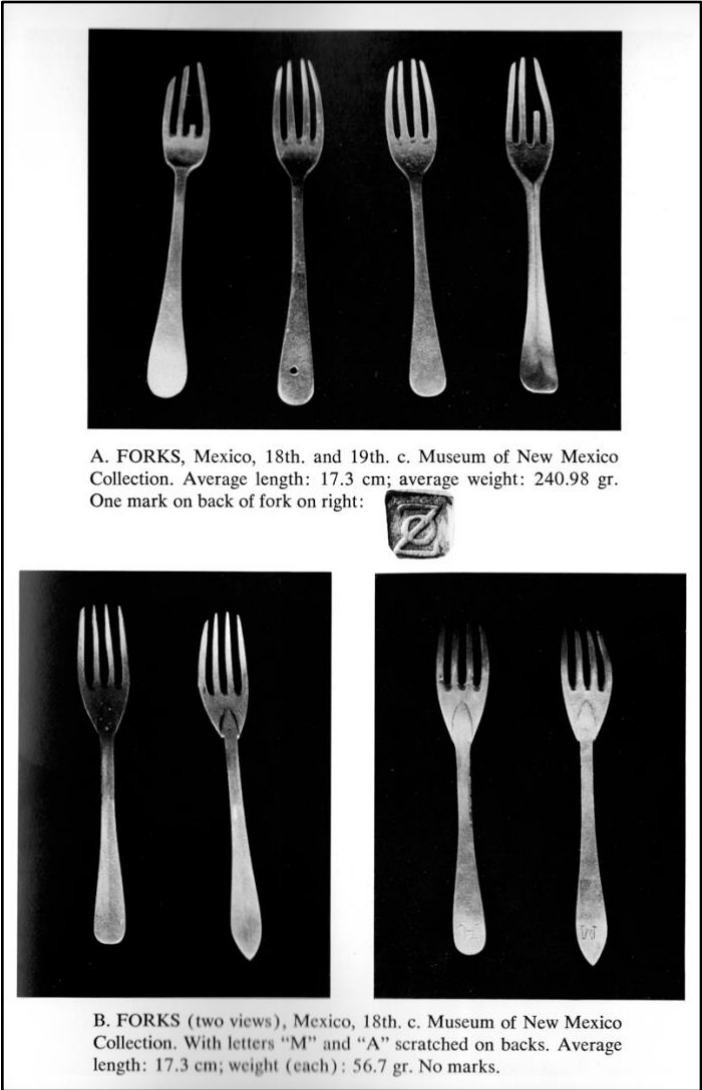


FIGURE 18. Eighteenth century forks (Boylan 1974:129).



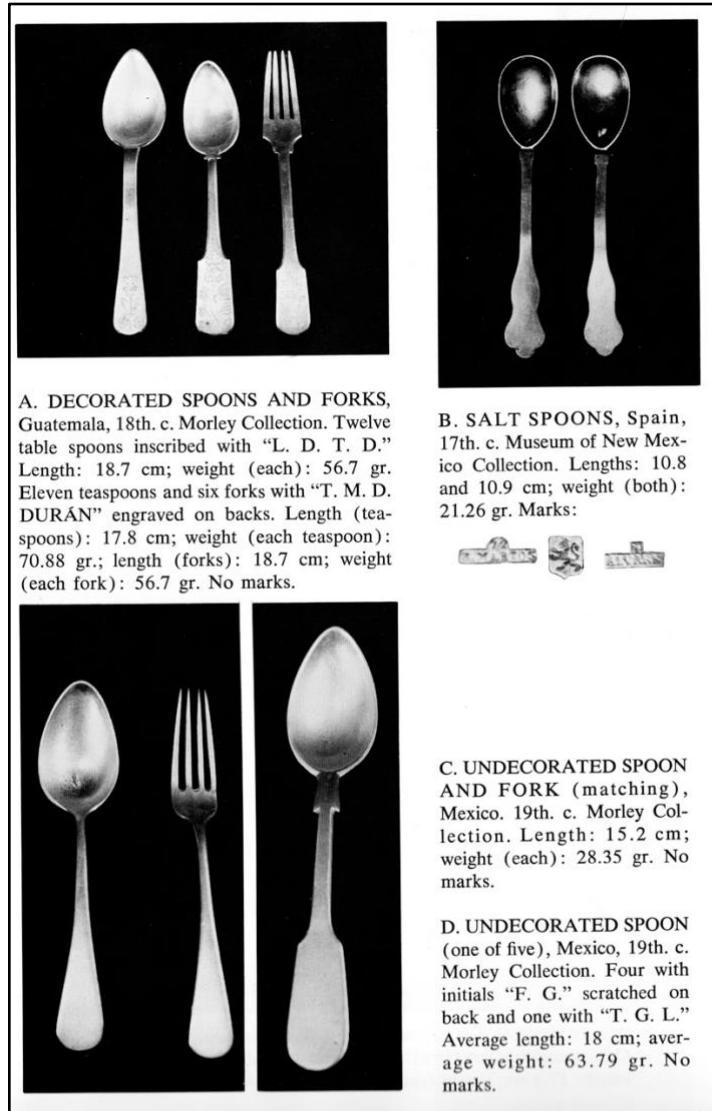


FIGURE 19. Eighteenth century forks and spoons (Boylan 1974:130).

Despite the variety in nationality and time within the eighteenth century, cutlery trends in the aforementioned archaeological and museum collection contexts are consistent between the 1715 fleet and the 1733 *flota*. These consistencies are depicted in Table 17. Similarities between the 1715 and 1733 fleets and other Spanish ships would be expected given their nationality and presumed culture of the crew. The similarities of the Spanish, Dutch, French, American, and British collections speak to the mobility of artifacts between cultures due to immigration and

trade, as well as the relatively common, simplistic, easily replicated designs of eighteenth century cutlery.

The collections of four shipwrecks and two museums discussed above have shown that, despite variations in nationality, location, and specific decade within the eighteenth century, cutlery trends tended to remain consistent through those variables for an extended period. Table 18 illustrates the similarities between each of the respective collections above, the 1715 Tierra Firme Fleet collection, and the 1733 New Spain *flota* collection.

TABLE 18. Comparison of 1715 and 1733 Fleet Collections to Other Archaeological and Historical Collections

Collection	Date	Forks	Spoons	Knives	Handle Typologies	Attachment Points	Materials	Marks
“Storm Wreck”	?	--	X	--	X	X	X	--
<i>Amsterdam</i>	1749	--	X	X	X	X	X	X
<i>Machault</i>	1758	--	--	X	--	X	X	--
Boca Chica Channel Wreck	post-1772	X	--	--	X	X	X	--
<i>Defence</i>	1779	--	X	X	X	X	X	X
Museum of Fine Arts, Boston	1655-1740	X	X	--	X	X	X	X
New Mexico (Boylan)	~18 <sup>th</sup> Century	X	X	--	X	X	X	X

#### 5.4 Comparison to Contemporary Artwork

Art, like an archaeological site or a written account, is one way people of the present can study people of the past as it represents trends in subject matter, technological advancements, and religious and stylistic developments. While some styles of painting are difficult for wide audiences to appreciate, still-life works seem relatable to all variations in social, economic, and

cultural status. William B. Jordan (1985:1) asserts that “the emergence throughout Europe of the modern still life toward the end of the sixteenth century was a phenomenon related to rapidly evolving conditions of a European society at the threshold of the modern age in politics, science, philosophy and art.” As the popularity of still-life artwork grew during the European Renaissance, Jordan (1985:1) states that “successive generations of great painters have wrestled with the most serious pictorial issues in their attempts to depict a simple arrangement of fruit, flowers or familiar objects.” While still-life paintings are not unique to any one European culture, in the early sixteenth century, “Spain, with its political domination of Europe still largely intact and its aristocratic emissaries scattered about the globe, was very much involved in this exchange of information and ideas: its artists and intellectuals were among the first to express the new view of nature and art” (Jordan 1985:2). Artwork of the sixteenth, seventeenth, and eighteenth centuries can shed light on the development of various cultural features of Europe and the New World colonies by presenting scenes of food and tablescapes, ships and maritime activities, individuals in different styles of clothing, musicians and their instruments, and occupational activities of farmers, weavers, butchers, and marketplaces. One of the most common still-life subjects for European painters was the tablescape, commonly adorned with a variety of bread, cheeses, fruits, and tablewares including chafing dishes, platters, goblets, and cutlery. Several sixteenth, seventeenth, and eighteenth-century paintings have been examined to locate corroborative images of eating utensils that may have been popular, either as personal possessions or trade goods, near the time of the 1715 and 1733 fleet disasters. The paintings referenced in the following discussion of cutlery depictions in still life artwork are compared to the 1715 and 1733 fleet collections shown in Table 19.

Giuseppe Arcimboldo was a sixteenth century Italian painter who was patronized by Holy Roman Emperor Rudolf II (Tucker 2011). Arcimboldo's works often featured different types of food, mainly fruits and vegetables, arranged to form a portrait. One example of Arcimboldo's creativity is a piece called *The Cook* (ca.1616-1623), which features a human figure composed of kitchen utensils. Included in this painting are images of pots, knives, fireplace tools, a pastry cutter, and several forks and spoons (Figure 20). One spoon is featured prominently in the painting as part of the figure's face. The spoon is brassy or golden in color with a very round bowl and a long round handle with no design on the terminal. A second spoon is near the first, though partly obscured by a knife handle. This spoon is a silver color, much smaller, with a more oval-shaped bowl and a floral design at the handle terminal. The knife is a unique design resembling a small scimitar, with a curved handle and blade following the same line. Finally, there is a two-tined fork behind the figure's shoulder that is dark in color, perhaps to resemble a ferrous material, and resembles a large fork that would have been utilized to hold a piece of meat while it was cut. While these utensils differ slightly from the artifacts of the eighteenth century Spanish fleets, the suggested materials and the design of the silver spoon are consistent with the artifacts in the 1715 fleet collection.



FIGURE 20. Giuseppe Arcimboldo, *The Cook*, oil on canvas, ca.1616-1623, The Royal Danish Collection, Rosenborg Castle, Copenhagen, <http://gersondenmark.rkdmonographs.nl/5.-christian-iv2019s-winter-room-and-studiolo-2013-joergen-wadum/5.2-the-studiolo> (accessed June 14, 2017).

André Bouys was a French painter in the late seventeenth and early eighteenth centuries (Graves 1886:173). While he died in 1740, Bouys would have been living and painting at the time of both the 1715 and 1733 fleet disasters (Graves 1886:173). Though he focused mainly on portraits, one of Bouys later works, *La Récurveuse [The Scrubber]* (1737) is a still life featuring a

female scouring a silver dish (Figure 21). On the table in front of her are a variety of silver objects including two candlesticks, two other silver dishes, and a set of silver cutlery, as well as a copper pot. When examining these pieces of cutlery closely, the fork has a round-based working end with four tines, and that the spoon has an oval shaped bowl with a rattail attachment on the back. While the handle of the spoon is obscured by the fork, the fork handle appears to be flat and oval shaped at the terminal. Behind the spoon and fork is a visible knife handle, though the blade cannot be seen. The handle of the knife is wide and cylindrical with a pronounced tip at the terminal and an oval design along the side. The designs of the fork and spoon are consistent with the cutlery artifacts recovered from the 1715 and 1733 Spanish fleet wrecks.



FIGURE 21. Andre Bouys, *La Récurveuse* [The Scrubber], oil on canvas, 1737, Musée des Arts Décoratifs, Paris, <http://www.lesartsdecoratifs.fr/francais/musees/musee-des-arts-decoratifs/editions/arts-decoratifs/francais/musees/musee-des-arts-decoratifs/parcours/xviiie-xviiiie-siecles/l-acajou/la-recureuse> (accessed June 14, 2017).



Jean-Baptiste-Siméon Chardin was born at the turn of the eighteenth century in Paris and became a famous still life painter during his seventy-year long life (Rosenberg 2017). His painting of *The Silver Cup* (1760) depicts a small silver cup, three apples, two cherries, and a utensil handle sticking out of a copper bowl (Figure 22). The only part of this utensil that is visible is the terminal which is clearly fiddle-shaped, and appears to be made of silver. The shape of this handle terminal is consistent with several artifacts from the 1715 and 1733 collections.

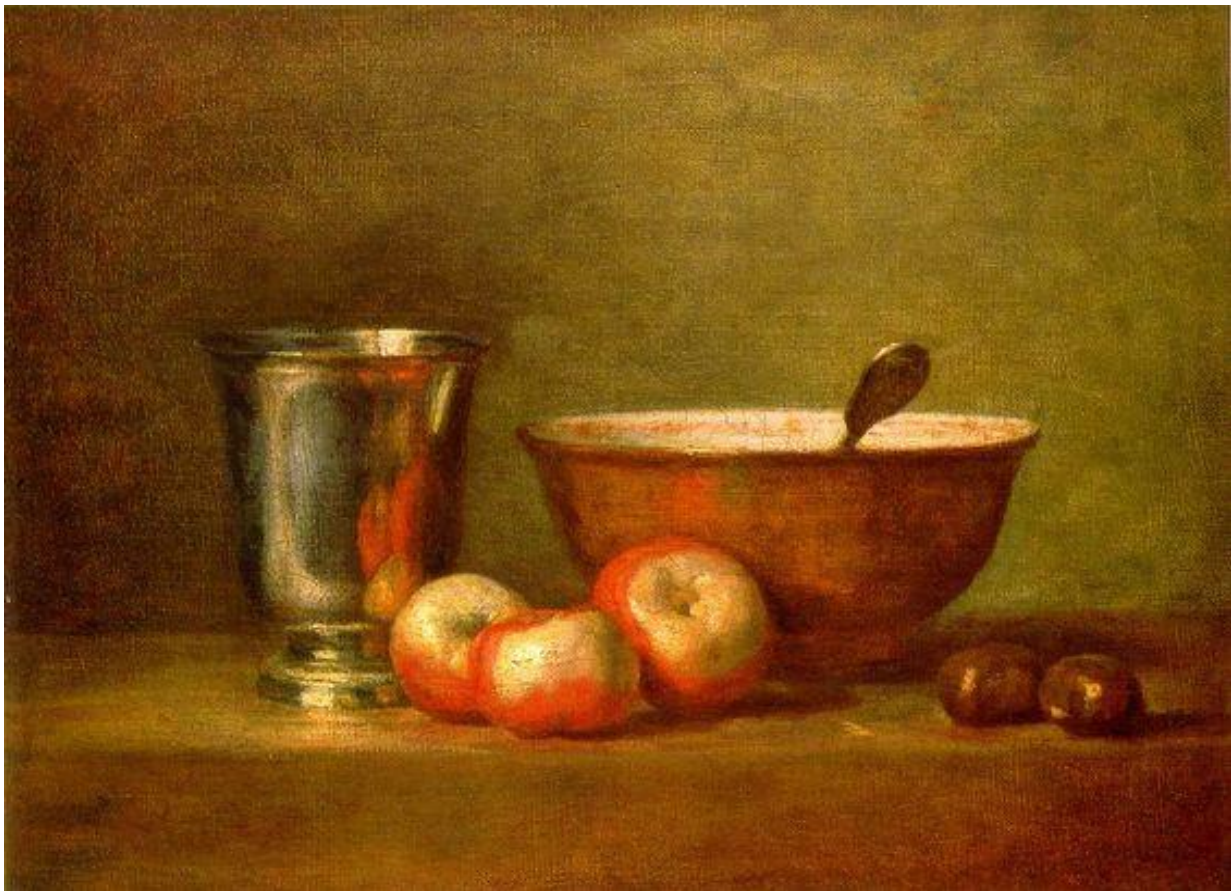


FIGURE 22. Jean-Baptiste-Siméon Chardin, *The Silver Cup*, oil on canvas, ca.1760, Louvre Museum, Paris, [https://commons.wikimedia.org/wiki/File:Jean\\_Sim%C3%A9on\\_Chardin\\_-\\_The\\_Silver\\_Cup\\_-\\_WGA04786.jpg](https://commons.wikimedia.org/wiki/File:Jean_Sim%C3%A9on_Chardin_-_The_Silver_Cup_-_WGA04786.jpg) (accessed June 14, 2017).

Another French painter, Alexandre-François Desportes, lived during the early eighteenth century and often painted scenes focused around hunting and animals as well as typical still life

scenes (The Editors of Encyclopaedia Britannica 2014). Desportes' depiction of animals and foodstuffs in *Cat Stealing Food* [1700-1740] includes two silver platters, a basket of wine bottles, a teapot, a variety of ceramic pitchers and cups, bread, fruit, meat, a cat, and a bird (Figure 23). While the scene is entertaining in and of itself, of primary importance here is the fork in the center of the scene that is resting on a silver platter. This fork appears to be made of silver, it has a round-based working end and four tines as well as a distinctive Dog-nose type handle terminal. This design is consistent with other early eighteenth century cutlery items, including those in the 1715 and 1733 Spanish fleet shipwreck collections.





FIGURE 23. Alexandre-François Desportes, *Cat Stealing Food*, n.d., The Great Cat, <http://www.thegreatcat.org/the-cat-in-art-and-photos-2/cats-in-art-18th-century/alexandre-francois-desportes/> (accessed June 14, 2017).

Juan Bautista de Espinosa was a sixteenth century Spanish painter who concentrated in still life works (Jordan 1985:164). One of Espinosa's pieces that has been utilized by treasure

hunter Mel Fisher in some of his works is titled *Still Life with Silver Gilt Salvers* (1624) and is an incredibly symmetrical display of gilt salvers, ceramic dishes, utensils, and fruit (Figure 24). To the right side of the painting is a stack of three silver spoons with clear rattail attachments, oval shaped bowls, and scrolled handle terminals. There are two knives framing the display in the center of the piece, one appears to have a bone or ivory handle, and the other appears to be darker, perhaps made of wood. Both knives have long pointed blades of a darker metal, most likely intended to be iron. While few the knives from the early eighteenth century Spanish shipwrecks are completely preserved, the handles and blade shapes are vaguely similar. The terminal design of the spoons is unique and not seen in the 1715 or 1733 artifact collections, but the spoon bowls and rattail attachments are consistent with early eighteenth century cutlery.



FIGURE 24. Juan Bautista de Espinosa, *Still Life with Silver Gilt Salvers*, 1624, The Hilmar Reksten Art Foundation, Bergen, Norway, <https://www.magnoliabox.com/products/still-life-with-silver-gilt-salvers-ix003487> (accessed June 14, 2017).



Juan van der Hamen y León was another painter in the sixteenth and seventeenth centuries, during the Golden Age of Spanish still life (Jordan 1985:103). Van der Hamen's works often included a variety of containers such as boxes, jars, baskets, and cups. His painting entitled *Still Life with Boxes of Sweets* (1621) was completed ten years before his death and depicts two round wooden boxes, a covered jar, a ceramic container, and one silver spoon (Figure 25). The spoon has an oval shaped bowl and a distinctive hoof shaped handle terminal. The popularity of utensil handles that resembled horse hooves peaked in the seventeenth century (Scher 1979:44). While the terminal is not consistent with early eighteenth century cutlery from the Spanish shipwrecks in Florida, the working end is very similar to the artifacts in the 1715 and 1733 collections.

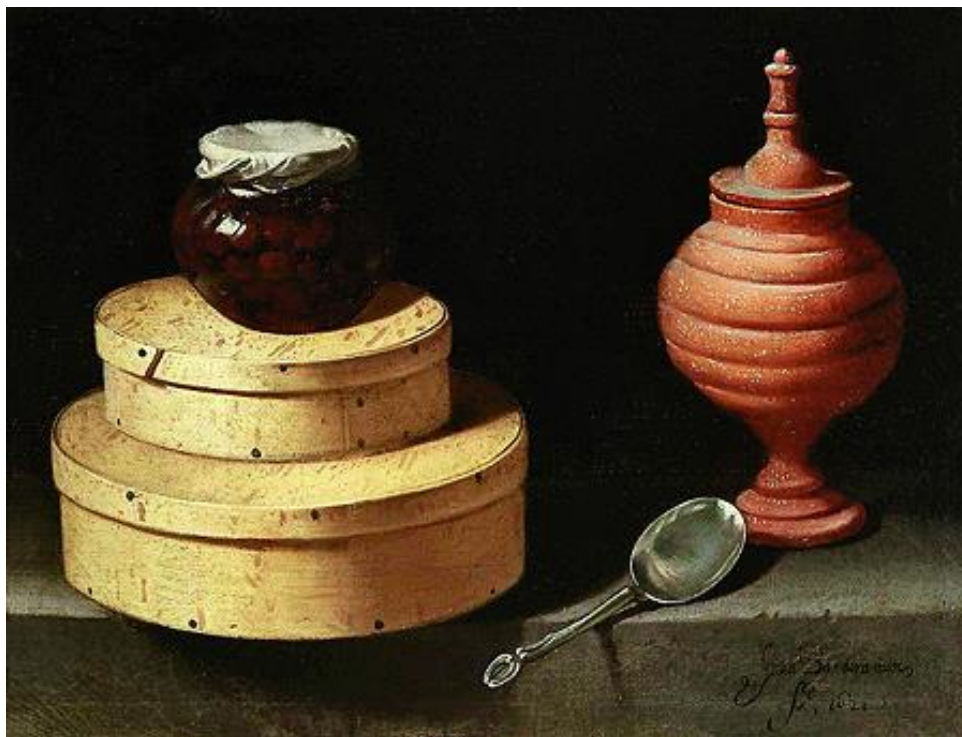


FIGURE 25. Juan van der Hamen y León, *Still Life with Boxes of Sweets*, 1621, The State Hermitage Museum, St. Petersburg, Russia, [http://www.hermitagemuseum.org/wps/portal/hermitage/what-s-on/temp\\_exh/1999\\_2013/hm4\\_1\\_276/?lng=en](http://www.hermitagemuseum.org/wps/portal/hermitage/what-s-on/temp_exh/1999_2013/hm4_1_276/?lng=en) (accessed June 14, 2017).

Another of van der Hamen's paintings, *A Chocolate Service with a Wooden Box of Packed Chocolate, Two Lacquered Gourd Drinking Bowls, a Wooden Milk Whisk, Napkins, a Spoon and Pastries on a Pewter Plate* (ca.1600-1650), depicts all the items mentioned in the title. This painting gives a view of the bottom side of a milk whisk, which has carved petals in two rows and a flattened end (Figure 26). While the exact design of the milk whisk is not consistent with the cocoa frothers in the 1733 artifact collection, it symbolizes the importance of these items, even as early as the first half of the seventeenth century. The spoon rests on a napkin on one of the gourds and appears to be made of either silver or pewter, given its coloring. The leaf-like design on the handle terminal and the oval shaped spoon bowl are both consistent with spoons in the 1715 and 1733 artifact collections.



FIGURE 26. Juan van der Hamen y León, *A Chocolate Service with a Wooden Box of Packed Chocolate, Two Lacquered Gourd Drinking Bowls, a Wooden Milk Whisk, Napkins, a Spoon and Pastries on a Pewter Plate*, oil on canvas, ca. early 17<sup>th</sup> century, Sotheby's, <http://www.sothebys.com/es/auctions/ecatalogue/lot.265.html/2014/old-master-paintings-n09102> (accessed June 21, 2017).

English painter William Hogarth's work entitled *Captain Lord George Graham in His Cabin* (ca. 1745) depicts Lord Graham at a table in his ship's cabin surrounded by other gentlemen, a servant, a musician and a dog (Figure 27). Upon the table in the center of the painting are silver place settings. Silvia Malaguzzi (2008:340) states, "the use of individual forks had become established in the 18<sup>th</sup> century...here the fork indicates that it was no longer permissible to touch food with one's hands...although this is a ship's cabin, it is clear that great care has been taken in setting out the silver plates and cutlery." This depiction of a gentlemen's tablescene aboard a ship may indicate that some of the finer cutlery onboard the early eighteenth century Spanish fleets would have been reserved for and utilized by ships officers.



FIGURE 27. William Hogarth, *Captain Lord George Graham, 1715-1747, in his Cabin*, oil on canvas, ca.1745, National Maritime Museum, Greenwich, [https://commons.wikimedia.org/wiki/File:Captain Lord George Graham, 1715-47, in his Cabin.jpg](https://commons.wikimedia.org/wiki/File:Captain_Lord_George_Graham,_1715-47,_in_his_Cabin.jpg) (accessed July 12, 2017).



Jean-Étienne Liotard was a mid-eighteenth century Swiss-French painter who focused primarily on portraits and pastel depictions of Turkish individuals (Jeffreys 2014). One of Liotard's still life paintings, *Still Life Tea Set* (1783), features a porcelain tea set on a tray with six place settings, a tea pot, and vessels for milk and sugar, as well as pieces of bread (Figure 28). Six spoons are shown in the painting in a variety of positions. The spoons all seem to match, indicating their status as a set, with flat handles, oval shaped terminals, and short, drop style attachments to the oval shaped bowls. These spoons are similar to those seen in the 1715 and 1733 fleet artifact collections.



FIGURE 28. Jean Etienne Liotard, *Still Life Tea Set*, oil on canvas, 1783, The J. Paul Getty Museum, Los Angeles, CA, <http://www.getty.edu/art/collection/objects/735/jean-etienne-liotard-still-life-tea-set-swiss-about-1781-1783/> (accessed June 14, 2017).

Eighteenth century Italian artist Carlo Magini is famous for his Baroque still life paintings of standard kitchen items, food, and tablescapes (Brogi 1995:232). His piece *Still Life with a Copper Jug* [ca.1720-1750] depicts a wide array of items, including the titular copper jug, a ceramic bowl, a porcelain plate, a glass wine bottle, a drinking glass, a brass candlestick with a candle mounted inside, cucumbers, gourds, onions and a tomato, as well as a knife and a spoon (Figure 29). The knife appears to have a bone or wooden handle with carved faces running the length of the handle. The silver spoon rests atop the ceramic bowl or pot and has a very large bowl with a long thin handle. The terminal design is not clear, nor is the attachment point. Given the size of the spoon bowl, it is inferred that it is a type of soup spoon or ladle. While it is not consistent with the spoons in the 1715 or 1733 fleet artifact collections, this is a depiction of a type of spoon that would likely have been common at the time of the fleets' sailing and can be referenced in the future.



FIGURE 29. Carlo Magini, *Still Life with a Copper Jug*, oil on canvas, ca.1720-1750, National Museum in Warsaw, [https://commons.wikimedia.org/wiki/File:Magini Still life with a copper jug.jpg](https://commons.wikimedia.org/wiki/File:Magini_Still_life_with_a_copper_jug.jpg) (accessed June 19, 2017).

Luis Egidio Meléndez was a prolific Spanish still life artist during the eighteenth century who focused upon foods and foodways (Tufts 1985). His paintings often have dark or black backgrounds with the arrangements in the foreground, typically with light coming in from one side to show depth and shadows. While Meléndez's work post-dates the 1715 and 1733 Spanish fleet shipwrecks, many of his depictions of cutlery are still consistent with those artifacts in the respective collections. Meléndez's *Still Life with Box of Jellied Fruit, Bread, Silver Salver, Glass, and Wine Cooler* (1770), shows two silver dishes, a drinking glass, bread, a wooden wine cooler containing a wine bottle, and a single silver fork. The fork has four tines, a round-based working end, and a fiddle shaped terminal (Figure 30). Regarding this painting, Gretchen A. Hirschauer and Catherine A. Metzger (2009:104) state that, "the fork, the short crystal glass from the La Granja royal factory, and the fluted silver plate under the round box do not appear in any other known Meléndez still life, while the matching silver salver on a pedestal is the most ornate he ever painted." Meléndez tended to focus more on the foods, ceramics, and wooden table wares than on silver cutlery, and his depiction of a silver fork in the aforementioned painting, in addition to the other silver and glass table wares, might suggest that this was a finer, more luxurious tablescape.





FIGURE 30. Luis Meléndez, *Still Life with Box of Jellied Fruit, Bread, Silver Salver, Glass, and Wine Cooler*, oil on canvas, 1770, Museo Nacional del Prado, Madrid.

Two of Luis Meléndez's paintings contain wooden spoons, *Still Life with Melon, Boxes of Sweets, Cask, and Spoon* (ca.1770) and *Still Life with Melon and Pears* (1772). Hirschauer and Metzger (2009:64) note that the wooden spoon in the former has a distinctive gouge in the outer side of the bowl that is consistent with the spoon in the latter which rests on the cask in the background (Figure 31). The second painting, *Still Life with Melon and Pears* also shows three wooden spoons resting in a shallow ceramic dish in the background (Figure 32). Only one

complete spoon is visible here as parts of the other two are obscured. The spoon has an oval shaped bowl and a round, plain handle.

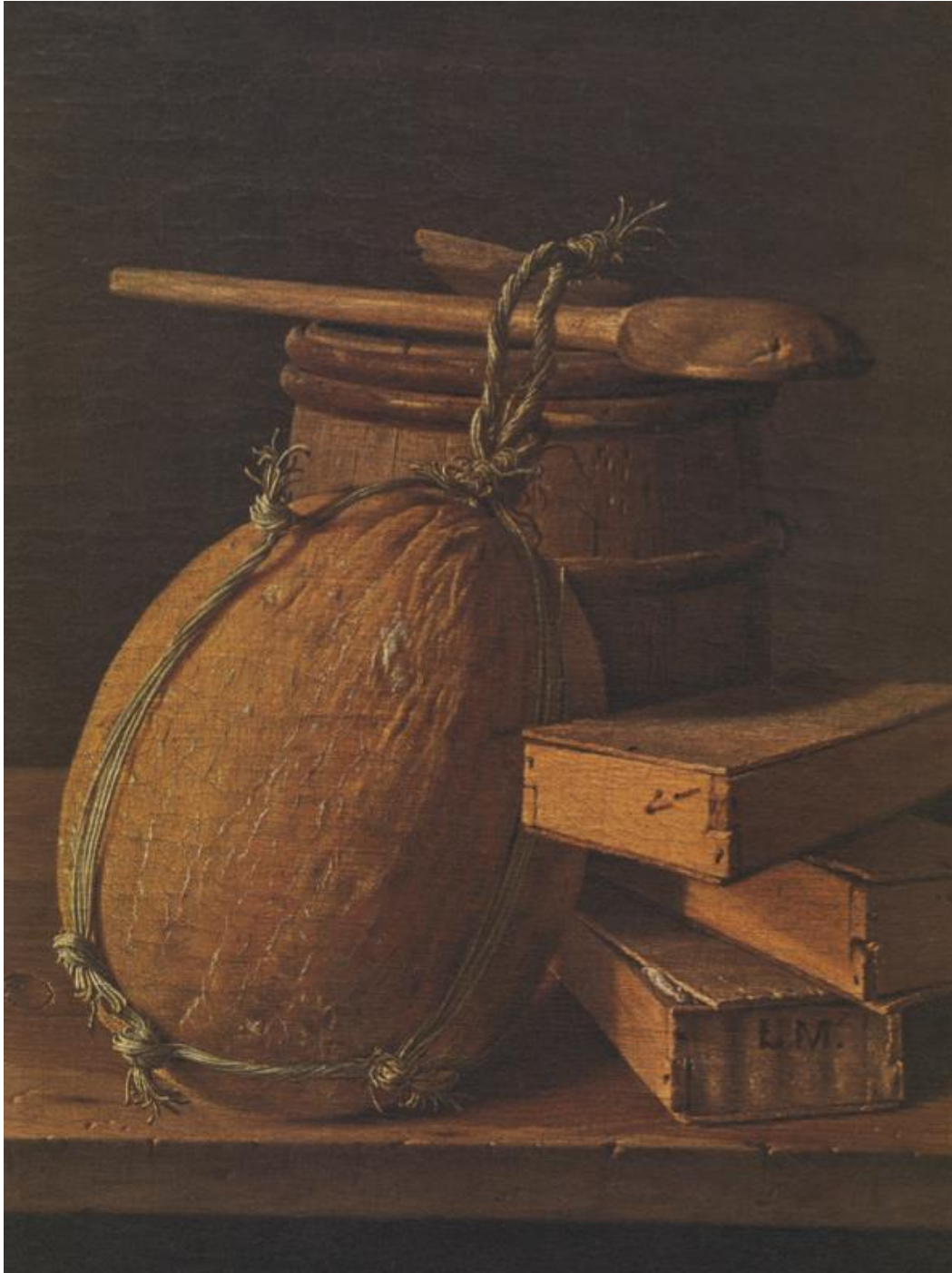


FIGURE 31. Luis Meléndez, *Still Life with Melon, Boxes of Sweets, Cask, and Spoon*, oil on canvas, ca.1770, in *Luis Melendez: Master of the Spanish Still Life*, eds. Gretchen A. Hirschauer and Catherine A. Metzger (Yale University Press: New Haven, CT, 2009).



FIGURE 32. Luis Meléndez, *Still Life with Melon and Pears*, oil on canvas, ca.1772, Museum of Fine Arts, Boston, MA, <http://www.mfa.org/collections/object/still-life-with-melon-and-pears-32670> (accessed September 8, 2016).

Some of Meléndez's works also include implements for drinking chocolate, such as *Still Life with Chocolate Service, Bread Roll, and Biscuits* (1770), which depicts a copper vessel, a porcelain cup, and an array of baked goods on both a plate and the table (Figure 33). The chocolate pot has the handle of a chocolate spoon protruding from the top, though the actual working end is obscured. The chocolate spoon appears to be made of wood and has one carved knop at the terminal end.





FIGURE 33. Luis Egidio Meléndez, *Still Life with a Chocolate Service*, oil on canvas, 1770, Museo Nacional del Prado, Madrid, <https://www.museodelprado.es/en/the-collection/art-work/still-life-with-a-chocolate-service/004dba61-31c4-42b8-8bc4-5ceb8fe20825> (accessed June 19, 2017).

According to William Jordan (1985:206), Spanish painter Antonio de Pereda was part of “the generation of painters born around 1610,” but “stands out as the one truly great painter of still lifes.” Several of Pereda’s paintings show scenes of military success and religious icons, but perhaps his most famous are his still life depictions of tablescapes. In one particularly detailed work entitled *Kitchen Scene (Allegory of Lost Virtue)* (ca.1650-1655), Pereda shows a man and a woman on either side of a table that is laden with a wide variety of dishes, food, and service

items (Figure 34). The woman kneels on the floor gesturing towards the man, who is seated sideways on the table, pouring a liquid from a pitcher to a cup. The floor is also littered with household items. In the center of the painting, on the floor is a large basin with silver and porcelain dishes resting inside including two wooden spoons and two or three silver spoons. The silver spoons share a similar floral, leaf-like designed handle terminal to several of the artifacts in the 1715 and 1733 collections. The wooden spoons have oval shaped bowls and plain, round handles. On the floor near the woman's knee is a copper chocolate cup resting inside a broken porcelain dish and a chocolate spoon lying nearby. In this painting, the working end of the chocolate spoon is visible; it is spherical with carved points in a pattern around the working end. This style of chocolate spoon is consistent with the style seen in the cocoa frothers of the 1733 artifact collection.



FIGURE 34. Antonio Pereda y Salgado, *Two Figures at a Table with Kitchen Utensils*, oil on canvas, ca.1631-1678, Penrhyn Castle, Gwynedd, UK, <http://www.nationaltrustcollections.org.uk/object/1421752> (accessed June 19, 2017).

Another of Pereda's works, entitled *Still Life with an Ebony Chest* (1652), includes a copper chocolate pot, wooden chocolate spoon, and a silver spoon, to one side of the titular ebony chest (Figure 35). The working end of the chocolate spoon rests in the middle ground, in front of the chest, but still behind several other items. The working end is very similar to the chocolate spoon in the *Kitchen Scene* painting, but can be seen in much clearer detail. The silver spoon rests on a silver plate next to three porcelain cups with the back of the spoon bowl visible to the viewer. There is a clear rattail attachment point on the silver spoon and it has an oval shaped bowl, consistent with those spoons in the 1715 and 1733 artifact collections.



FIGURE 35. Antonio de Pereda, *Still Life with an Ebony Chest*, oil on canvas, 1652, State Hermitage Museum, St. Petersburg, [https://commons.wikimedia.org/wiki/File:Antonio de Pereda y Salgado - Still-Life with an Ebony Chest - WGA17174.jpg](https://commons.wikimedia.org/wiki/File:Antonio_de_Pereda_y_Salgado_-_Still-Life_with_an_Ebony_Chest_-_WGA17174.jpg) (accessed June 19, 2017).



Finally, Juan Bautista Romero was a successful Spanish still life painter in the late eighteenth century who focused his paintings on food and tablescapes (López 2006:271). In his work, *Still Life with Strawberries and Chocolate* (ca.1775-1790), Romero depicts a plate of strawberries, several pieces of bread, a shallow dish of sugar, a knife, a spoon, and a ceramic cup of chocolate presented on a white, lace-trimmed cloth (Figure 36). The knife in this painting has a gold colored handle and a silver colored blade that is partly obscured by the handle of the spoon. The spoon is also gold colored and has an oval shaped bowl and a distinctive fiddle shaped handle terminal. While the knife does not resemble any of the artifacts in the 1715 or 1733 collections, the design of this spoon is consistent with spoons found in those assemblages.



FIGURE 36. Juan Bautista Romero, *Still Life with Strawberries and Chocolate*, oil on panel, ca.1775-1790, North Carolina Museum of Art, Raleigh, NC, <http://ncartmuseum.org/art/detail/still-life-with-strawberries-and-chocolate> (accessed June 19, 2017).

TABLE 19. Comparison of 1715 and 1733 Fleet Collections to Contemporary Artwork

Painting	Artist	Nationality	Date	Forks	Spoons	Knives	Cocoa Frother	Handle Typologies	Attachment Points	Materials
<i>The Cook</i>	Giuseppe Arcimboldo	Italian	ca. 1616-1623	--	X	X	--	--	--	X
<i>La Récreuse</i>	André Buouys	French	1737	X	X	X	--	X	X	X
<i>The Silver Cup</i>	Jean-Baptiste-Siméon Chardin	French	1760	--	--	--	--	X	--	X
<i>Cat Stealing Food</i>	Alexandre-François Desportes	French	ca. 1700-1740	X	--	--	--	X	--	X
<i>Still Life with Silver Gilt Salvors</i>	Juan Bautista de Espinosa	Spanish	1624	--	X	X	--	--	X	X
<i>Still Life with Boxes of Sweets</i>	Juan van der Hamen y León	Spanish	1621	--	X	--	--	--	--	X
<i>A Chocolate Service...</i>	Juan van der Hamen y León	Spanish	ca. 1600-1650	--	X	--	X	X	--	X
<i>Captain Lord George Graham in His Cabin</i>	William Hogarth	English	ca.1745	X	--	--	--	--	--	X
<i>Still Life Tea Set</i>	Jean-Étienne Liotard	Swiss-French	1783	--	X	--	--	X	X	X
<i>Still Life with a Copper Jug</i>	Carlo Magini	Italian	ca.1720-1750	--	X	X	--	X	--	X
<i>Still Life with Box of Jellied Fruit...</i>	Luis Egidio Meléndez	Spanish	1770	X	--	--	--	X	--	X
<i>Still Life with Melon...</i>	Luis Egidio Meléndez	Spanish	ca. 1770	--	X	--	--	X	--	--
<i>Still Life with Melon and Pears</i>	Luis Egidio Meléndez	Spanish	1772	--	X	--	--	X	--	--
<i>Still Life with Chocolate Service...</i>	Luis Egidio Meléndez	Spanish	1770	--	--	--	X	--	--	X
<i>Kitchen Scene (Allegory of Lost Virtue)</i>	Antonio de Pereda	Spanish	ca. 1650-1655	--	X	--	X	X	--	X
<i>Still Life with an Ebony Chest</i>	Antonio de Pereda	Spanish	1652	--	X	--	X	X	X	X



## *5.5 Artifact Biographies and Analysis*

A comprehensive discussion of the concept of artifact biographies can be found in Chapter Two. The information presented here considers all the available data for each individual artifact. The following artifact biographies are given to illustrate the variety of knowledge that can be gained from the study of unprovenienced artifacts, and where the knowledge gap exists.

### 5.5.1 Artifact I- 93.673.103.1

Artifact 93.673.103.1 from the 1715 fleet was selected for the artifact biography section because it is the sole example of a toothpick in this study. Cited by the BAR as being made of bone or ivory, this artifact is in nearly pristine condition, unbroken and still slightly pointy. At the top of the toothpick is an effigy figurine. The figurine is fairly simple, a crowned head with short hair and a beard atop a body concealed by robes with no visible appendages. This figurine was most likely made to represent an important religious individual or the king of Spain, much like the “Apostle” cutlery described by Hume (1969:181) and shown by Marquardt (2007:92-93). It is indeterminable who this toothpick may have belonged to because, while it is somewhat ornate, anyone with carving skills could have whittled the toothpick and the effigy figure from any bone following dinner, during down time, though it also could have been bound for a market in Europe. Artifact 93.673.103.1 is shown in Figure 37.



FIGURE 37. Artifact 93.673.103.1 – Bone/ivory Toothpick with Figurine

#### 5.5.2 Artifact II- 93.641.112.1

Artifact 93.641.112.1 from the 1715 fleet was selected for the artifact biography section because it is a Twisted handle with markings on the butt of the handle. This handle is one of the largest in the collection and is one of four identical pieces. The consistency in size, shape, and decorations of the four suggest they were part of a set. Their size, as well as the fact that all four are hollow, implies they were likely knife handles as they are far larger than any other fork or spoon handle seen in this study. The hollow nature of the handles indicates that the working end would have been attached, either inside the handle or at the proximal opening by another apparatus. Neither forks nor spoons were commonly made in this way, further corroborating the argument that these were knife handles. The size and general shape of these handles are consistent with examples seen in the *Amsterdam* collection, though the twisted nature is unique to these four pieces.

Artifact 93.641.112.1 was chosen, specifically, out of the four matching handles for the extended analysis because of the clarity of the crest on the butt of the handle. The crest is

consistent with Spanish heraldry designs of the time, though an exact match has yet to be found. There is a crown atop the shield, which has alternating squares around the perimeter with designs that resemble a castle and a vague, “stick” like rendition of the roaring lion common in regal iconography. In the center of the shield is a cross of the same type of squares but the image in those is less discernable than those on the perimeter. The images do not seem to be standardized, there are slight variations from one square to another which suggests that this crest was carved into the butt of the handle and not stamped with a die, which would have had cleaner lines and, if truly a family or jurisdictional crest, would have had more time spent on making a more impressive stamp. The butt ends of 93.641.113.1 and 93.642.115.1 are too degraded to discern if there was ever a crest stamped or carved on them, but the fourth handle, 93.641.114.1, shares vague similarities with the design on 93.641.112.1, though the former is in worse condition and a large portion of the crest is worn away. As stated above, the crest on these handles has yet to be identified. The border design, of the alternating lions and castles, is consistent with several known Spanish coats of arms including the Commonwealth of Puerto Rico and Santa Isabel City (Spanish Guinea). Artifact 93.641.112.1 is shown in Figure 38 and images of the crest and the coats of arms can be found in Figures 39, 40, and 41, respectively.



FIGURE 38. Artifact 93A.641.000112.0001— Twisted Silver Handle



FIGURE 39. Artifact Number 93.641.112.1 – Twisted Silver Handle with Marks, Butt Close-up



FIGURE 40. “Coat of Arms of the Commonwealth of Puerto Rico”  
[https://commons.wikimedia.org/wiki/File:Coat\\_of\\_arms\\_of\\_the\\_Commonwealth\\_of\\_Puerto\\_Rico.svg](https://commons.wikimedia.org/wiki/File:Coat_of_arms_of_the_Commonwealth_of_Puerto_Rico.svg) (Accessed 22 December 2016).



FIGURE 41. “Coat of Arms of Santa Isabel City (Spanish Guinea)”  
[https://commons.wikimedia.org/wiki/File:Coat\\_of\\_Arms\\_of\\_Santa\\_Isabel\\_City\\_\(Spanish\\_Guinea\).svg](https://commons.wikimedia.org/wiki/File:Coat_of_Arms_of_Santa_Isabel_City_(Spanish_Guinea).svg) (Accessed 22 December 2016).

### 5.5.3 Artifact III- 93A.641.135.1-2

Artifact 93A.641.135.1-2 from the 1715 fleet was selected for the artifact biography section because it is a nearly complete fork and the only item in the collection gilt with gold. The size and shape of the working end of this fork is typical for pieces in this collection, but is significantly smaller than the example seen in the Boca Chica Channel Wreck. Most of this fork is significantly degraded, only one tine is close to being complete and the details of the handle are worn away. As mentioned above, the fork is in two pieces and nearly fits together, though it is not a perfect match. It is likely that there is a small third piece to this fork that is not a part of the BAR collections or that the two sides of the break have been worn down over time and so no longer match exactly. Artifact 93A.641.135.1-2 can be seen in Figure 42.

Gold was a rather rare material for cutlery; even as it became more easily accessible, it was often reserved for specie, jewelry and other luxury goods. It is safe to say that a crew member did not own this fork, unless perhaps an exceptionally high-ranking officer, and was most likely a trade item or owned by a wealthy passenger. It is peculiar that this is the only piece of gold cutlery in the collection, perhaps because other pieces have not been recovered, possibly claimed by survivors of the wreck, or kept by treasure hunters after recovery. If the first, hope remains that more may be found in the future. If the second, it will be impossible to know if any particular gold cutlery found in Spain, Florida, or Mexico was originally part of the same set. If the latter, those pieces may never be revealed, and thus the possible knowledge about this shipwreck is further limited.

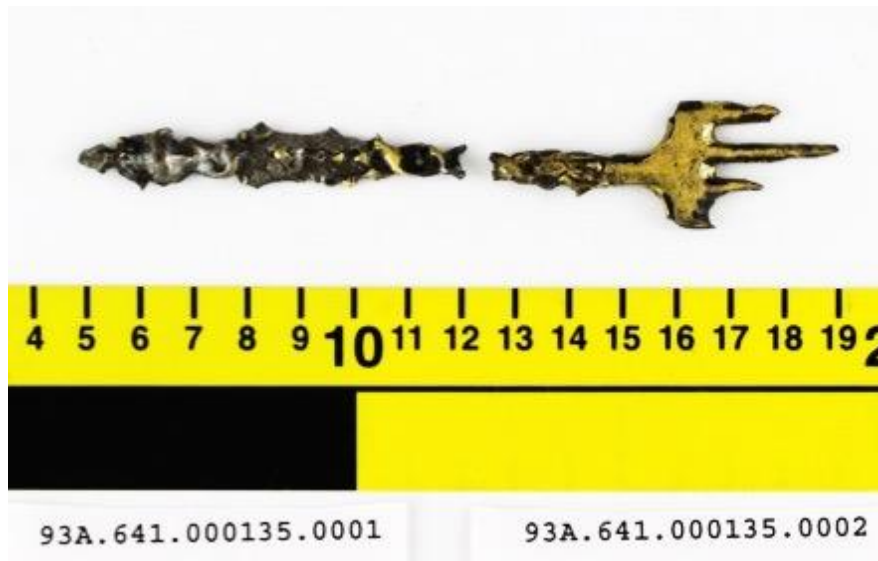


FIGURE 42. Artifact 93A.641.000135.0001-2 – Gilt Fork with Figurine Handle

#### 5.5.4 Artifact IV- 72A.21.53.1

Artifact 72A.21.53.1 from the 1715 fleet was selected for the artifact biography section because it is a complete spoon, albeit in two pieces, with a Fiddle shaped handle terminal and three stamps on the interior of the bowl. The spoon bowl is large, but consistent with most other

specimens in this study, and has a “vestigial” rattail design which appears to be solely for decorative purposes and not employed for attachment of the handle to the bowl. The Fiddle terminal is also consistent with eighteenth century cutlery designs. The spoon is broken near the middle of the handle, but both pieces are intact and the breaks match, indicating that the two pieces are of the same item. It seems most likely that this break occurred during the recovery process since there are several small points within the break, which should have worn away if exposed to movement and make up of ocean water and sand for two hundred years. Artifact 72A.21.53.1 can be seen in Figures 43 and 44.

There are three stamps on the interior edge of the spoon bowl of artifact 94.36.829.1 which indicate that the silver was assayed and taxed in Mexico City, where it also received a hall-mark of quality. The Mexico City tax mark, an “M” between two columns (the Pillars of Hercules) is adequately preserved and identifiable, as is the bird-shaped stamp of quality. The assayer’s stamp on this artifact is imperfect, but the letters “OSA” are visible atop the letters “EZ” which match the known stamp of Don Diego Gonzalez de la Cueva, the *Ensayador Mayor* (Chief Assayer) in Mexico City from 1731 until 1778 (Anderson 1941:310). According to Daniel Sedwick and Frank Sedwick (2007:70-71), Diego Gonzalez de la Cueva was only active during the year of 1730, and they cite an ownership dispute as the basis for this claim, going on to say that Felipe Rivas Angulo was the “typical assayer for Mexican silver cobs salvaged from the 1733 Fleet.” Regardless of who the true assayer was, this corroborates Anderson’s claim that Gonzalez de la Cueva’s marks are attributed to the year 1730 and later.

These stamps are well known, as is the legal paperwork that established and explained their use. They can be key to dating archaeological sites by *terminus post quem*, meaning “a relative dating method used by archaeologists; ‘date after which’” (Deagan 1987:192).



According to Anderson (1941:303), silversmiths only used two marks until 1732, and in 1733 an ordinance was dispatched that required three stamps on all silver. This is problematic because this piece, and all other artifacts that bear the matching stamps, is attributed to the 1715 Plate Fleet; eighteen years prior to the installment of Diego de la Cueva as Chief Assayer and the ordinance requiring three stamps. This calls into question the notion that these artifacts came from a ship of the 1715 fleet. The most obvious possible explanation for this is that the shipwreck this spoon came from was from a different ship, in a different fleet, which sailed sometime after 1733 according to the information presented by Anderson (1941:303). Other possibilities include human error in the cataloging process, site contamination by one ship wrecking near or at the same site of another previous shipwreck, incorrect identification at the outset of modern recovery efforts, mixing artifacts of two different sites by the individuals who recovered those artifacts, or errors in the historical record, or translation thereof, which indicate the regulations surrounding the silver marking process. If, however, these artifacts are indeed from another ship, fleet, and time, the whole catalog of artifacts attributed to the 1715 fleet must be called into question since treasure hunters removed artifacts from these shipwreck sites without properly recording their locations, quantities, and exact methods of removal.



FIGURE 43. Artifact 72A.021.000053.0001 – Silver Spoon with Fiddle Handle and Stamps, Front





FIGURE 44. Artifact 72A.021.000053.0001 – Silver Spoon with Fiddle Handle and Stamps, Back

#### 5.5.5 Artifact V- 72A.15.318.1

Artifact 72A.15.318.1 from the 1715 fleet was selected for the artifact biography section because it is a spoon bowl fragment with a clear linear break. This spoon bowl is highly fragmented, with neither the tip nor the attachment point preserved. The shape and curvature does, however, attest to the fact that it is indeed a spoon. The rounded edges near the inferred location of the attachment point are ragged and chipped. In nearly the middle of the spoon bowl, there is a break extending the width of the bowl which is, conversely, very straight. Some raggedness would be expected, the spoon having been in a marine environment for approximately two hundred years, and wear is present on the linear break face of the spoon. Due to the difference in degradation between the curved edges and the linear break, it is suspected that the linear break was caused by some kind of tool, and broken purposefully, while the other edges are simply worn from two hundred years in a marine environment. This break could indicate the necessity of raw currency, and lack thereof, for an eighteenth century individual who intended to pass off one or both fragments of the spoon bowl as specie. This method is commonly seen in Spanish coins from the eighteenth and nineteenth centuries as larger

denomination coins were cut or clipped to create smaller denominations (Craig 2000:122). As these smaller denomination coins would have lacked official coinage stamps, or showed only a fragment of them, it seems quite plausible that pieces of flatware and other silver objects could have been purchased, traded, or stowed aboard a ship as personal belongings with the intention of being broken to be used as, or melted down to create new, currency. Artifact 72A.15.318.1 is shown in Figure 45.



FIGURE 45. Artifact 72A.015.000318.0001 – Spoon Bowl with Linear Break

#### 5.5.6 Artifact VI- 93.673.65.1

Artifact 93.673.65.1 from the 1715 fleet was selected for the artifact biography section because it is a complete spoon with a brass finish and a Dog-Nose type handle terminal. This is the only cutlery item in the 1715 and 1733 collections that is made of brass, an uncommon cutlery material. The terminal style is rare within the collections examined in this study, though it is well exemplified in the early eighteenth century cutlery examples from the Boston Museum of Fine Arts. The size and shape of this spoon's bowl is consistent with several other examples

from this collection as well as the *Amsterdam* and *Defence* collections. The vestigial rattail attachment is also consistent with eighteenth century cutlery trends, as spoons could be cast or hammered as a single piece, though the rattail continued as a stylistic feature. Artifact 93.673.65.1 can be seen in Figure 46.



FIGURE 46. Artifact 93.673.65.1 – Dog-Nose Spoon

#### 5.5.7 Artifact VII- 05A.101.065860.0001

Artifact 05A.101.065860.0001 from the 1715 fleet was selected for the artifact biography section because it is a spoon bowl fragment with distinctive breaks. This silver spoon bowl is consistent with the size and shape of other spoon bowls in this study. This spoon has a rattail attachment, indicating that the handle and bowl were made separately and then attached. The rattail is the only portion of the handle that is preserved. The break pattern towards the tip of this spoon bowl is particularly interesting. There are four individual curves and five points, which suggests four separate, likely intentional, breaks. It is entirely possible that this silver spoon was intentionally broken and that the small pieces of silver were used to stand in for small amounts of

specie in small scale transactions where such materials were accepted as raw currency. Artifact 05A.101.065860.0001 can be seen in Figure 47.



05A.101.065860.0001

FIGURE 47. Artifact 05A.101.065860.0001 – Spoon Bowl with Distinctive Breaks

#### 5.5.8 Artifact VIII- 72A.13.96.1

Artifact 72A.13.96.1 from the 1715 fleet was selected for the artifact biography section because it is a nearly complete fork with a Spade I handle terminal and stamps on the working end. This piece is one of the most complete forks in the 1715 collection and is shown below in Figure 48. This fork is consistent with many other forks in this study in terms of size and terminal style. It has four tines in varying degrees of completion: one complete, one missing just the tip, one approximately 75% complete, and one broken in half. All four tines are still attached to the square-based working end, which has three stamps between the tines and the handle. The Mexico City tax mark, the quality hall-mark, and the letters “GOSA” above the letters “EZ” are all stamped on the base of the working end of this fork. All three stamps match those seen on artifact 72A.21.53.1, with one slight variation in the amount of the assayer’s mark that was

preserved. Like artifact 72A.21.53.1, this fork becomes problematic in both the determining and dating of the site from which it was taken because it has been attributed to a 1715 fleet shipwreck, but, again, Diego Gonzalez de la Cueva was not the Chief Assayer until 1733, the same year that three marks became the standard for silver products from Mexico.



FIGURE 48. Artifact 72A.013.000096.0001 – Silver Fork with Spade I Handle and Stamps

#### 5.5.9 Artifact IX- 72.13.364.3

Artifact 72.13.364.3 from the 1715 fleet was selected for the artifact biography section because it is a handle fragment with a Spade II terminal and a stamp which matches four other artifacts. This handle fragment can be seen in Figure 49. All five of these handle fragments are within four centimeters of each other in length and all weigh roughly half an ounce. Each is made of silver and has a stamp or carving of “B<sup>o</sup>,” at the terminal end. Since this is not a standardized mark, it was most likely done by an individual to signify their personal belongings. Marking personal cutlery with one’s initials was common in the eighteenth century, especially in a crowded place, such as a ship, where one might be afraid of getting their silverware stolen or used by another. It is interesting that, while there are five handles with the same matching mark,

none of these handles have a working end attached. This begs any number of the following questions: did they all coincidentally break as the ship wrecked; were they broken intentionally by the original owner and smuggled aboard to avoid paying taxes; or were they broken by treasure hunters when they were recovered from the shipwreck site? Each of these explanations for the state of artifact 72.13.364.3, and its corresponding four handles, is plausible and again exemplifies the problematic nature of treasure hunting and lack of context.

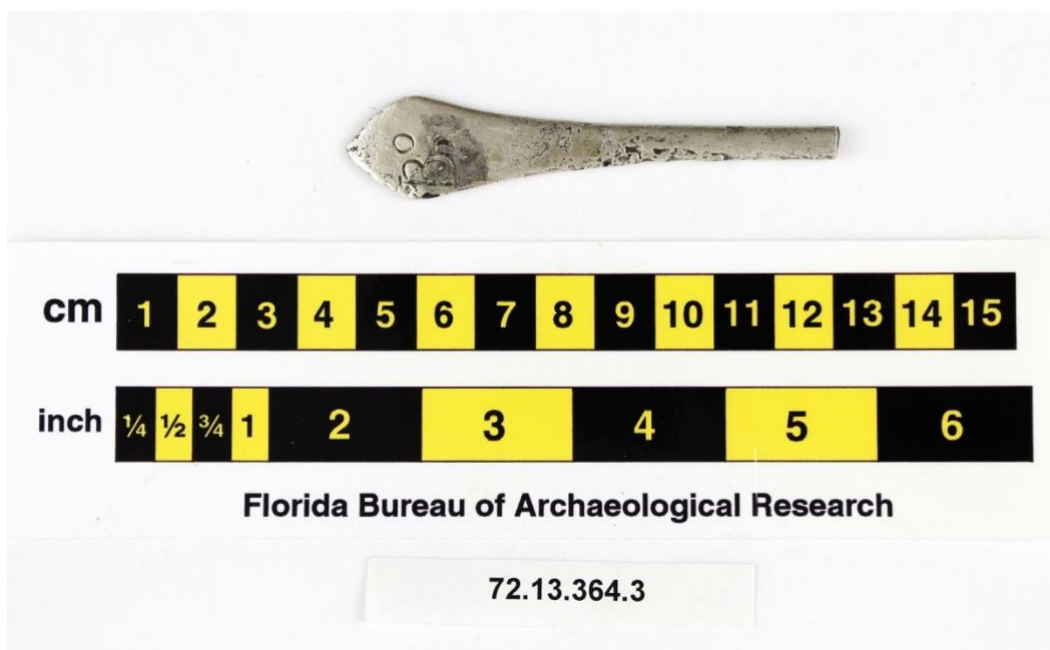


FIGURE 49. Artifact 72.13.364.2 – Spade II style handle with “B°,” mark

#### 5.5.10 Artifact X- 94A.36.843.1

Artifact 94A.36.843.1 from the 1715 fleet was selected for the artifact biography section because it is a handle fragment with the clearest example of a Figurine terminal. This artifact is a silver handle fragment with no indication of the type of working end or attachment style and is shown in Figure 50. It is possible that there was another section of handle between the break at the proximal end of artifact 94A.36.843.1 and the original working end. This is surmised based on the blunt face of the proximal end that is dissimilar from all other attachment points in this

study. The figurine section, as described in Chapter Four, has an anthropomorphic figure wearing a headdress or crown, one hand at the forehead and one hand at the waist in a sort of “S” shape. The figure is shown above an animal with large ears and extensive hair around its head, possibly meant to be a lion, which was common in Spanish iconography. Below the animal, towards the working end, the handle is intricately crisscrossed before coming together near the proximal end of the handle. This artifact, and the others that share the same handle terminal, are noted in the BAR catalog as a “Carmen style” piece. This name is presumed to have been referencing entertainer Carmen Miranda, whose headpieces and dance poses are similar to the style and pose of the figurine on the handle. There is no reference to this type of style, or the name “Carmen style” in any academic or antique literature to the knowledge of the author at the time of this writing. As mentioned above, most figurine handles of the medieval and Renaissance eras represented religious figures, while in the Baroque era and later those figures would likely have represented monarchs, wealthy patrons, or religious figures (Marquardt 2007:92-93). Apart from the toothpick described above (artifact 93.673.103.1), all the Figurine type handles in this study share the same position and makeup of artifact 94A.36.843.1, described here. This consistency indicates that all the pieces were either made by the same artisan, from a mold, or for a specific patron.



FIGURE 50. Artifact 94A.036.000843.0001 – Figurine type handle

#### 5.5.11 Artifact XI- 93A.605.19.1

Artifact 93A.605.19.1 from the 1733 fleet was selected for the artifact biography section because it contains two fragments of one cocoa frother head. While numerous cocoa frother heads exist in the 1733 collection, this artifact was chosen due to its large size and degree of completeness. In the center of the piece is a hole where the wooden stem or handle would have originally attached. Two pronounced rows of twenty-one ridges run the circumference of the frother head. The two sections of this artifact fit together to form a complete piece and the break seems to pre-date the recovery by treasure hunters as there is dirt and debris in the exposed sections of grain, indicating it was broken prior to or during the wrecking process and caught debris in between the ridges of the wood grain after being lost in the ocean. The details of the whole cocoa frother, with both pieces together, can be seen in Figure 51, and the side details can be seen in Figure 52.





FIGURE 51. Artifact 93A.605.19.1 – Two-piece cocoa frother head



FIGURE 52. Artifact 93A.605.19.1 – Cocoa frother head side

#### 5.5.12 Artifact XII- 93A.605.105

Artifact 93A.605.105 from the 1733 fleet was selected for the artifact biography section because it is a handle fragment with an Oval II terminal. This style of handle is consistent with pieces from the Boca Chica Channel Wreck as well as both the *Amsterdam* and *Defence* shipwrecks, and the silver collection in the Boston Museum of Fine Arts. This handle fragment is less than ten centimeters long, broken midway between the terminal and the working end, and has a distinct central ridge running the length of the piece; a design that was common in eighteenth century cutlery. Artifact 93A.605.105 can be seen in Figure 53.



FIGURE 53. Artifact 93A.605.105 – Oval II type handle

#### 5.5.13 Artifact XIII- 93.605.1753

Artifact 93.605.1753 from the 1733 fleet was selected for the artifact biography section because it is the only example of a three-tined fork in the collection. This fork can be seen in Figure 54, below. Only the working end of this fork is preserved, with one full tine remaining.

The condition of this piece is not optimal, it still has quite a bit of sand and other marine debris encrusted on the surfaces. The fact that the debris is on all the exposed surfaces suggests that the handle and two missing tines broke before or during the wrecking process, and certainly before being recovered. As it is the only three-tined fork in either the 1715 or 1733 collection, this is a unique specimen that likely attests to the popularity and preference of the four-tined fork over the three-tined version.

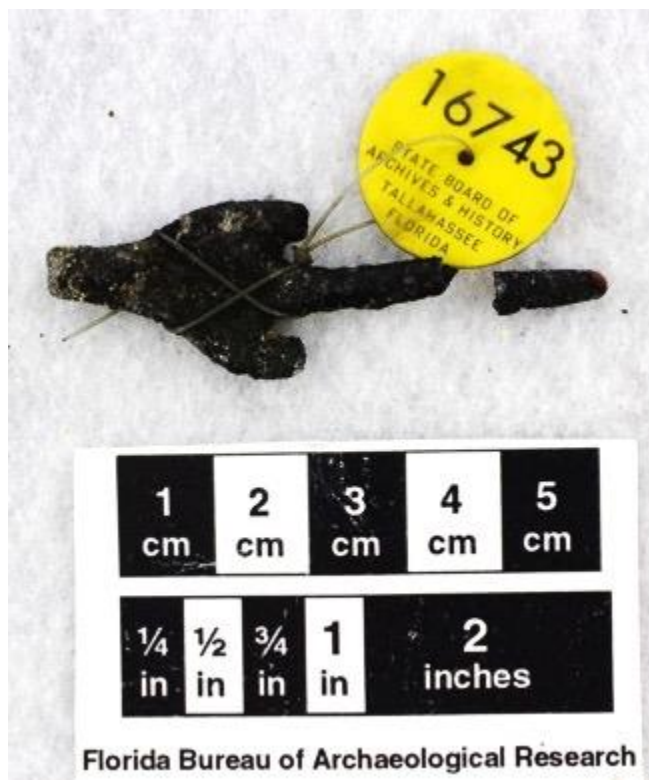


FIGURE 54. Artifact 93.605.1753 – Three-tined fork

#### 5.5.14 Artifact XIV- 93.605.398.1

Artifact 93.605.398.1 from the 1733 fleet was selected for the artifact biography section because it is a complete spoon and is listed as one of the few artifacts made of pewter. The front and back sides of this spoon are shown in Figures 55 and 56, respectively. The size, shape, attachment point, and handle terminal of this spoon are consistent with examples from the

*Amsterdam* and *Defence* shipwreck collections. The handle terminal of this spoon is also nearly identical to the handle fragment denoted 93A.605.105, discussed above. The marks on this spoon are not consistent with other known, standardized Spanish markings of the eighteenth century (Anderson 1941). The “H” and “X” that are visible on the posterior, medial section of the handle are unique when compared to the other marks that are seen in the 1715 and 1733 cutlery collections, as is the indecipherable set of markings on the back of the spoon bowl. If the sale of *San Jose* to the Spanish in 1730 truly included English dinner service as Weller (2001:89) claims, it would explain both the distinctive material and markings of this spoon.

The fact that this piece is complete, and in remarkable condition, begs the questions of why this piece survived intact and others of similar shape, size, and presumed site did not? One explanation for this can be seen in the material of the pieces, this spoon is one of the few pewter cutlery items from the 1715 and 1733 artifact collections and thus is perhaps more apt to survive the violent hurricane that caused the ships to wreck than its silver counterparts, which are almost all fragmented to some degree. Another explanation is that this spoon was on someone’s person at the time of the wreck and thus “protected” to a point, and perhaps dropped during the evacuation to shore.

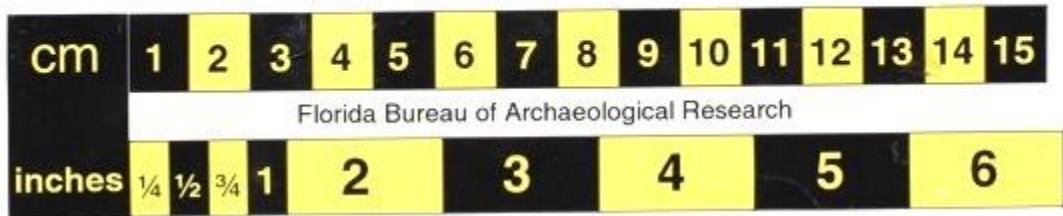


FIGURE 55. Artifact 93.605.398.1 – Pewter Spoon with marks (front)

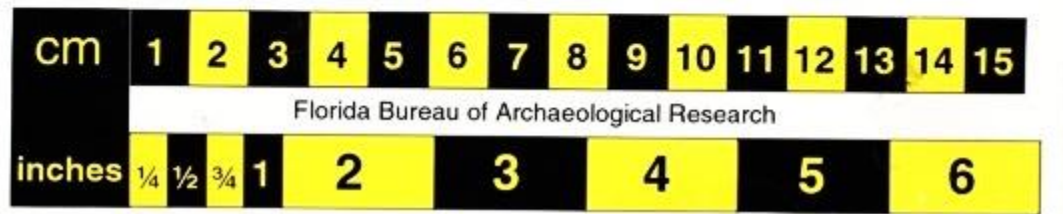


FIGURE 56. Artifact 93.605.398.1 – Pewter spoon with marks (back)



### 5.5.15 Artifact XV- 93.614.071

Artifact 93.614.071 is from the 1733 fleet and was selected for the artifact biography section because it is a wood knife handle fragment. This handle is well preserved with orange colored stains on the surface that indicate the presence, or at least nearby location, of iron whilst in a marine context. This could have been the casing of the handle, the knife blade itself, or another piece of iron such as a fastener or armament. There are a series of holes along one edge of the piece, along with one prominent hole close to the distal end. These holes indicate that this piece was either a portion of the handle case, or the interior tang section, and would have originally had rivets within the holes to connect all the pieces. Artifact 93.614.071 can be seen below, in Figure 57.



FIGURE 57. Artifact 93.614.071 – Wood Handle

### *5.6 Relation to Frontier Models*

Chapter Two gives an extended definition and discussion of Stanley South's (1977:141) Frontier Model of Archaeology and the concept of alternative economies. The similarities between the collections of the 1715 and 1733 fleets' artifacts and other eighteenth century shipwreck and colonial silver collections also speak to the consistency of the fleets with typical

frontier models. The size, shape, material, and frequency of cutlery items in the 1715 and 1733 fleets' collections is comparable to that of other maritime and terrestrial frontier statistics, which are discussed above. Skowronek's (1982) study of the 1733 artifact collection confirmed its consistency with South's frontier model regarding the statistical variation of artifact groups. As South's (1977:95-96) model incorporates all types of archaeological artifact groups, it is difficult to affirm whether the 1715 fleet artifact collection fits the model, having only examined a portion of the kitchen artifact group. It is expected that, with further analysis of the artifact collection, the 1715 fleet will also fit South's frontier model. Since the 1715 fleet was of a similar mission, origin, and destination, the likelihood that it will be consistent with both the findings of the 1733 fleet, and of South's frontier model, is great.

The theory of alternative economies can be seen in this study in the historic documentary evidence of smuggling goods aboard the 1733 fleet ships as the Spanish crews salvaged larger numbers of specie than recorded in the ships' manifests immediately following the wrecking events. The lack of taxation stamps on the overwhelming majority of the artifacts in these collections may indicate the trade of untaxed items within the colonies, an element of the alternative economy. The archaeological evidence of cutlery items with distinctive break patterns also speaks to the model of alternative economies as those pieces may have been intentionally broken to be repurposed or melted and remade as currency. The choice to break a piece which included an assayers stamp as well as a tax mark would be advantageous as those stamps would still be a testament to the quality of the silver, despite the fact that the silver item was broken.

In summary, a large portion of the 1715 fleet remains to be analyzed and effectively compared to elicit a corroboration of the frontier models discussed above. The 1733 fleet has already been analyzed regarding South's model, but still requires a more detailed analysis of the

complete collection of kitchen and tablewares, much like the 1715 fleet. Alternative economies are known to have been at play in the 1715 and 1733 eras, as well as specific ships as shown by the initial salvage results. With more study and analysis of these fleets' artifact collections, a more assured interpretation of their frontier status can be developed.

### *5.6 Conclusion*

This chapter has compared the quantity, type, design, and materials from the 1715 and 1733 fleets' cutlery collections. Artifact biographies illustrated the range of interpretations that can still be made from these artifacts which lack archaeological provenience. Finally, this chapter has provided examples of seventeenth and eighteenth-century artwork that include depictions of cutlery and other tableware and described various contemporary archaeological contexts which included cutlery artifacts. The consistencies between the artistic depictions of cutlery, artifacts from other archaeological contexts, and the cutlery artifacts from the 1715 and 1733 shipwreck fleets support the time period for the shipwrecked artifacts and indicate several stylistic and material trends held by Europeans and New World colonists of the era.



## CHAPTER SIX: DISCUSSION AND CONCLUSIONS

### *6.1 Introduction*

The previous chapters in this thesis have presented a literature review of the theoretical concepts employed in this study, historical background on Spanish colonialism, commerce, and mining in the New World, a catalog and description of the cutlery artifacts that are included in the 1715 and 1733 fleet collections, examples of object biographies of selected artifacts, and several comparisons to contemporaneous archaeological sites, textual descriptions, and artistic representations. This chapter will focus upon a discussion of the problems associated with this study, the recommendations for future study in this area, succinctly answer the research questions posed at the beginning of this thesis, and offer conclusions on the subjects contained herein.

### *6.2 Discussion*

This is the second academic study striving for a comprehensive analysis of the archaeological artifacts associated with early eighteenth century Spanish shipwrecks in Florida, and a wealth of knowledge has been gathered and presented. In the same token, extensive work is still needed in order to complete the pictures of the 1715 and 1733 Spanish fleets, their cargo, their underlying cultural indications, and their importance in history. It is hoped that with additional work, the following issues in this research might be mitigated.

#### 6.2.1 Contextual Problems

The main problem within this thesis is that the artifacts studied were removed from their original site contexts without regard for their positioning within the site bounds or in relation from one object to another. As previously stated, this problem led to the classification of

“unprovenanced” regarding the artifact collections here. Without context, numerous observations and conclusions that otherwise could have been successfully made cannot be fully realized. Scientific surveys and excavations take painstaking efforts to accurately record the location, both stratigraphically and horizontally, of each and every artifact and feature within an archaeological site. These programs also document the actions taken in regard to each artifact; whether it was systematically recovered from the site for analysis or left *in situ*. The contextual problem here extends beyond the cutlery items analyzed in this study to the whole of the collections associated with the 1715 and 1733 fleets.

### 6.2.2 Temporal Problems

As far as the evidence can tell, it seems that, despite treasure hunters removing artifacts from sites without recording their inter-site context, due to the permitting system in Florida, the recovered artifacts have been designated to at least a fleet, if not a specific shipwreck site. Again, due to the lack of systematic recording and background research, this information was taken at face value. Treasure hunters often conduct a cursory amount of research, enough to vaguely determine the origin, time period and nationality of a shipwreck, but rarely pursue such exhaustive research as archaeologists, where investigators are often reluctant to make immediate claims as to origin, time, nationality or name of a given shipwreck without significant substantive research and undoubted proof.

In the course of this analysis one glaring issue arose: the 1715 Fleet Collection included seven artifacts with some variation of the stamp attributed to Diego Gonzalez de la Cueva, Chief Mexican assayer from 1733 to 1778 (Anderson 1941:310). Since Gonzalez de la Cueva was not the assayer prior to the 1715 fleet setting sail, it would have been impossible for his products to have been associated with that fleet. It is inferred, therefore, that the items with stamps that date

to Gonzalez de la Cueva's tenure as Chief Assayer must have come from a ship that dates after 1730 and are included in the wrong collection. This speaks strongly for the argument against treasure hunting: if those items had been systematically excavated, recorded, and analyzed, and proper background research conducted, there is a much higher likelihood that they would have been a part of the correct collection. The unproven characteristics of these pieces clearly extend beyond the geographic location of an item, and throughout time as well. Without proper recording of each object, those items can only offer so much information before it becomes conjecture. Accurate documentation of each artifact within each archaeological site is imperative to a comprehensive study of any time, place, culture, or civilization in history.

### 6.2.3 Identification Problems

In addition to the issue of ability to correctly attribute items to a particular wreck site or fleet, the lack of information regarding particular physical characteristics of the artifacts in this study make it difficult to determine other aspects of their existence. The lack of sources discussing the range of stamps and other markings makes their utilization as dating or location mechanisms utterly impossible. Where the stamp associated with Diego Gonzalez de la Cueva indicated artifacts attributed to the wrong fleet based upon other studies' research and results, many stamps that appeared to be from a manufacturer or assayer ("MASCA" and "TVRA") have not been positively identified in historical sources. These stamps, therefore, do not indicate any specific geographic location or time period. Another problem with identification regards the original item type of various handles. As shown in Kathryn C. Buhler's (1972) survey of American silver, there are numerous similarities between cutlery handles and the handles of cups, pitchers, and drawer pulls. Given the placement of various breaks, some of the items included in this study may have originally been part of a piece that was not, in fact, cutlery.

Since the artifacts from these shipwreck sites were recovered by treasure hunters and split between them and the state, the examination of the 1715 and 1733 artifact collections will always be incomplete.

#### 6.2.4 Comparative Problems

Like the issue discussed in the preceding section, the lack of supplementary academic sources on eighteenth century cutlery, Spanish or otherwise, made comparisons to anything beyond the collections in this study difficult. While general developments and design trends were easy enough to determine, more extensive explanations and backgrounds of each design characteristic would aid in comparisons and the extrapolation of wider ranges of information from smaller details.

A secondary comparative problem is the disparity in number of artifacts in the two fleets analyzed. The 1715 fleet collection included far more individual pieces than the 1733 fleet collection. This is explained by the exponentially more successful salvage efforts by the survivors of the 1733 fleet shipwrecks. Unfortunately, even for a strictly quantitative comparison, there is no indication in historical records of the number of pieces that ultimately arrived in Spain nor the fate of those items. This lack of artifacts, again, speaks to the general lack of academic focus upon eighteenth century cutlery which could have been used, or be used in the future, to make useful comparisons and identifications. With a wider range of sources, both physical and published, for artifact descriptions and characteristics, the study of unprovenanced artifacts will become easier, more relatable, and more informative.

### *6.3 Answering the Research Questions*

This thesis sought to reach reasonable conclusions regarding unprovenanced foodways artifacts by presenting a case study of eighteenth century artifacts and analyzing them both in terms of physical shape, size, and characteristics, but also in the form of artifact biographies. The preceding chapters have illustrated the theoretical and methodological frameworks consulted during this project, the historical background for the time period in question, and the artifacts studied in terms of their type quantities, and differences in size, shape, form, and function. By presenting this information, this thesis has addressed the following research questions:

#### 6.3.1 What conclusions can be reached regarding Spanish colonial foodways in the eighteenth century through the examination of unprovenanced artifacts recovered from shipwrecks in Florida waters?

Spanish colonization of the Americas led swiftly to extensive trade networks between the New and Old Worlds wherein the exchange of ideas, goods, and cultures occurred. The form and function of cutlery through time developed initially out of necessity, and changed in terms of form, preferences in style, and the availability of materials needed to manufacture such pieces. Evidence from the 1715 and 1733 Spanish fleets artifact collections indicates the early eighteenth century culmination of these two processes exemplified by the following: the increase in silver availability and products after the establishment of New World mining camps; designs consistent with European trends of the time, but not to the standard of quality of European goods; and markings consistent with imperial regulations and personal, cultural trends of the time.

The alternative economy was certainly at play at the time of the 1715 and 1733 fleet disasters as evidenced by historic documents and archaeological studies. Archaeological sites throughout the southern United States, Central, and South America have shown that, despite

imperial Spanish regulations on trade with other nations, colonists were willing to trade with other nations to procure the goods which they desired. Some artifacts are especially good at denoting the alternative economy at play, such as coins and ceramics. Markings, materials, and fragmentation patterns in foodways items, such as cutlery, could also indicate international trade or the smuggling of contraband goods.

The cutlery artifacts in the 1715 and 1733 fleet collections were compared to contemporaneous archaeological artifacts, museum collections, and artwork. This thesis has shown that the form and function of these pieces are consistent with known pieces of cutlery from the late seventeenth and early eighteenth centuries. These comparisons allow for interpretation of the rise and fall of design, material, and size trends. The variation of materials and styles speaks to the necessity of trade, sanctioned or not, between Spaniards in the New World and merchants of other nationalities. The artifacts in the 1715 and 1733 fleet collections have the potential to aid in the formation of a wider series of typological patterns because of the extensive range in types, sizes, materials, and designs of foodways items within those collections.

### 6.3.2 What are the biographies of cutlery from eighteenth century Spanish shipwrecks?

The artifact biographies of cutlery pieces from the two eighteenth century Spanish shipwrecks studied in this collection are less extensive than typical object biographies due to their lack of archaeological context, but nonetheless are helpful in beginning stages of the creation of a complete picture of early eighteenth century Spanish maritime life and culture. The biographies in this thesis relate many of the conclusions that can be reached when studying artifacts which lack clear provenience. These biographies also illustrate several problems that arise when examining artifacts without context. Thus, the object biographies created for artifacts

in this thesis were a crucial component to understanding the source, meaning, possible usage, and popularity of each piece. The tiny clues yielded in the analysis of the artifacts in this thesis have the potential to lead to wider interpretations and the expansion of the knowledge base of eighteenth century Spanish cutlery.

The biographies of cutlery artifacts depicted in this thesis focus upon the variation in material, size, and design of individual pieces. The artifacts chosen for the biographies section were selected based on the commonality or rarity of a particular feature or series of features. Each artifact was described in detail regarding all observable aspects. Artifacts were then compared to other archaeological sites of a similar time period or context as well as artwork that included depictions of cutlery.

### 6.3.3 What do these biographies relate about eighteenth century Spanish colonial foodways and trade?

The artifact biographies presented as a part of this thesis show that Spanish life and trade during the eighteenth century were intimately connected to their colonial context. The discrepancies in size, shape, and presence or absence of stamps between the cutlery items examined in this thesis indicate a lack of standardization of the silversmithing industry when it came to items for everyday use as opposed to the incredibly standardized forms, sizes, and markings of specie. The broken pieces of cutlery in the collections presented here can be attributed to a number of factors including the wrecking process, natural changes in wear, and the effects of the marine environment, but also to deliberate human intervention and modification. As has been presented throughout this thesis, the alternative economy and the traditions of smuggling and contraband goods were alive and well in the early eighteenth century Spanish territories of the New World. Breaking pieces of cutlery in order to have them melted

into coins or be treated as coins is a possible explanation and relation to the alternative economy of the eighteenth century. If one could smuggle them onboard a ship as “personal possessions” they would not be subject to the same taxes as goods marked for trade, thus evading the high tariffs imposed on the citizens of the New World territories and the merchants who traded there.

The artifact biographies in this thesis also elucidate a number of issues that arise with artifacts that have been recovered without scientific procedures in place. The lack of background research and focus on the cheapest, quickest methods of recovery, to thereby sell objects as quickly and expensively as possible are some of the biggest impediments when attempting to study such sites and artifacts. Treasure hunters’ background research is often conducted just enough for their claims to seem credible and they tend to hope that the items will speak for themselves in terms of value and validity. In addition to the lack of research conducted that might confirm or deny the identity of a particular shipwreck, the methods employed by treasure hunters are often damaging to the archaeological site and integrity as well as the artifacts.

Finally, the selling of artifacts is universally condemnable within the academic community, yet praised by treasure hunters as allowing individuals to “own a piece of history” when in reality the history should belong to humanity as a whole. Conversely, academic endeavors often include extensive research, painstaking excavation and recovery methods, and strictly prohibit the sale or purchase of archaeological artifacts, preferring instead to conserve and display them in museums and institutions for the public. These stark differences have been shown in the artifact biographies as well as the subsequent discussion and interpretation, in the amount and quality of the information that exists in regard to these artifacts and the amount and quality of information that would have been possible, and quite probable, if scientific theory and methodology had been employed.



#### *6.4 Recommendations for Future Research*

Stanley South's (1977) work on artifact categorization, Russell K. Skowronek's (1982) master's thesis, and Kathleen Deagan's (1987, 2002) studies of colonial Spanish artifacts have all played a part in paving the way for future researchers. More work, however, is needed, especially regarding foodways artifacts, artifacts from the 1715 and 1733 fleets in particular, and those artifacts which lack provenance. To accomplish the expansion of the knowledge base in terms of these three groups, an extensive study of all of the artifacts within the 1715 and 1733 fleet collections is both recommended and necessary. One initial way to achieve this would be to begin by examining all the foodways (kitchen and dining wares) artifacts within the two fleets. From there, researchers could follow Stanley South's (1977:95-96) artifact categories to complete the study of all the artifacts in smaller, more manageable groupings.

Another recommendation for the future of the artifacts in this study is to pursue public outreach opportunities to illustrate, for a wider audience, the various reasons scientific methods produce more knowledge and better long term results than those utilized by treasure hunters. This thesis has shown the problems with studying unprovenanced artifacts, as well as the information that may still be gleaned from them. There will, no doubt, be more and more examples of gaps in knowledge when it comes to unprovenanced artifacts as more artifact categories are reported upon. It would be beneficial for the future of archaeology to present these problems to the public in an engaging, non-threatening or accusatory way, so as to comprehensively demonstrate the benefits of systematic, scientific methodology for the investigation, survey, and excavation of archaeological sites and the detriment of removing artifacts without recording their individual location and relation within the site. The inclusion of

the public in these scientific projects could also be beneficial: the public can see “up close and personal” the research, labor, and excitement of archaeology, while assisting project directors with said research and labor in a supervised manner and setting. Perhaps, with time and increased awareness, the attitude of the public towards treasure hunting will shift to one of disapproval and the effects of treasure hunters on archaeological sites will diminish.

### *6.5 Conclusion*

The objective of this thesis was to study unprovenienced cutlery artifacts from two early eighteenth century shipwrecked Spanish fleets as a case study to illustrate the importance and benefits of studying artifacts that lack archaeological context. Through historical research and archaeological analysis, a series of typologies based upon existing distinctions and established trends of the early eighteenth century was formed. Object biographies constructed for a series of artifacts have shown that though these pieces lack provenience they can still offer information to the historical and archaeological communities. The stamps on broken items raise an interesting concept of using broken silver pieces as specie, and this could lead to new scholastic developments as well as renewed interest in the study of alternative economics. It is hoped that this comprehensive study of cutlery from the 1715 and 1733 Spanish Plate Fleets can and will be used in the future, as well as the comparative collections presented herein, in studies of both cutlery artifacts and artifacts which lack archaeological context.

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## APPENDIX A: GLOSSARY

*Añil*: “Indigo, blue dye (English: anil)” (Weller 2001:293)

*Asiento*: “an exclusive permit and contract to import slaves to the Spanish Americas” (Deagan 2002:313)

*Arroba*: “a measure of weight comprising approximately 14.3 kg (about 25 lb)” (Deagan 2002:313)

*Audiencias*: “high court of a region, with governing powers; the region under its jurisdiction” (Andrews 1978:256)

*Capitana*: “flagship” (Andrews 1978:256)

*Caribbean*: “... primarily the sea that stretches from the great arc of the Lesser Antilles westwards to the Yucatan Channel, a distance of some 1500 miles, and secondarily the lands and peoples contained within or bordering that sea.” (Andrews 1978:1)

*Cochineal*: “small insect that thrives on the native nopal cactus of central and southern Mexico. The females were collected, dried, and crushed into a deep red dyestuff coveted by Europeans.” (Mills and Taylor 1998:348)

*Cubierto*: “... served as a royal gift is the set... comprising knife, fork, and spoon...” (Johnson 1944:108)

*Fanega*: “unit of dry measure, about 1.5 bushels.” (Mills and Taylor 1999:349); “a unit of weight or volume comprising about 4 *arrobas*, 44.8 kg (100 lb), or 1.6 bushels” (Deagan 2002:314)

*Food-ways*: “a term used by the folklorist Jay Anderson to describe “the whole interrelated system of food conceptualization, procurement, distribution, preservation, preparation, and consumption shared by all members of a particular group”” (Deetz 1996:73); “the intersection of food and culture” (Thursby 2008:176)

*Frontier exchange*: “intercultural relations that evolved within a geographical area in a way that emphasizes the initiatives taken by the various participants” (Usner 1992:8); “activities surrounding the production of food and other goods among Indians, settlers, and slaves were the foundation of the frontier exchange economy” (Usner 1992:149)

*Hall-mark*: “the mark identifying the hall, or assay office, where silver was taken for assay, but now applied to any standard or tax mark on precious metals other than the maker’s mark” (Truman 1999:197)

*Marco*: “equals ½ pound = 230 grams = 67 *reales*” (Weller 2001:294)

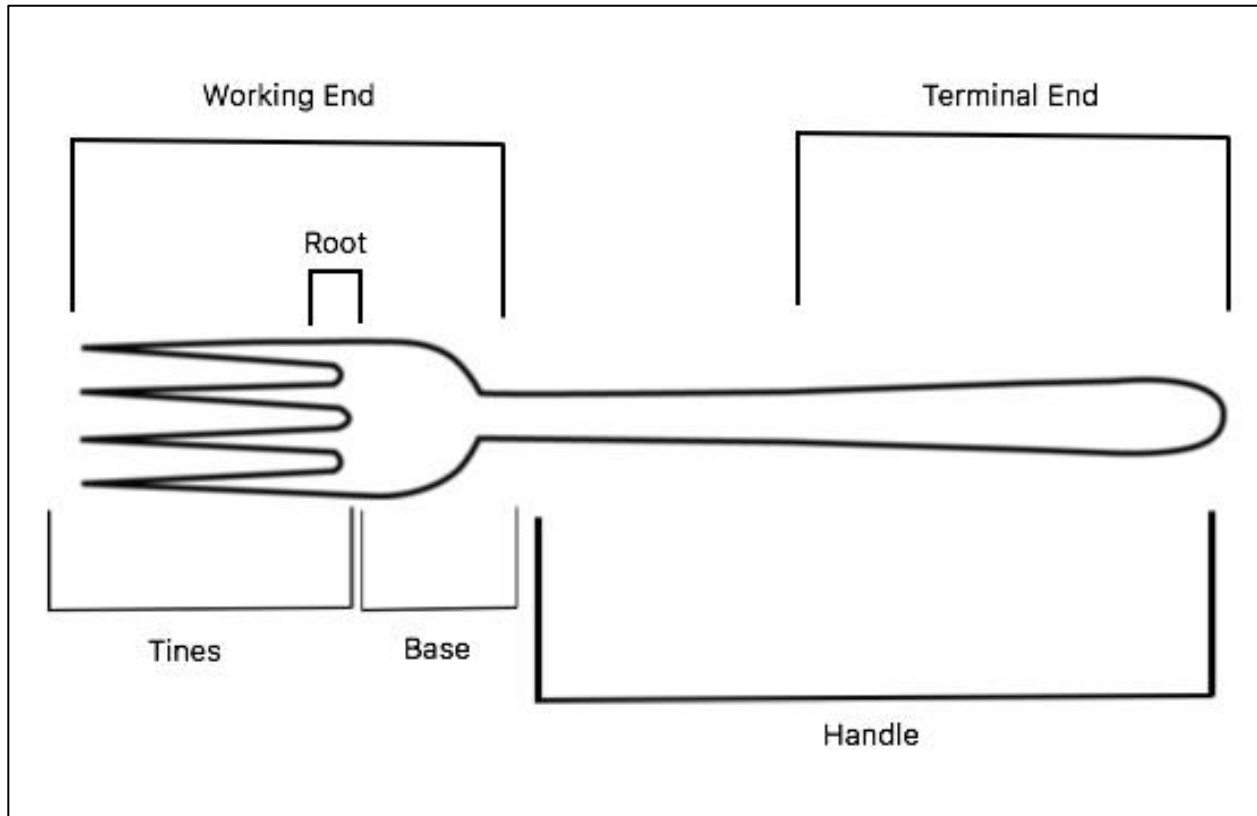
*Plata*: “silver” (Weller 2001:293); *plata labrada*=worked silver (Weller 2001:293)

Presidio: “a fortified town on a frontier, existing principally for the defense of the empire”  
(Deagan 2002:316)

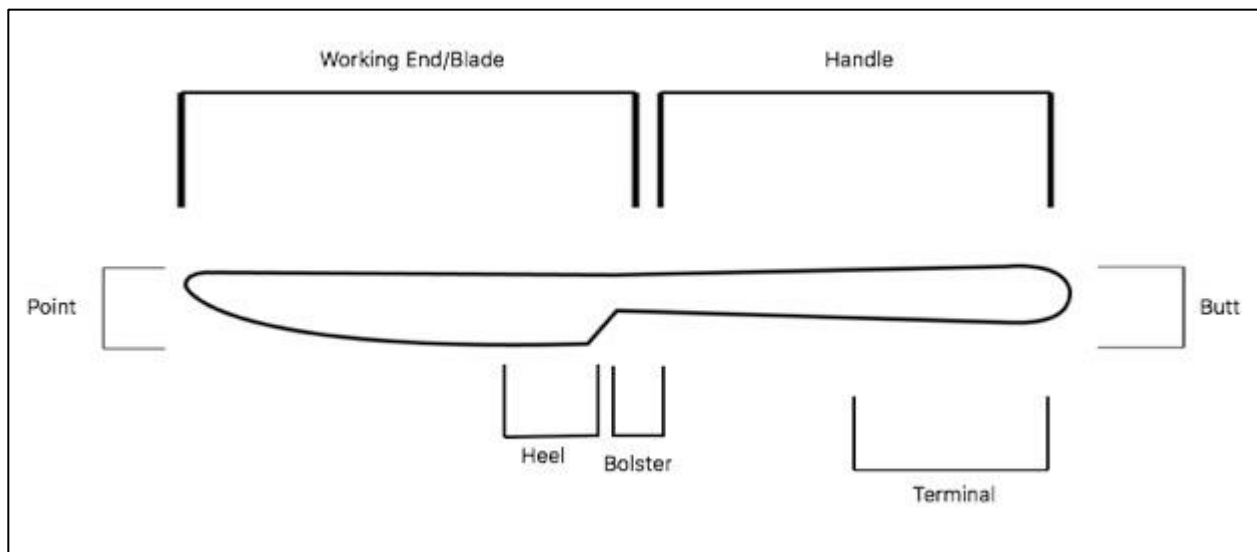
Situado: “a government subsidy of goods and specie provided to military *presidio* colonies”  
(Deagan 2002:316)

Terminus post quem: “a relative dating method used by archaeologists; “date after which””  
(Deagan 2002:192)

## APPENDIX B: CUTLERY ANATOMY

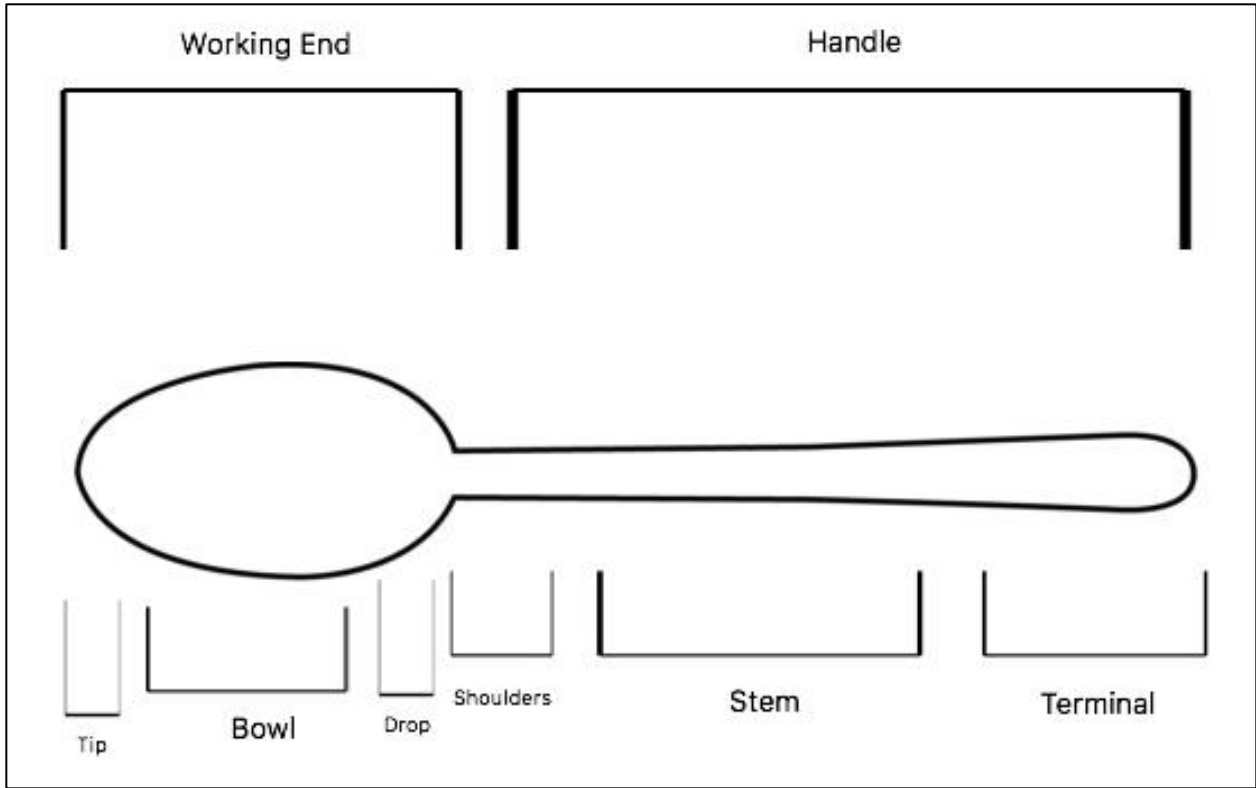


Anatomy of a Fork [Illustration by author, 2017]



Anatomy of a Table Knife [Illustration by author, 2017]





Anatomy of a Spoon [Illustration by author, 2017]

APPENDIX C: 1715 FLEET ARTIFACT COLLECTION PHOTOS



Artifact Number 94A.036.000839.0001 – Spade II Handle Encrusted with Marine Debris



Artifact Number 94A.036.000839.0001 – Spade II Handle Encrusted with Marine Debris



Artifact Number 94A.036.000843.0001 – Figurine Handle, Front



Artifact Number 94A.036.000843.0001 – Figurine Handle, Back



Artifact Number 94.36.829.1 – Oval II Handle, Front



Artifact Number 94.36.829.1 – Oval II Handle, Back



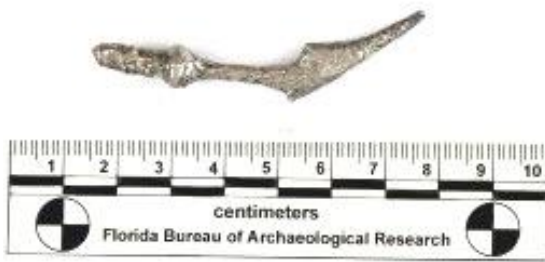
Artifact Number 94.36.829.2 – Oval III Handle, Front



Artifact Number 94.36.829.2 – Oval III Handle, Back



Artifact Number 94.36.829.3 – Spade II Handle Front (L) and Back (R)



94-36-829.4



94-36-829.4

Artifact Number 94.36.829.4 – Rattail Attachment Point Side (L) and Top (R)



Artifact Number 94.36.829.5 – Handle Fragment with Rattail Attachment Side (L) and Top (R)



Artifact Number 94A.36.829.6 –  
Handle Fragment



Artifact Number 94.36.829.8 –  
Handle Fragment



Artifact Number 94.36.829.7 – Fiddle Handle Fragment with Stamps Top (L) and Bottom (R)



Artifact Number 94.36.829.9 – Oval I Handle Fragment Side (L) and Top (R)



94A.036.000818.0001

94A.036.000818.0001

Artifact Number 94A.036.000818.0001 – Spade I Handle Fragment, Side (L) Top (R)



94A.036.000820.0001

94A.036.000820.0001

Artifact Number 94A.036.000820.0001 – Spade I Handle Fragment Side (L) and Top (R)





Artifact Number 94A.036.000822.0001 – Spade I Handle Fragment



Artifact Number 94.36.738.1 – Handle Fragment

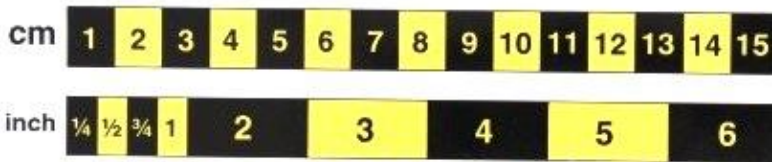


Artifact Number 94.36.738.2 – Oval I Handle Fragment Side (L) and Top (R)



94A.036.000807.0001

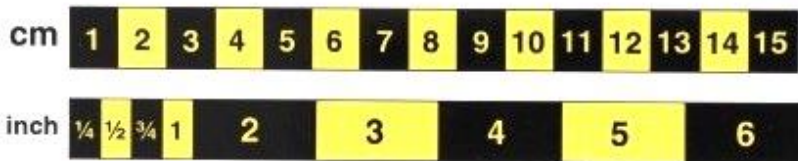
Artifact Number 94A.036.000807.0001 – Oval I Handle Fragment, Side



Florida Bureau of Archaeological Research

94A.036.000807.0001

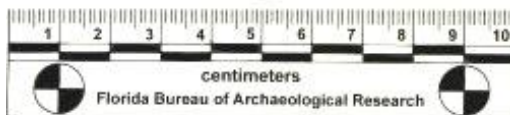
Artifact Number 94A.036.000807.0001 – Oval I Handle Fragment, Proximal Section



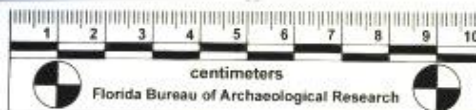
Florida Bureau of Archaeological Research

94A.036.000807.0001

Artifact Number 94A.036.000807.0001 – Oval I Handle Fragment, Distal Section



94A.036.000815.0001



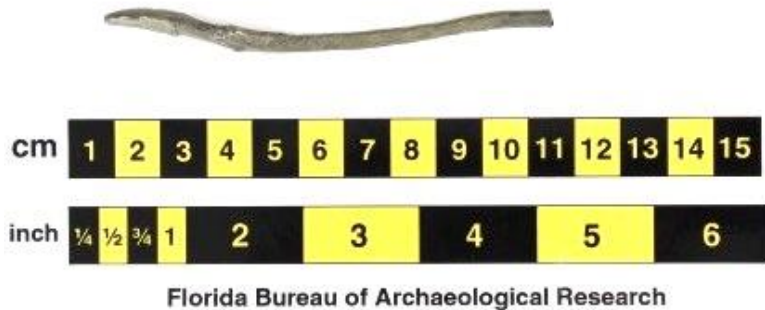
94A.036.000815.0001

Artifact Number 94A.036.000815.0001 – Oval I Handle Fragment Side (L) and Top (R)





Artifact Number 94A.036.000831.0001 – Fiddle Handle Fragment Top (L) and Bottom (R)



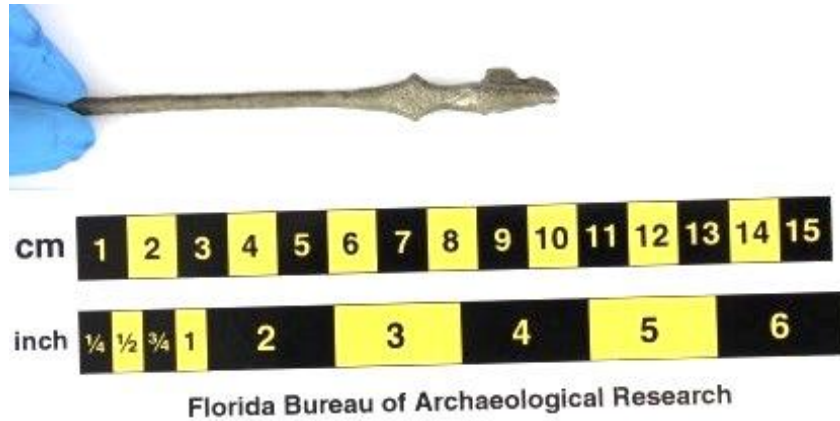
94A.036.000817.0001

Artifact Number 94A.036.000817.0001 – Handle Fragment with Rattail Attachment, Side 1



94A.036.000817.0001

Artifact Number 94A.036.000817.0001 – Handle Fragment with Rattail Attachment, Top



94A.036.000817.0001

Artifact Number 94A.036.000817.0001 – Handle Fragment with Rattail Attachment, Bottom



94A.036.000823.0001

Artifact Number 94A.036.000823.0001 – Spade I Handled Fork, Top



94A.036.000823.0001

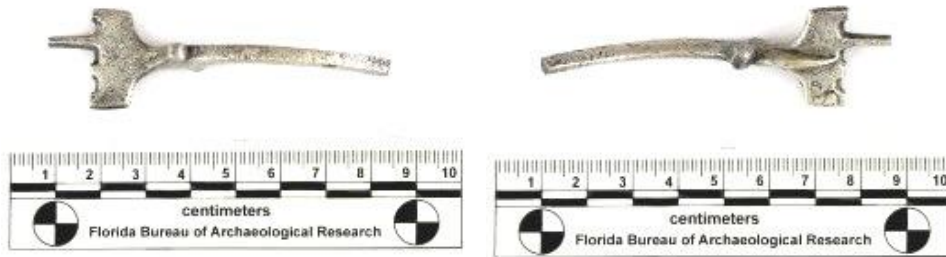
Artifact Number 94A.036.000823.0001 – Spade I Handled Fork, Bottom



94A.036.000819.0001

94A.036.000819.0001

Artifact Number 94A.036.000819.0001 – Square-based Fork Fragment Front (L) and Back (R)



94A.036.000644.0001

94A.036.000644.0001

Artifact Number 94A.036.000644.0001 – Square-based Fork Fragment Front (L) and Back (R)



94A.036.000813.0001

Artifact Number 94A.036.000813.0001 – Round-based Fork Fragment, Front



Artifact Number 94A.036.000813.0001 – Round-based Fork Fragment, Back



Artifact Number 94.36.814.2 – Fork and Handle Concretion, Front



Artifact Number 94.36.814.2 – Fork and Handle Concretion, Back





Artifact Number 94.36.824.1-3 – Square-based Fork Fragments, Top (L) and Bottom (R)



94A.036.000821.0001



94A.036.000821.0001

Artifact Number 94A.036.000821.0001 – Spoon Fragment Encrusted with Marine Debris, Top (L) and Bottom (R)



Artifact Number 06A.152.7.1 – Trefid II Handle Fragment



72A.015.000245.0001

Artifact Number 72A.015.000245.0001 – Oval I Handle Fragment and Floral Handle Fragment



Artifact Number 72.21.46.1 – Bone Handle Fragment, Side 1



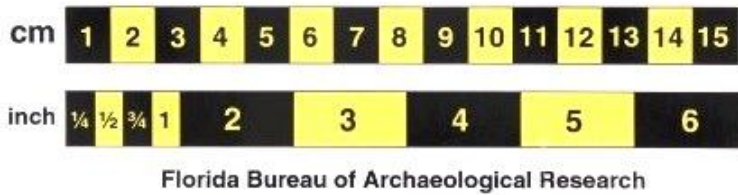
Artifact Number 72.21.46.1 – Bone Handle Fragment, Side 2



Artifact Number 07.203.21.1 – Bone Handle, 2 Pieces, Front

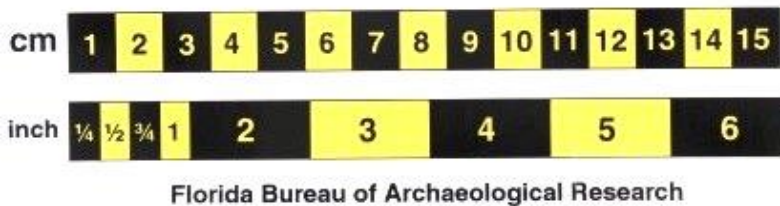


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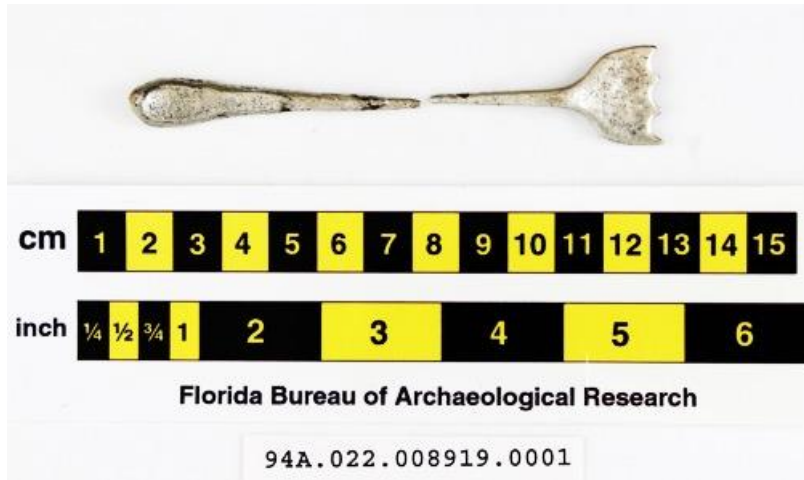
94A.022.008918.0001

Artifact Number 94A.022.008918.0001 – Oval II Handled Fork Fragments, Front

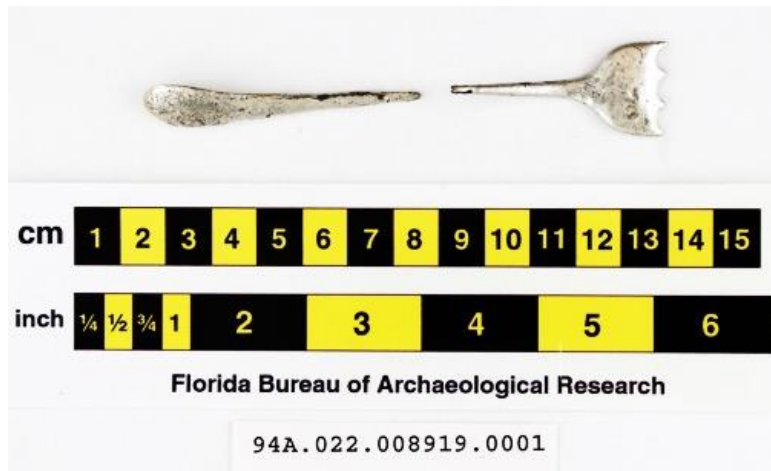


94A.022.008918.0001

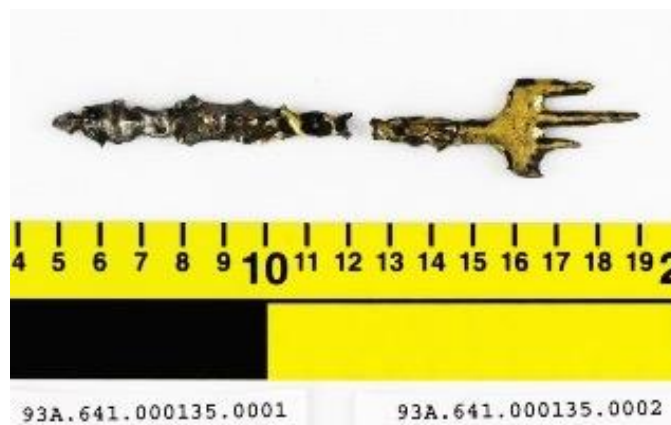
Artifact Number 94A.022.008918.0001 – Oval II Handled Fork Fragments, Back



Artifact Number 94A.022.008919.0001 – Oval II Handled Fork Fragments, Front

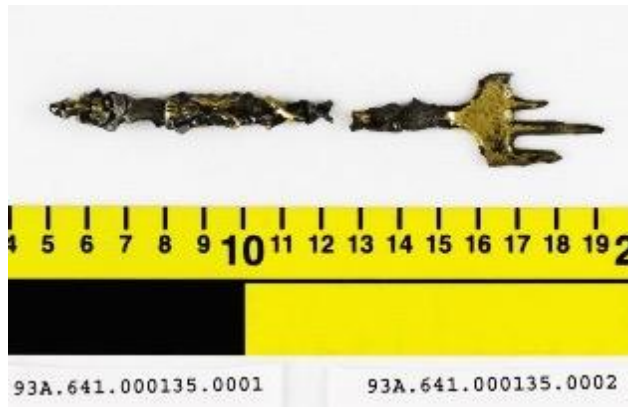


Artifact Number 94A.022.008919.0001 – Oval II Handled Fork Fragments, Back



Artifact Number 93A.641.000135.0001-2 – Figurine Handled Gilt Fork, Front





Artifact Number 93A.641.000135.0001-2 – Figurine Handled Gilt Fork, Back



Artifact Number 93A.641.000146.0001 – Spade I Handled Fork Front (L) and Back (R)



72A.015.000266.0001

Artifact Number 72A.015.000266.0001  
Silver Fork Fragment with Stamps, Front



72A.015.000266.0001

Artifact Number 72A.015.000266.0001  
Silver Fork Fragment with Stamps, Back



93A.641.000112.0001

Artifact Number 93A.641.000112.0001 – Twisted Handle Fragment



Artifact Number 93A.641.000112.0001 – Twisted Handle Fragment, Crest on Butt of Handle



93A.641.000113.0001

Artifact Number 93A.641.000113.0001 – Twisted Handle Fragment



93A.641.000114.0001

Artifact Number 93A.641.000114.0001 – Twisted Handle Fragment



Artifact Number 93A.641.000114.0001 – Twisted Handle Fragment, Crest on Butt of Handle



Artifact Number 93A.641.000115.0001 – Twisted Handle Fragment



Artifact Number 15A.019.076549.0001 – Oval II Handled Spoon with Stamps, Front



Artifact Number 15A.019.076549.0001 – Oval II Handled Spoon with Stamps, Back



Artifact Number 02A.156.000002.0001 – Oval II Handled Spoon, Front





02A.156.000002.0001

Artifact Number 02A.156.000002.0001 – Oval II Handled Spoon, Back



72A.021.000053.0001

Artifact Number 72A.021.000053.0001 – Fiddle Handled Spoon with Stamps, Front



72A.021.000053.0001

Artifact Number 72A.021.000053.0001 – Fiddle Handled Spoon with Stamps, Back



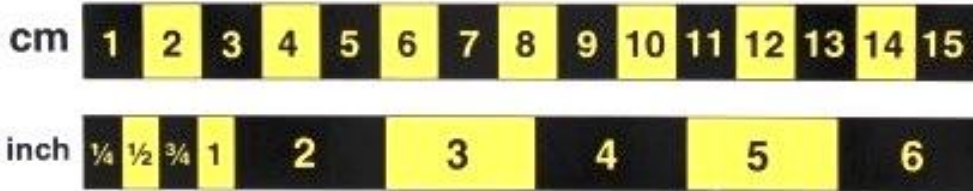
Artifact Number 72A.021.000053.0001 – Fiddle Handled Spoon with Stamps, Close-up



Artifact Number 08.329.1.1 – Twisted Handle Spoon, Front



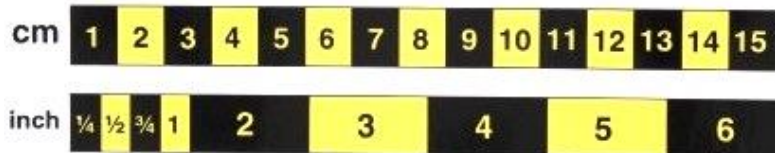
Artifact Number 08.329.1.1 – Twisted Handle Spoon, Back



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93A.641.000136.0001

Artifact Number 93A.641.000136.0001 – Twisted Handle Spoon, Front



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93A.641.000136.0001

Artifact Number 93A.641.000136.0001 – Twisted Handle Spoon, Back





72A.015.000296.0001

Artifact Number 72A.015.000296.0001 – Oval I Handled Spoon, Front



72A.015.000296.0001

Artifact Number 72A.015.000296.0001 – Oval I Handled Spoon, Back



93A.671.000109.0001

Artifact Number 93A.671.000109.0001 – Dog-Nose Handled Spoon, Front

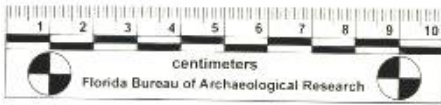


93A.671.000109.0001

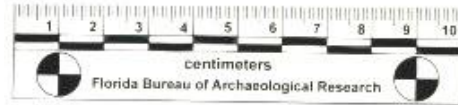
Artifact Number 93A.671.000109.0001 – Dog-Nose Handled Spoon, Back



Artifact Number 06.151.12.1 – Spoon Bowl Fragment Front (L) and Back (R)

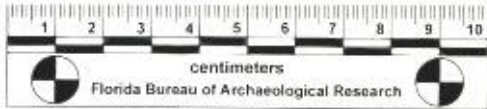


04A.119.000002.0001

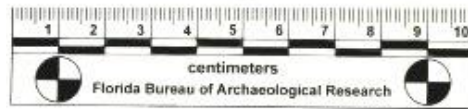


04A.119.000002.0001

Artifact Number 04A.119.000002.0001 – Spoon Bowl Fragment Front (L) and Back (R)

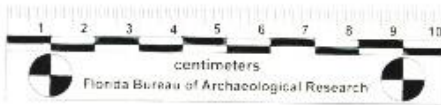


72A.015.000242.0001

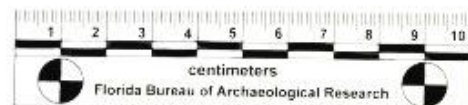


72A.015.000242.0001

Artifact Number 72A.015.000242.0001 – Spoon Bowl Fragment Front (L) and Back (R)

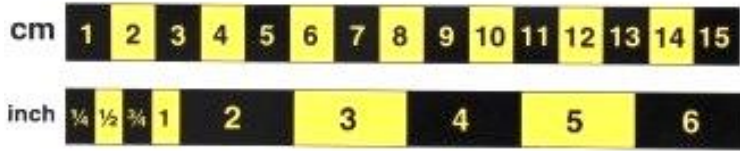


72A.015.000318.0001



72A.015.000318.0001

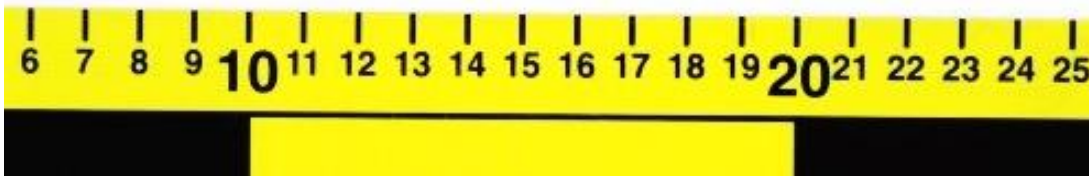
Artifact Number 72A.015.000318.0001 – Spoon Bowl Fragment Front (L) and Back (R)



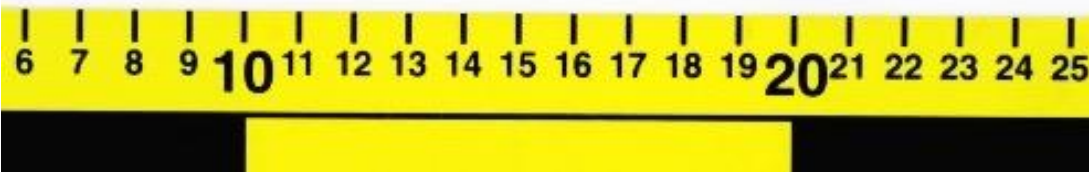
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72A.015.000308.0001

Artifact Number 72A.015.000308.0001 – Oval I Handled Spoon Fragment



Artifact Number 93.671.141.1 – Fiddle Handled Spoon with Stamps, Front

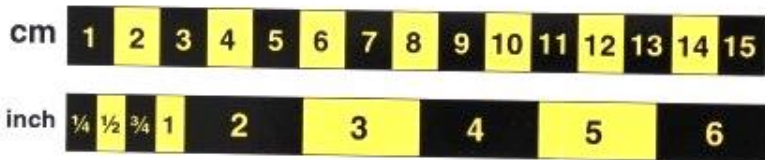


Artifact Number 93.671.141.1 – Fiddle Handled Spoon with Stamps, Back



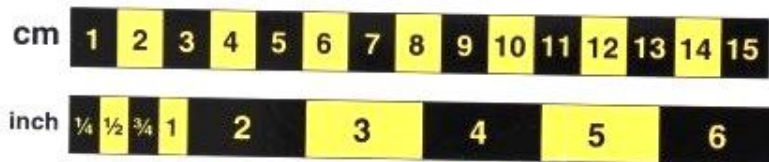


Artifact Number 93.671.141.1 – Fiddle Handled Spoon with Stamps, Close-up



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Artifact Number 72A.15.241.1-2 – Floral Handled Spoon Fragments, Side 1



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Artifact Number 72A.15.241.1-2 – Floral Handled Spoon Fragments, Front



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 Artifact Number 72A.15.241.1-2 – Floral Handled Spoon Fragments, Back



Artifact Number 72A.015.000265.0001-3 – Trefid I Handled Fork, Front (L) and Back (R)



Artifact Number 93A.671.000135.0001 – Oval I Handled Fork, Front



Artifact Number 93A.671.000135.0001 – Oval I Handled Fork, Back



Artifact Number 72A.015.000235.0001 – Oval I Handled Fork, Front



Artifact Number 72A.015.000235.0001 – Oval I Handled Fork, Back



Artifact Number 06A.151.000008.0001 – Oval I Handled Fork, Front



Artifact Number 06A.151.000008.0001 – Oval I Handled Fork, Back



72A.015.000297.0001

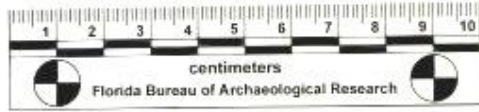
Artifact Number 72A.015.000297.0001 – Oval I Handled Fork Fragment, Front



72A.015.000297.0001

Artifact Number 72A.015.000297.0001 – Oval I Handled Fork Fragment, Back



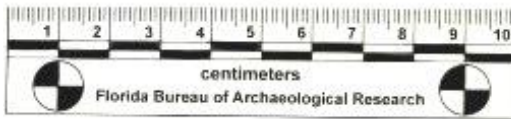


72A.015.000300.0001

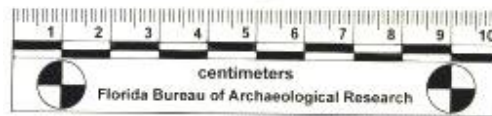


72A.015.000300.0001

Artifact Number 72A.015.000300.0001 – Square-based Fork Fragments Front (L) and Back (R)

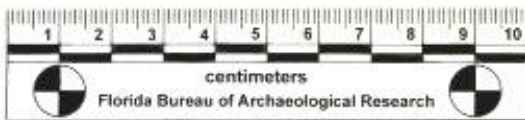


72A.015.000315.0001

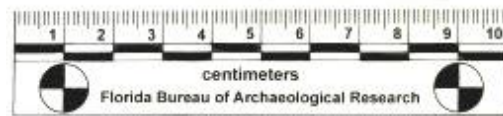


72A.015.000315.0001

Artifact Number 72A.015.000315.0001 – Square-based Fork Fragments Front (L) and Back (R)

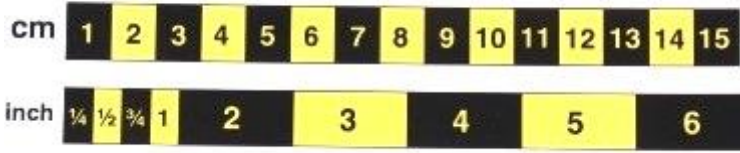


93A.671.000164.0001



93A.671.000164.0001

Artifact Number 93A.671.000164.0001 – Twisted Handle Fork Front (L) and Back (R)



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Artifact Number 06.151.2.1 – Square-based Fork Fragment, Front



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Artifact Number 06.151.2.1 – Square-based Fork Fragment, Back



Artifact Number 06.151.2.1 – Square-based Fork Fragment, Stamps Close-up



Artifact Number 72A.015.000778.0001 – Oval II Handled Fork, Front



72A.015.000778.0001

Artifact Number 72A.015.000778.0001 – Oval II Handled Fork, Back



Artifact Number 72A.015.000236.0001 – Trefid I Handled Fork with Stamp, Front



Artifact Number 72A.015.000236.0001 – Trefid I Handled Fork with Stamp, Back



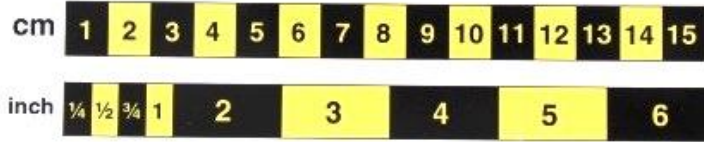
Artifact Number 72A.015.000236.0001 – Trefid I Handled Fork with Stamp, Close-up



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72A.015.000307.0001

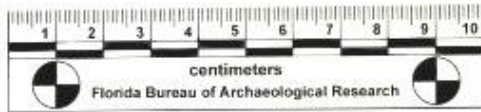
Artifact Number 72A.015.000307.0001 – Oval II Handle Fragment, Front



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72A.015.000307.0001

Artifact Number 72A.015.000307.0001 – Oval II Handle Fragment, Back

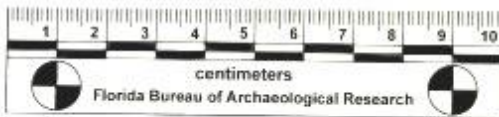


72A.015.000317.0001



72A.015.000317.0001

Artifact Number 72A.015.000317.0001 – Floral Handle Fragment Front (L) and Back (R)



93A.671.000132.0001



93A.671.000132.0001

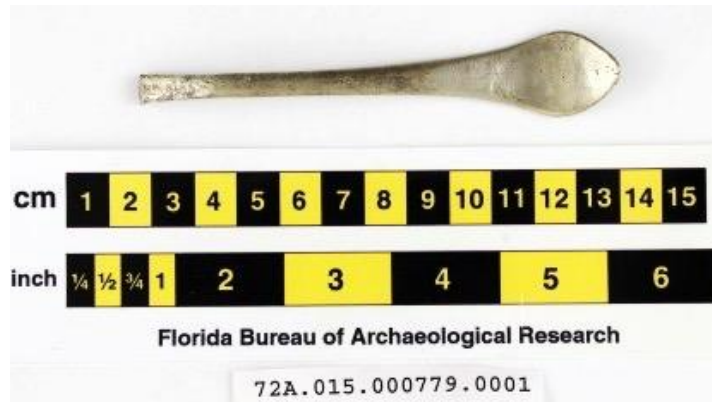
Artifact Number 93A.671.000132.0001 – Figurine Handle Fragment Front (L) and Back (R)





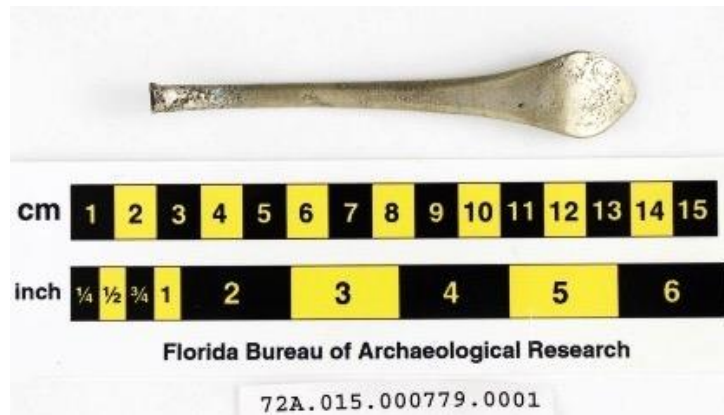
01A.100.000002.0001

Artifact Number 01A.100.000002.0001 – Floral Handle Fragment



72A.015.000779.0001

Artifact Number 72A.015.000779.0001 – Spade II Handle Fragment, Front



72A.015.000779.0001

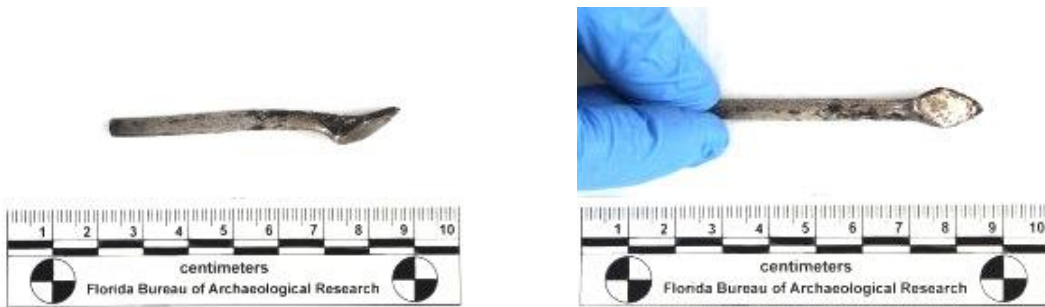
Artifact Number 72A.015.000779.0001 – Spade II Handle Fragment, Back



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72A.015.000320.0001

Artifact Number 72A.015.000320.0001 – Spade I and Floral Handle Fragments



72A.015.000319.0001

72A.015.000319.0001

Artifact Number 72A.015.000319.0001 – Spade I Handle Fragment Side (L) and Front (R)



02A.155.000006.0001

02A.155.000006.0001

Artifact Number 02A.155.000006.0001 – Spade I Handle Fragment Front (L) and Back (R)



72A.015.000251.0004



72A.015.000251.0004

Artifact Number 72A.015.000251.0004 – Fiddle Handle Fragment with Stamps Front (L) and Back (R)



Artifact Number 72.15.01.708 – Bone Handle 1, Interior



Artifact Number 72.15.01.708 – Bone Handle 1, Exterior





Artifact Number 72.15.01.708 – Bone Handle 1, Two Pieces Together



Artifact Number 72.15.01.708 – Bone Handle 2, Interior



Artifact Number 72.15.01.708 – Bone Handle 2, Exterior



Artifact Number 72.15.31 – Bone Handle Fragment, Side 1



Artifact Number 72.15.31 – Bone Handle Fragment, Side 2



Artifact Number 72.15.269.1 – Bone Handle Fragment with Silver Bolster, Side 1



Artifact Number 72.15.269.1 – Bone Handle Fragment with Silver Bolster, Side 2



Artifact Number 72A.015.000323.0001 – Silver Handle, Side 1



Artifact Number 72A.015.000323.0001 – Silver Handle, Side 2





Artifact Number 72A.015.000267.0001 – Silver Handle, Side 1



Artifact Number 72A.015.000267.0001 – Silver Handle, Side 2



Artifact Number 93.671.6517.1 – Iron Knife



Artifact Number 93.643.38.1 – Spoon Bowl Front (L) and Back (R)



72A.018.000219.0001



72A.018.000219.0001

Artifact Number 72A.018.000219.0001 – Spoon Bowl Fragment Front (L) and Back (R)

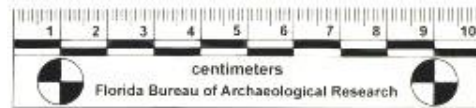
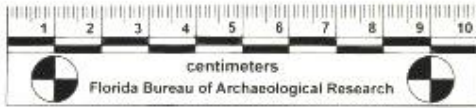


72A.018.000174.0002



72A.018.000174.0002

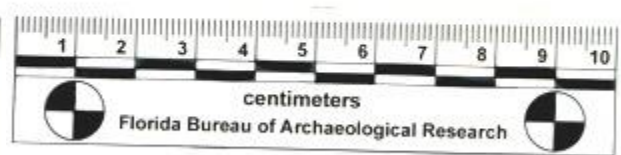
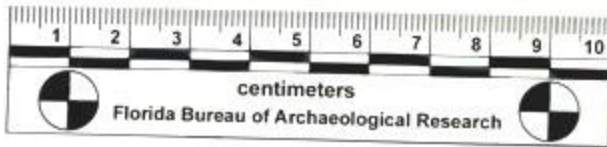
Artifact Number 72A.018.000174.0002 – Spoon Fragments Front (L) and Back (R)



72A.018.000217.0001

72A.018.000217.0001

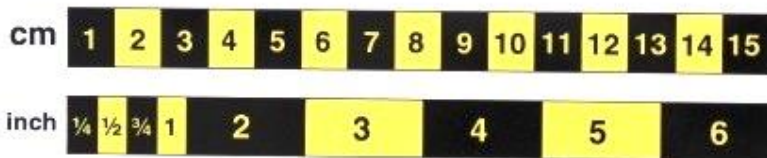
Artifact Number 72A.018.000217.0001 – Spoon Fragments Front (L) and Back (R)



72A.018.000206.0001

72A.018.000206.0001

Artifact Number 72A.018.000206.0001 – Fork Fragment Front (L) and Back (R)



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72A.018.000174.0003

Artifact Number 72A.018.000174.0003 – Spoon Fragments, Back



72A.018.000174.0003

Artifact Number 72A.018.000174.0003 – Spoon Fragments, Front



72A.018.000263.0001

Artifact Number 72A.018.000263.0001 – Oval II Handle Fragment



Artifact Number 72.18.168.1 – Silver Handle, Side 1





Artifact Number 72.18.16.1 – Silver Handle, Side 2

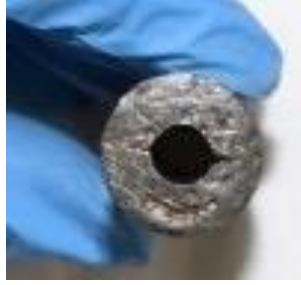


Artifact Number 72.18.168.1 – Silver Handle, Side 3

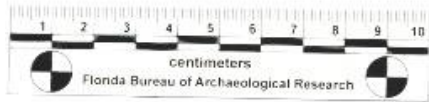


Artifact Number 72A.018.000168.0002 – Silver Handle

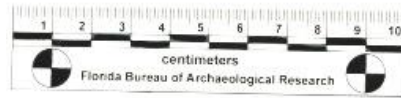




Artifact Number 72A.018.000168.0002 – Silver Handle, End

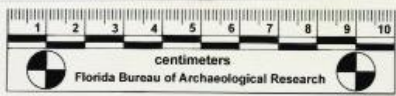


94A.019.007997.0001

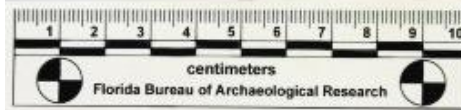


94A.019.007997.0001

Artifact Number 94A.019.007997.0001 – Spoon Bowl Fragment Front (L) and Back (R)



93A.677.000092.0001



93A.677.000092.0001

Artifact Number 93A.677.000092.0001 – Spoon Bowl Fragment Front (L) and Back (R)



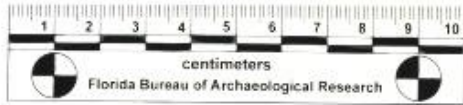
Artifact Number 05A.101.065860.0001 – Spoon Bowl Fragment Front (L) and Back (R)



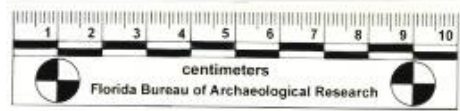
Artifact Number 72A.013.000625.0001 – Spoon Bowl Fragment Back (L) and Front (R)



Artifact Number 72A.013.000627.0001 – Spoon Bowl Fragment Front (L) and Back (R)

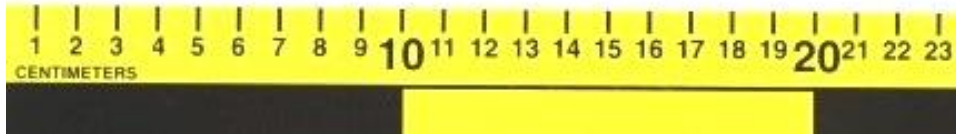


72A.014.001519.0001

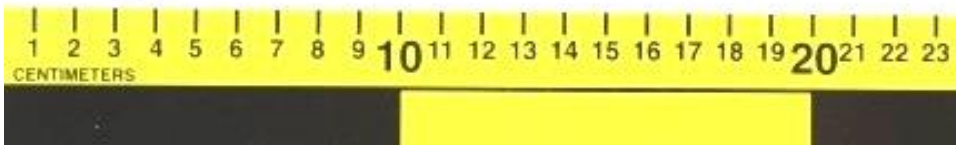


72A.014.001519.0001

Artifact Number 72A.014.001519.0001 – Spoon Bowl Fragment Front (L) and Back (R)



Artifact Number 72.13.365 – Spoon Bowl Fragments, Front



Artifact Number 72.13.365 – Spoon Bowl Fragments, Back



Artifact Number 93.673.65.1 – Dog-Nose Handled Spoon, Front



Artifact Number 93.673.65.1 – Dog-Nose Handled Spoon, Back



Artifact Number 93.677.121.1 – Trefid 1 Handled Fork, Front





Artifact Number 93.677.121.1 – Trefid I Handled Fork, Back



Artifact Number 93.673.90.1 – Trefid I Handled Fork, Front



Artifact Number 93.673.90.1 – Trefid I Handled Fork, Back



Artifact Number 93A.674.000037.0001 – Trefid II Handled Fork, Front



Artifact Number 93A.674.000037.0001 – Trefid II Handled Fork, Back



Artifact Number 93A.674.000032.0001 – Oval II Handled Fork, Front



Artifact Number 93A.674.000032.0001 – Oval II Handled Fork, Back



Artifact Number 72A.013.000096.0001 – Spade I Handled Fork with Stamps, Front



Artifact Number 72A.013.000096.0001 – Spade I Handled Fork with Stamps, Back



Artifact Number 72A.013.000096.0001 – Spade I Handled Fork with Stamps, Close-up



Artifact Number 07.204.1.1 – Spade II Handled Fork Front (L) and Back (R)



Artifact Number 72A.13.622.1 – Fork Fragment with Stamps Front (L) and Back (R)



05A.101.066496.0001

05A.101.066496.0001

Artifact Number 05A.101.066496.0001 – Fork Fragment Front (L) and Back (R)



72A.014.001560.0001

72A.014.001560.0001

Artifact Number 72A.014.001560.0001 – Fork Fragments Front (L) and Back (R)





72A.014.001359.0001



72A.014.001359.0001

Artifact Number 72A.014.001359.0001 – Fork Fragment Front (L) and Back (R)



Artifact Number 72A.014.001493.0001 – Fork Fragments Front (L) and Back (R)



72A.013.000700.0001



72A.013.000700.0001

Artifact Number 72A.013.000700.0001 – Round-based Fork Fragment Front (L) and Back (R)

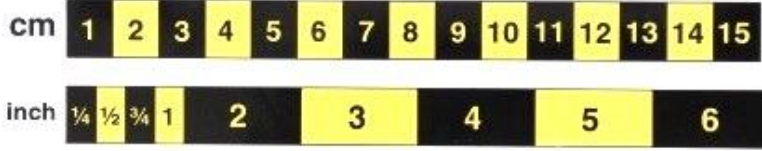


72A.014.001583.0001



72A.014.001583.0001

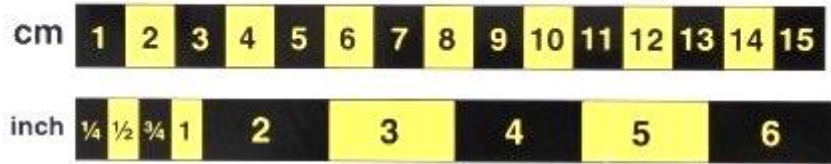
Artifact Number 72A.014.001583.0001 – Figurine Handle Fragment Front (L) and Back (R)



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72A.013.000664.0001

Artifact Number 72A.013.000664.0001 – Fork Fragment with Stamps, Front



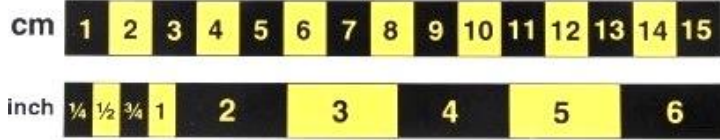
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72A.013.000664.0001

Artifact Number 72A.013.000664.0001 – Fork Fragment with Stamps, Back



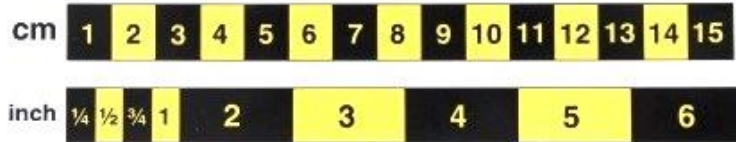
Artifact Number 72A.013.000664.0001 – Fork Fragment with Stamps, Close-up



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72A.014.001489.0001

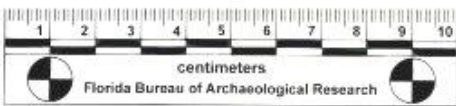
Artifact Number 72A.014.001489.0001 – Trefid II Handle, Front



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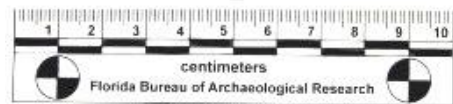
72A.014.001489.0001

Artifact Number 72A.014.001489.0001 – Trefid II Handle, Back



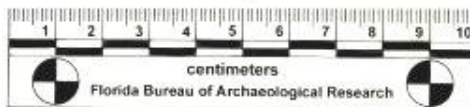
82A.170.008527.0001

Artifact Number 82A.170.008527.0001 –  
Trefid II Handle Fragment



93A.617.000157.0001

Artifact Number 93A.617.000157.0001 –  
Trefid I Handle Fragment



93A.673.000081.0001

Artifact Number 93A.673.000081.0001 – Floral Handle Fragment



72A.014.001567.0001



72A.014.001567.0001

Artifact Number 72A.014.001567.0001 – Oval III Handle Fragment Front (L) and Back (R)



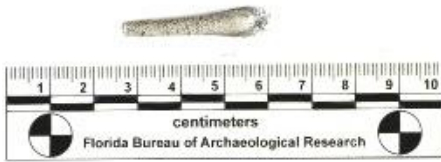
72A.013.000372.0001

Artifact Number 72A.013.000371.0001 – Handle Fragment



72A.013.000056.0001

Artifact Number 72A.013.000056.0001 – Handle Fragment



05A.101.065866.0001

Artifact Number 05A.101.065866.0001 – Oval III Handle Fragment Front (L) and Back (R)



05A.101.065866.0001



72A.014.001576.0001

Artifact Number 72A.014.001576.0001 – Oval III Handle Front (L) and Back (R)



72A.014.001576.0001



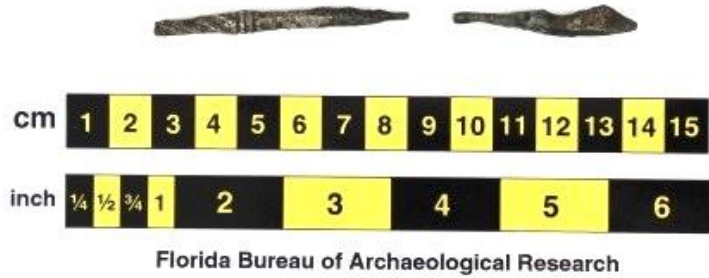
72A.013.000699.0001

Artifact Number 72A.013.000699.0001 – Spade I Handle Fragment



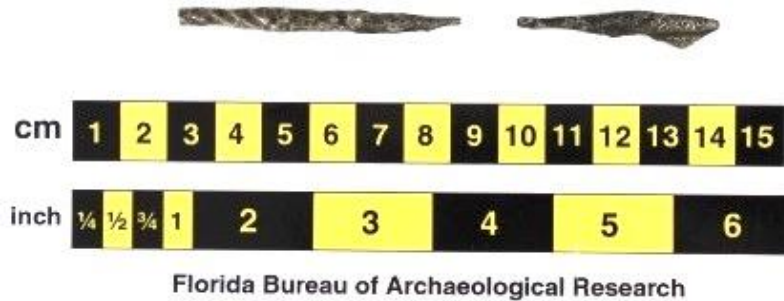
93A.635.000544.0001

Artifact Number 93A.000544.0001 – Twisted Handle Fragment



93A.677.000103.0001

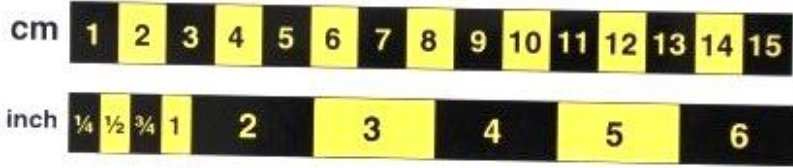
Artifact Number 93A.677.000103.0001 – Twisted Handle Fragment, Front



93A.677.000103.0001

Artifact Number 93A.677.000103.0001 – Twisted Handle Fragment, Back

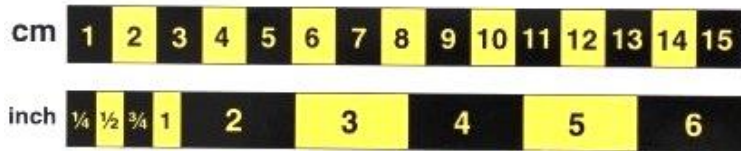




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93A.677.000095.0001

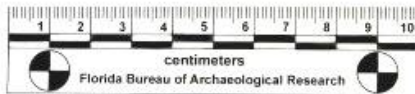
Artifact Number 93A.677.000095.0001 – Spade I Handle, Terminal



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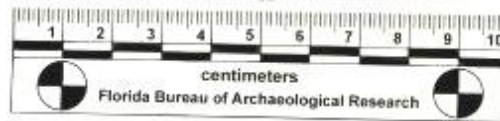
93A.677.000095.0001

Artifact Number 93A.677.000095.0001 – Spade I Handle, Side



72A.014.001492.0001

Artifact Number 72A.014.001492.0001 – Spade I and Unidentified Handle Fragments



93A.635.000545.0001

Artifact Number 93A.635.000545.0001 – Spade I Handle Fragment

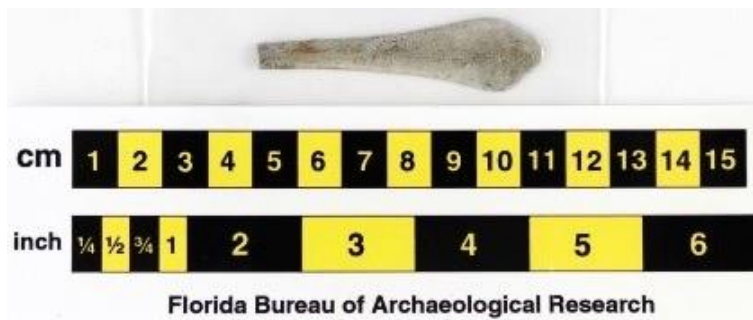


03A.102.000003.0001

Artifact Number 03A.102.000003.0001 – Spade I Handle Fragments



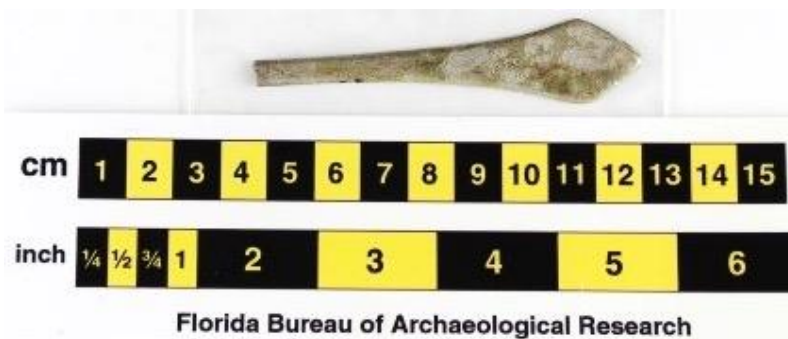
Artifact Number 07.204.2.1 – Handle Fragment



Artifact Number 72.13.364.1 – Spade II Handle Fragment with Marks, Front



Artifact Number 72.13.364.1 – Spade II Handle Fragment with Marks, Back



Artifact Number 72.13.364.2 – Spade II Handle Fragment with Marks, Front



Artifact Number 72.13.364.2 – Spade II Handle Fragment with Marks, Back



Artifact Number 72.13.364.2 – Spade II Handle Fragment with Marks, Close-up



Artifact Number 72.13.364.3 – Spade II Handle Fragment with Marks, Front





Artifact Number 72.13.364.3 – Spade II Handle Fragment with Marks, Back



Artifact Number 72.13.364.3 – Spade II Handle Fragment with Marks, Close-up



Artifact Number 72.13.364.4 – Spade II Handle Fragment with Marks, Front



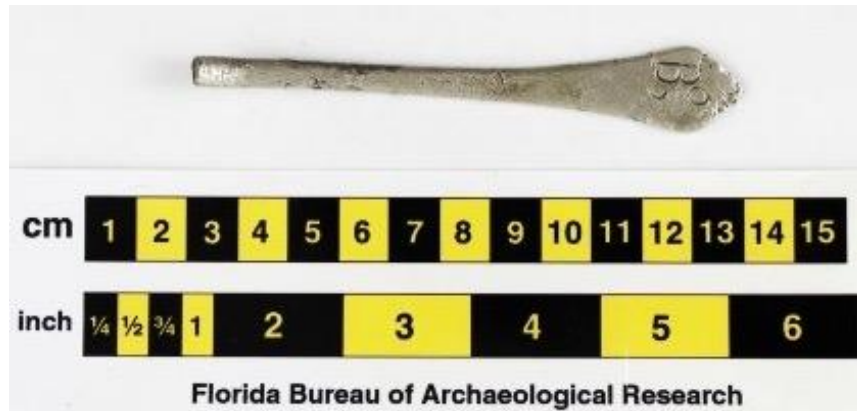
Artifact Number 72.13.364.4 – Spade II Handle Fragment with Marks, Back



Artifact Number 72.13.364.4 – Spade II Handle Fragment with Marks, Close-up



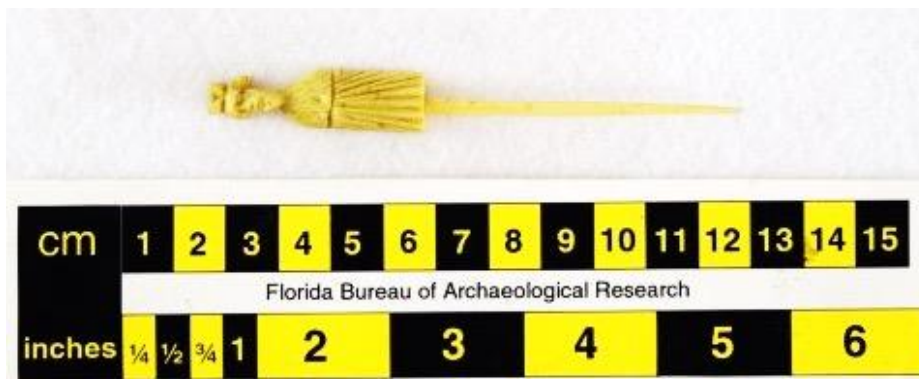
Artifact Number 72.13.364.5 – Spade II Handle Fragment with Marks, Front



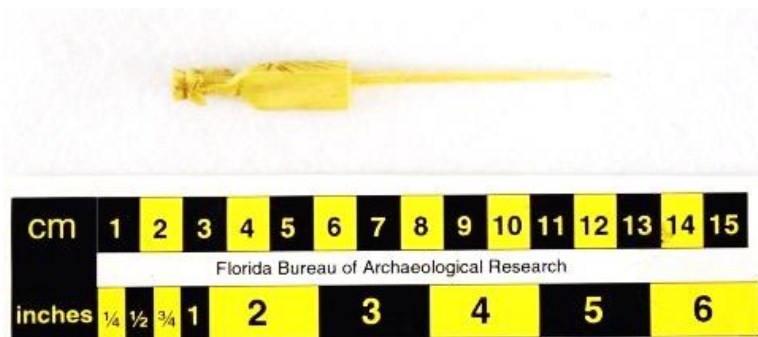
Artifact Number 72.13.364.5 – Spade II Handle Fragment with Marks, Back



Artifact Number 72.13.364.5 – Spade II Handle Fragment with Marks, Close-up



Artifact Number 93.673.103.1 – Bone Toothpick with Figurine, Front



Artifact Number 93.673.103.1 – Bone Toothpick with Figurine, Back

APPENDIX D: 1733 FLEET ARTIFACT COLLECTION PHOTOS



Artifact Number 93.614.071 – Wood Knife Handle (Front)



Artifact Number 93.614.071 – Wood Knife Handle (Back)



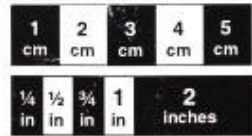
Artifact Number 93.616.75.1 – Iron Knife Blade Cast



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Artifact Number 75.8.420 – Silver Fork Fragment Front (L) and Back (R)



Florida Bureau of Archaeological Research

Florida Bureau of Archaeological Research

Artifact Number 75.08.270 – Silver Fork Fragment Front (L) and Back (R)



Florida Bureau of Archaeological Research

Florida Bureau of Archaeological Research

Artifact Number 75.8.404.1 – Pewter Handle Fragment Front (L) and Back (R)





Artifact Number 75.08.274 – Spoon and Handle Fragments (Front)



Artifact 75.08.274 – Spoon and Handle Fragments (Back)



Artifact Number 93A.605.105 – Metal Handle Fragment Front (L) and Back (R)

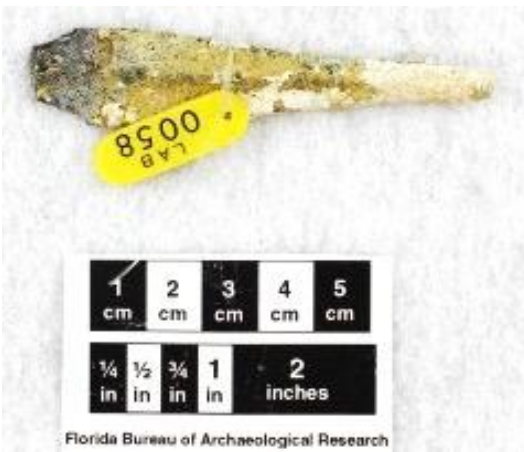


Florida Bureau of Archaeological Research

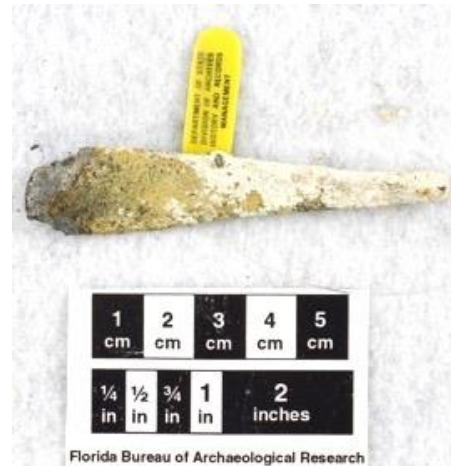


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Artifact Number 93A.605.945 – Metal Handle Fragment Front (L) and Back (R)



Florida Bureau of Archaeological Research



Florida Bureau of Archaeological Research

Artifact Number 93A.605.38 – Metal Handle Fragment Front (L) and Back (R)

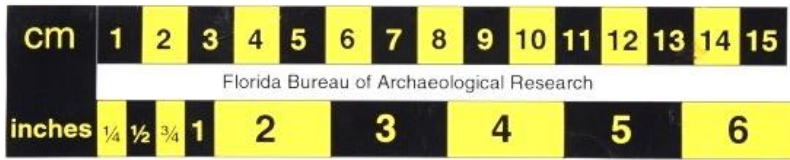


Florida Bureau of Archaeological Research

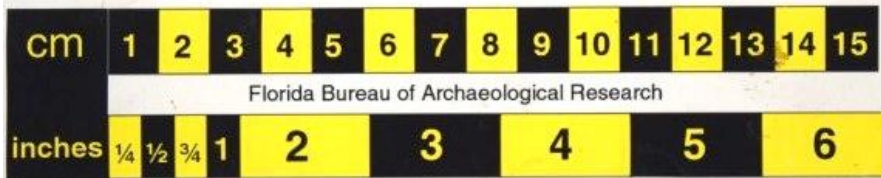
Artifact Number 93.605.1753 – Three-tined Fork Fragments



Artifact Number 93.605.571 – Wood Handle

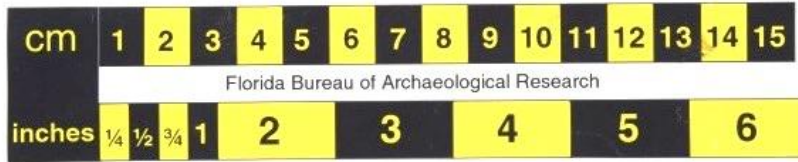


Artifact Number 93.605.574 – Wood Handle



Artifact Number 93A.605.1542 – Wood Handle





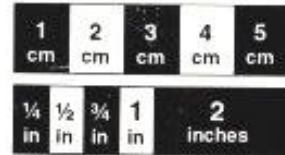
Artifact Number 93A.605.1543 – Wood Handle



Artifact Number 93.613.135.1 – Knife with Carved Wood Handle

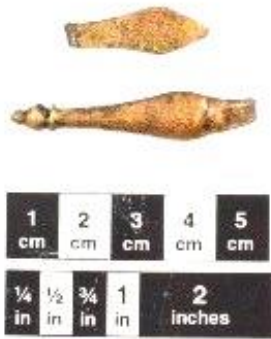


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Artifact Number 93A.605.37.1 – Brass Knife Handle Front (L) and Back (R)



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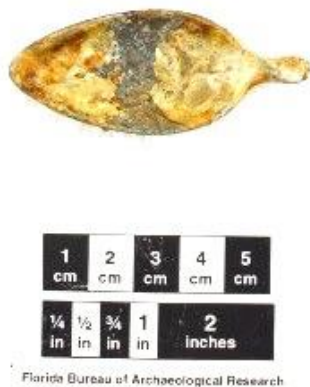


Florida Bureau of Archaeological Research

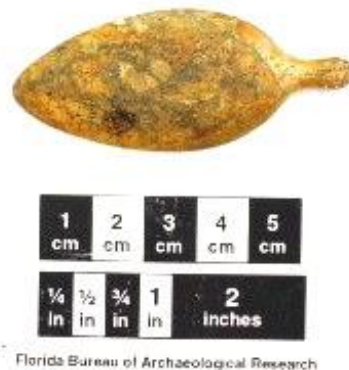
Artifact Number 93.672.19.1 – Metal Knife or Dagger Fragments Front (L) and Back (R)



Artifact Number 93.613.02 – Knife Blade Cast



Florida Bureau of Archaeological Research

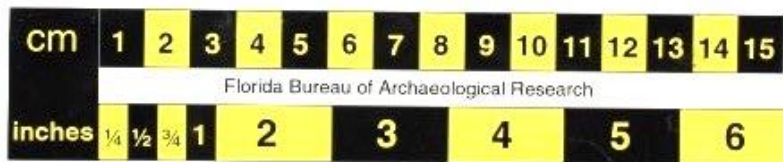


Florida Bureau of Archaeological Research

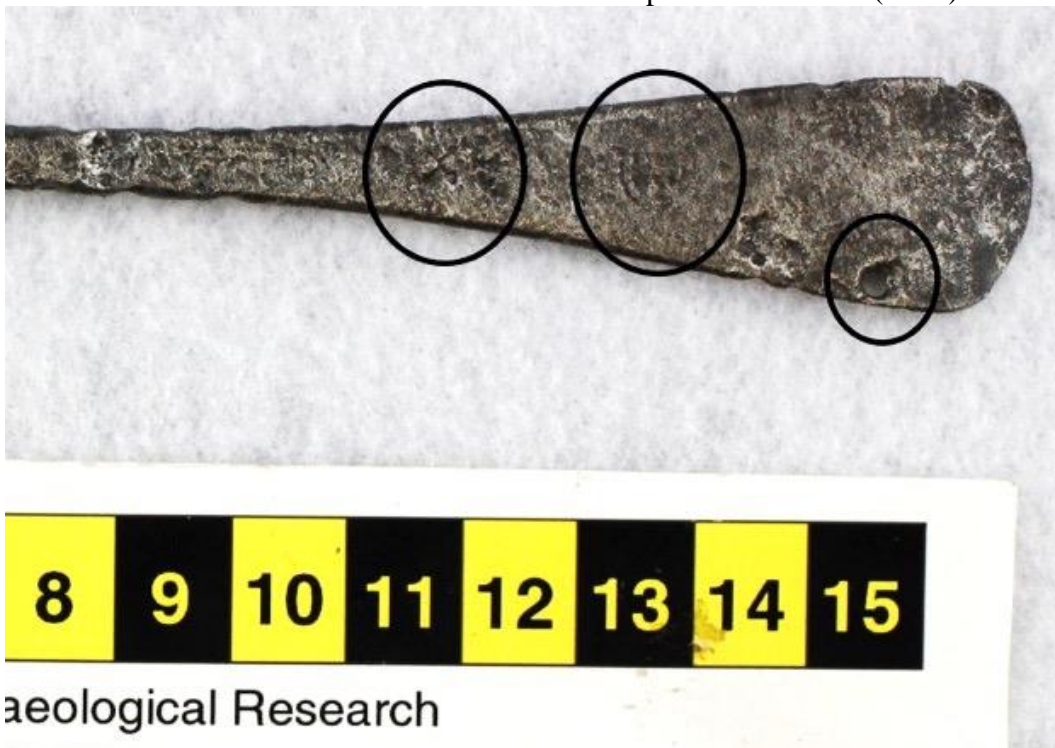
Artifact Number 93A.605.104 – Metal Spoon Fragment Front (L) and Back (R)



Artifact Number 93.605.398.1 – Pewter Spoon with Marks (Front)



Artifact Number 93.605.398.1 – Pewter Spoon with Marks (Back)



Artifact Number 93.605.398.1 – Pewter Spoon with Marks (Back, Close-up)

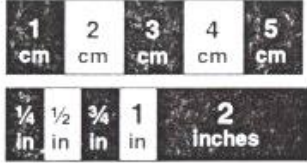


Artifact Number 93.605.1933.1 – Metal Spoon (Front)



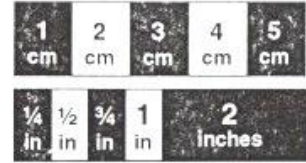
Artifact Number 93.605.1933.1 – Metal Spoon (Back)





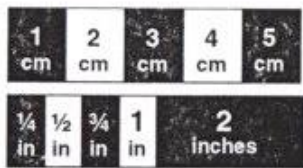
Florida Bureau of Archaeological Research

Artifact Number 93A.605.12  
Cocoa Frother, Side 1



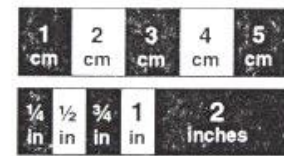
Florida Bureau of Archaeological Research

Artifact Number 93A.605.12  
Cocoa Frother, Side 2



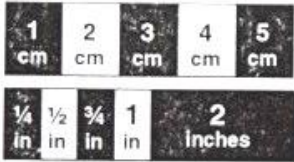
Florida Bureau of Archaeological Research

Artifact Number 93A.605.13  
Cocoa Frother, Side 1



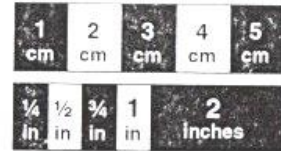
Florida Bureau of Archaeological Research

Artifact Number 93A.605.13  
Cocoa Frother, Side 2



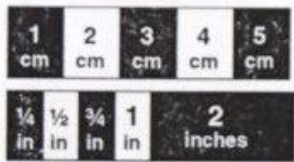
Florida Bureau of Archaeological Research

Artifact Number 93A.605.14  
Cocoa Frother, Side 1



Florida Bureau of Archaeological Research

Artifact Number 93A.605.14  
Cocoa Frother, Side 2



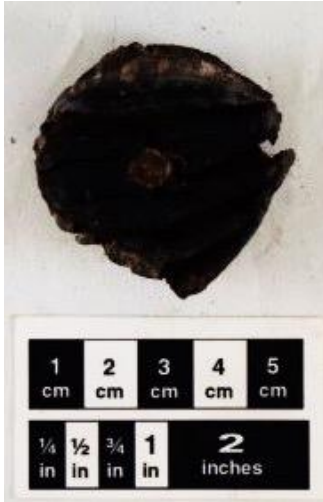
Florida Bureau of Archaeological Research

Artifact Number 93A.605.15  
Cocoa Frother, Side 1

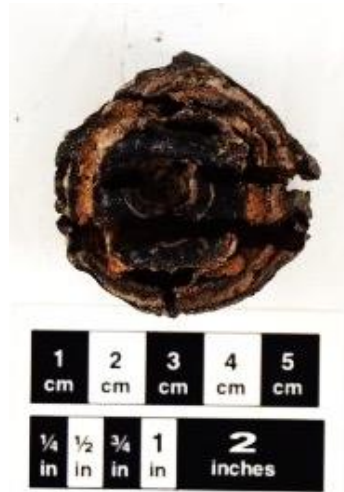


Florida Bureau of Archaeological Research

Artifact Number 93A.605.15  
Cocoa Frother, Side 2



Artifact Number 93A.605.16  
Cocoa Frother, Top



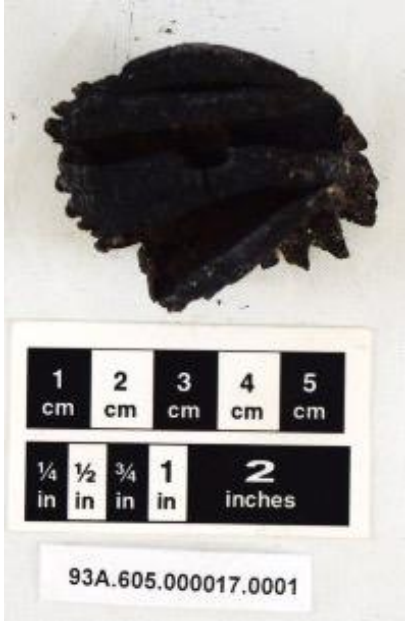
Artifact Number 93A.605.16  
Cocoa Frother, Bottom



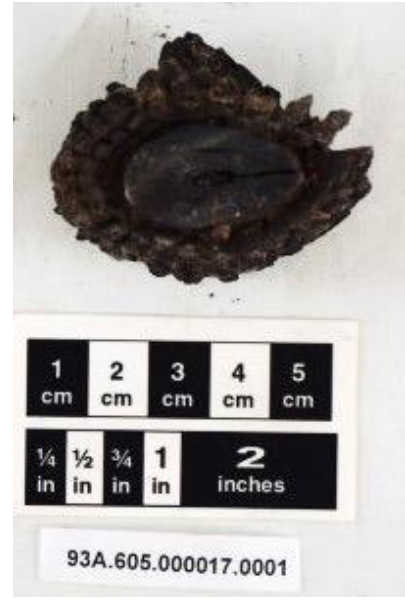
Artifact Number 93A.605.16  
Cocoa Frother, Side 1



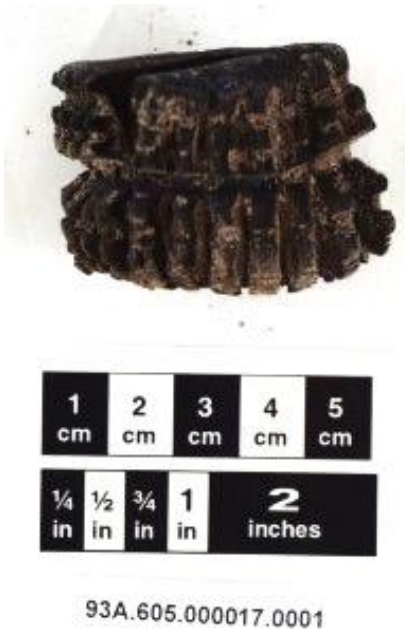
Artifact Number 93A.605.16  
Cocoa Frother, Side 2



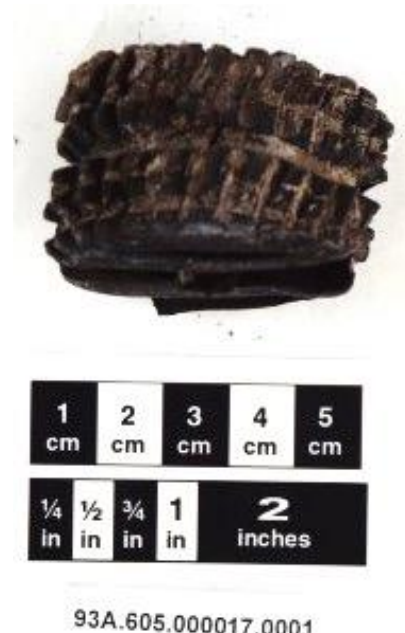
Artifact Number 93A.605.17.1  
Cocoa Frother, Top



Artifact Number 93A.605.17.1  
Cocoa Frother, Bottom



Artifact Number 93A.605.17.1  
Cocoa Frother, Side 1

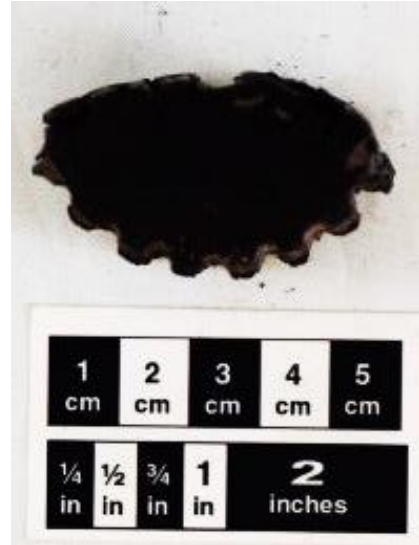


Artifact 93A.605.17.1  
Cocoa Frother, Side 2





Artifact Number 93A.605.19.1  
Cocoa Frother Piece 1, Top



Artifact Number 93A.605.19.1  
Cocoa Frother Piece 1, Bottom



Artifact Number 93A.605.19.1  
Cocoa Frother Piece 1, Side 1



Artifact Number 93A.605.19.1  
Cocoa Frother Piece 1, Side 2



Artifact Number 93A.605.19.1 – Cocoa Frother Piece 2, Top



Artifact Number 93A.605.19.1 – Cocoa Frother Piece 2, Bottom



Artifact Number 93A.605.19.1 – Cocoa Frother Piece 2, Side 1



Artifact Number 93A.605.19.1 – Cocoa Frother Piece 2, Side 2



Artifact Number 93A.605.19.1 – Complete Cocoa Frother, Top



Artifact Number 93A.605.19.1 – Complete Cocoa Frother, Bottom



Artifact Number 94.014.01.1  
Cocoa Frother, Top



Artifact Number 94.014.01.1  
Cocoa Frother, Bottom



Artifact Number 94.014.01.1  
Cocoa Frother, Side 1



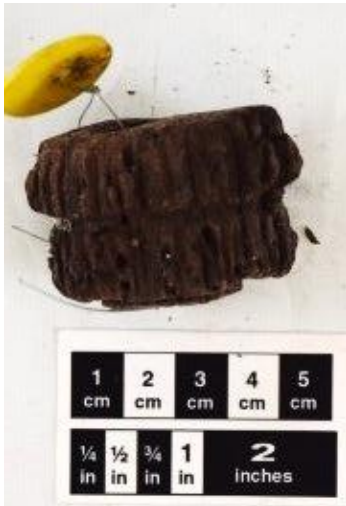
Artifact Number 94.014.01.1  
Cocoa Frother, Side 2



Artifact Number 93A.605.356  
Cocoa Frother, Top



Artifact Number 93A.605.356  
Cocoa Frother, Bottom

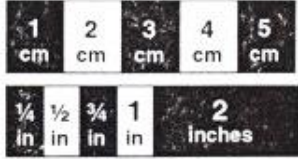


Artifact Number 93A.605.356  
Cocoa Frother, Side 1



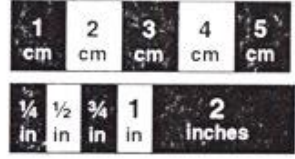
Artifact Number 93A.605.356  
Cocoa Frother, Side 2





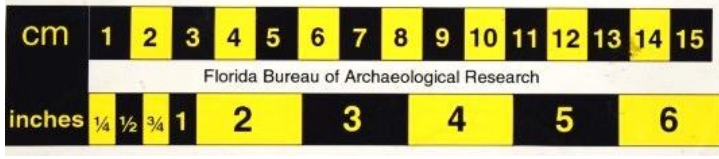
Florida Bureau of Archaeological Research

Artifact Number 93.605.544  
Cocoa Frother, Side 1



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Artifact Number 93.605.544  
Cocoa Frother, Side 2



Artifact Number 93.605.544 – Wood Handle, Side 1



Artifact Number 93.605.544 – Wood Handle, Side 2



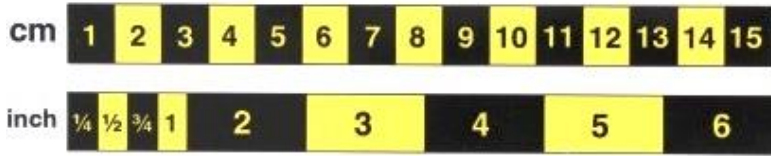
Artifact Number 75.07.115 – Iron Knife Blade, Side 1



Artifact Number 75.07.115 – Iron Knife Blade, Side 2

APPENDIX E: ARTIFACTS WITH LINEAR BREAKS PHOTOS

1715 Fleet Collection Artifacts



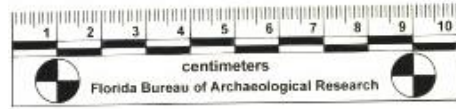
Florida Bureau of Archaeological Research

94A.036.000843.0001

Artifact Number 94A.036.000843.0001



Artifact Number 94.36.829.3



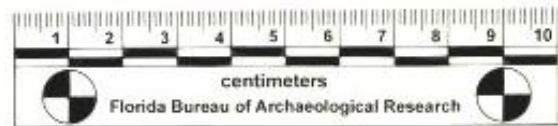
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94A.036.000820.0001

Artifact Number 94A.036.000820.0001



Artifact Number 94.36.829.9

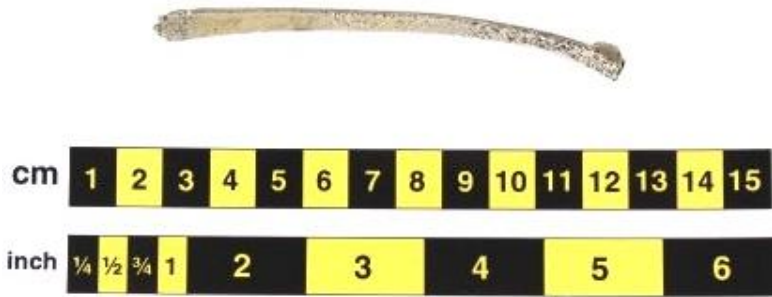




94A.036.000831.0001  
Artifact Number 94A.036.000831.0001



Artifact Number 94.36.829.7



Florida Bureau of Archaeological Research  
Artifact Number 94.36.829.2



Artifact Number 94.36.829.8



72A.013.000056.0001

Artifact Number 72A.013.000056.0001

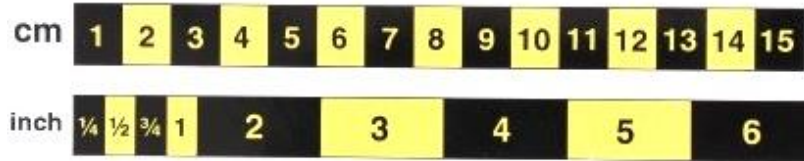


Artifact Number 94A.36.829.6



94A.036.000819.0001

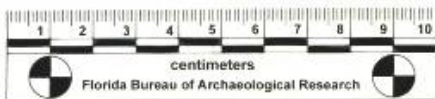
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Florida Bureau of Archaeological Research

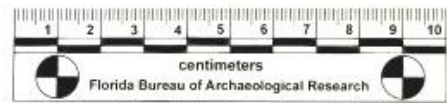
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Artifact number 94A.036.000813.0001

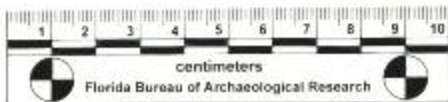


94A.036.000644.0001

Artifact Number 94A.036.000644.0001



Artifact Number 06A.152.7.1



Artifact Number 06.151.12.1



Artifact Number 72A.015.000242.0001



Artifact Number 72A.015.000318.0001



Artifact Number 72A.015.000245.0001



Artifact Number 93A.671.000132.0001



Artifact Number 72A.018.000219.0001



Artifact Number 72A.018.000174.0002



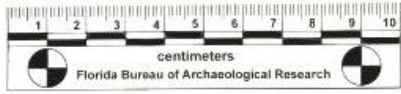
Artifact Number 72A.018.000217.0001



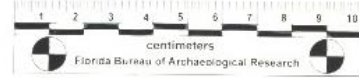
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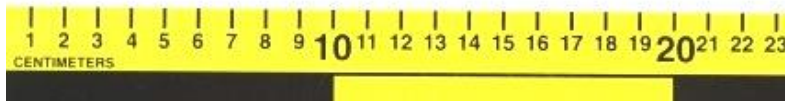
Artifact Number 93A.677.000092.0001



05A.101.065860.0001  
Artifact Number 05A.101.065860.0001



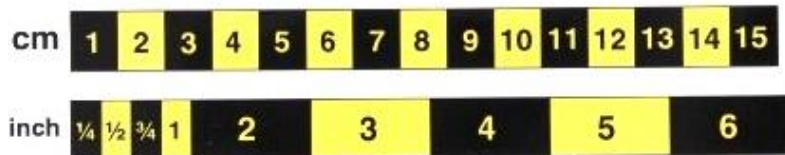
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Artifact Number 72.13.365

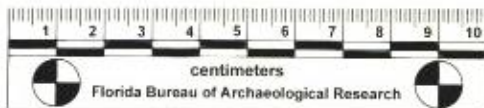


Artifact Number 93.643.38.1

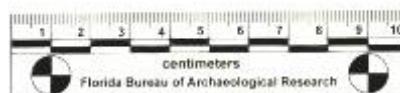


Florida Bureau of Archaeological Research  
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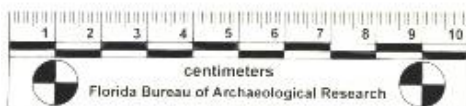




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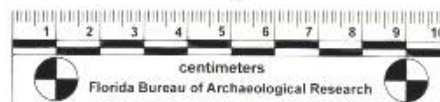


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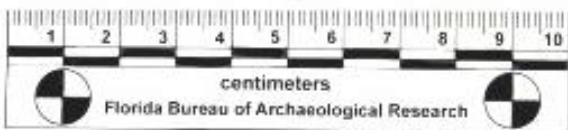
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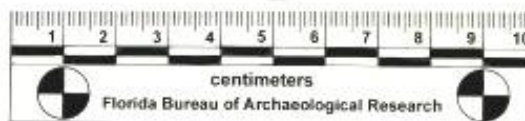


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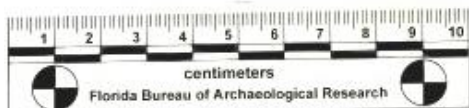
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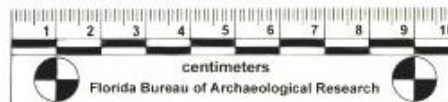
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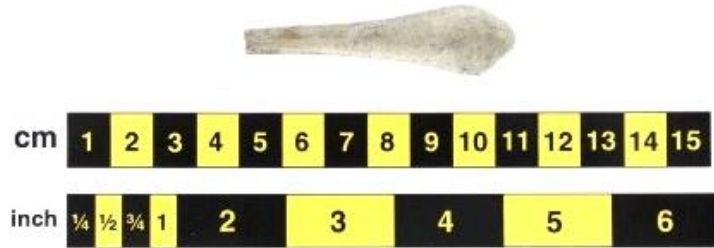


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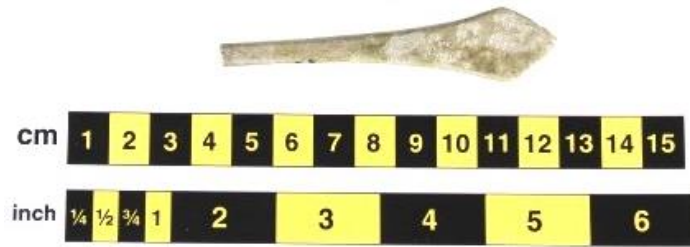


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Artifact Number 72.13.364.1



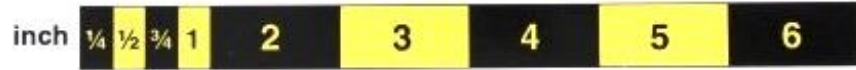
Florida Bureau of Archaeological Research

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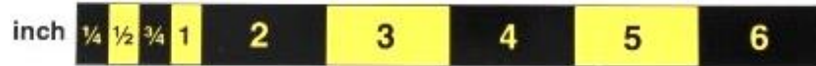


Florida Bureau of Archaeological Research

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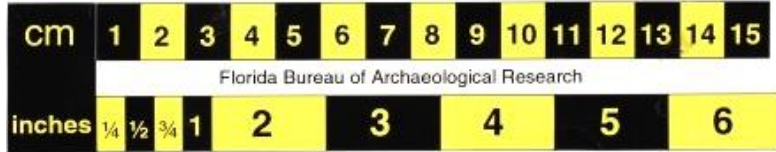


Florida Bureau of Archaeological Research  
Artifact Number 72.13.364.4



Florida Bureau of Archaeological Research  
Artifact Number 72.13.364.5

1733 Fleet Collection Artifacts

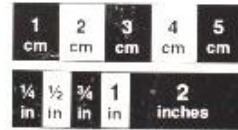


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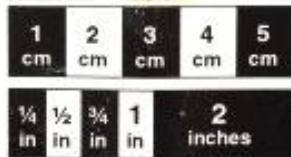
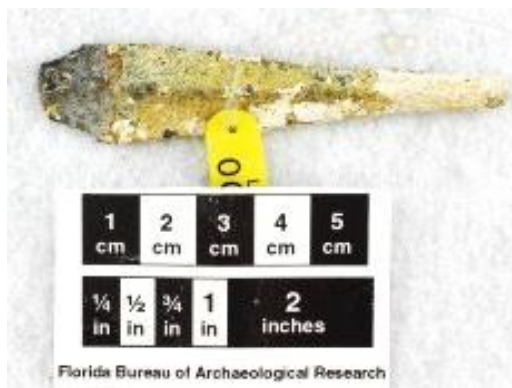
Florida Bureau of Archaeological Research

Artifact Number 75.8.404.1



Florida Bureau of Archaeological Research

Artifact Number 93A.605.105



Florida Bureau of Archaeological Research

Artifact Number 93A.605.38



APPENDIX F: PREFORMS FOR CUTLERY ANALYSIS

General Typology Form

Name of Cutlery Type: \_\_\_\_\_

N= \_\_\_\_\_

**Attributes**

Surface: (Pristine/very good/good/fair/poor/concreted)

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Material 1: \_\_\_\_\_ Material 2: \_\_\_\_\_

Working End:

Width	Proximal	Middle	Distal
Range/Average			
Length (Range/Avg.)			

Handle:

Width:	Proximal	Middle	Distal
Range/Average			
Length (Range/Avg.)			

Neck/Attachment:

Rat-Tail	Soldered	Finial	Other

Cross Section:

Rectangular	Flat	Oval	Ornate	Other

Stamps:

Gosalez	Mexico City	Mint	Other

Stamp Description:

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*Fork Typology Preform*

Complete \_\_\_Yes \_\_\_No

Number of Tines: \_\_\_\_\_

Shape of Base: \_\_\_Square \_\_\_Rounded \_\_\_Other

**Attributes**

Surface: (Pristine/very good/good/fair/poor/concreted)

\_\_\_\_\_  
\_\_\_\_\_

Material 1: \_\_\_\_\_ Material 2: \_\_\_\_\_

Working End:

Width	Proximal	Middle	Distal
Range/Average			
Length (Range/Avg.)			

Handle:

Width:	Proximal	Middle	Distal
Range/Average			
Length (Range/Avg.)			

Neck/Attachment:

Rat-Tail	Soldered	Finial	Other
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Cross Section:

Rectangular	Flat	Oval	Ornate	Other
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Stamps:

Gosalez	Mexico City	Mint	Other

Stamp Description:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

*Spoon Typology Preform*

Complete \_\_\_Yes \_\_\_No

Shape of Bowl: \_\_\_Fig \_\_\_Oval \_\_\_Other

**Attributes**

Surface: (Pristine/very good/good/fair/poor/concreted)

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Material 1: \_\_\_\_\_ Material 2: \_\_\_\_\_

Working End:

Width	Proximal	Middle	Distal
Range/Average			
Length (Range/Avg.)			

Handle:

Width:	Proximal	Middle	Distal
Range/Average			
Length (Range/Avg.)			

Neck/Attachment:

Rat-Tail	Soldered	Finial	Other
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Cross Section:

Rectangular	Flat	Oval	Ornate	Other
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Stamps:

Gosalez	Mexico City	Mint	Other

Stamp Description:

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Knife Typology Preform

Complete \_\_\_Yes \_\_\_No

Portion Present \_\_\_Blade \_\_\_Handle \_\_\_Tang \_\_\_Other

**Attributes**

Surface: (Pristine/very good/good/fair/poor/concreted)

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Material 1: \_\_\_\_\_ Material 2: \_\_\_\_\_

Working End:

Width	Proximal	Middle	Distal
Range/Average			
Length (Range/Avg.)			

Handle:

Width:	Proximal	Middle	Distal
Range/Average			
Length (Range/Avg.)			

Neck/Attachment:

Rat-Tail	Soldered	Finial	Other
----------	----------	--------	-------

Handle Shape:

Rectangular	Flat	Oval	Ornate	Other
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Stamps:

Gosalez	Mexico City	Mint	Other

Stamp Description:

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APPENDIX G:  
REPORTS OF CARGO MANIFESTS

San José (8MO101):

30,435 pesos in silver coins  
283 *arrobas* of cochineal  
603 *arrobas* of anil  
6 boxes of ceramic ware (probably K'ang His porcelain from China)  
27,000 pods of vanilla  
Sugar  
Chocolate  
Dyewoods  
Sacks of cocoa  
Earthen jugs  
Some hides

(Weller 2001:89)

San Pedro (8MO104):

16,000 pesos in silver specie  
323 *arrobas* of anil  
124 *arrobas* of cochineal  
3 boxes of porcelain  
Other general cargo

(Weller 2001:183)

Angustias (8MO131):

Indigo  
Cochineal  
Anil  
27,000 pesos in silver coins  
605 *marcos* of worked silver  
Manila galleon K'ang Hsi

(Weller 2001:219)

El Lerri (8MO133):

34,000 silver pesos  
326 *marcos* of worked silver  
675 *arrobas* of cochineal  
57 *arrobas* of wild cochineal

5,145 arrobas of anil  
6 boxes of chocolate  
51 barrels of molasses  
245 [Tajilla??] (orange or lemon relish)  
21 earthen jars  
8 boxes of gifts

(Weller 2001:198)

Capitana- El Rubí Segundo (8MO146):

1,940 boxes of silver coins totaling 5,080,285 pesos  
104 *Castellanos* in worked gold  
3,200 pesos in gold coins  
6,099 *marcos* in worked silver  
4,913 *arrobas* of cochineal  
97 *arrobas* of wild cochineal  
9,230 *arrobas* of anil  
36,000 (arrobas?) of vanilla  
10 boxes of chocolate

(Weller 2001:125)

