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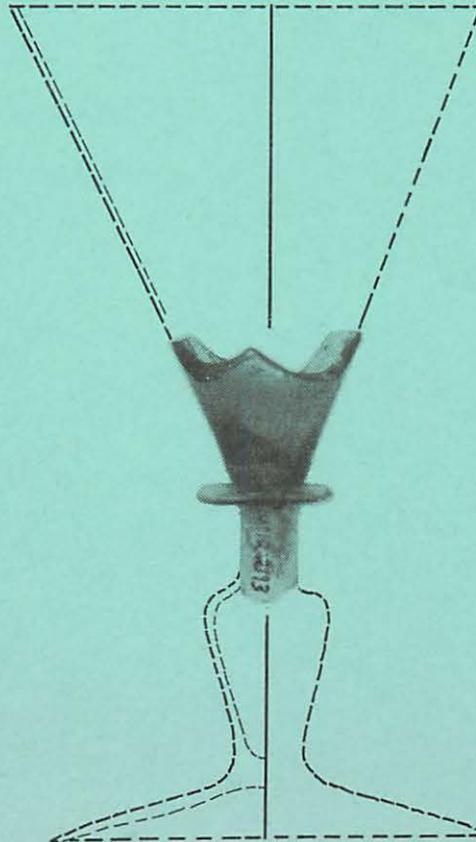
Nova Scotia Museum Complex

Curatorial Report Number 65

# Belleisle Nova Scotia 1680 - 1755 : Acadian Material Life and Economy

**Nova Scotia Museum**  
1747 Summer Street  
Halifax, Nova Scotia, Canada  
B3H 3A6

By  
Marc Charles Lavoie  
June 1987



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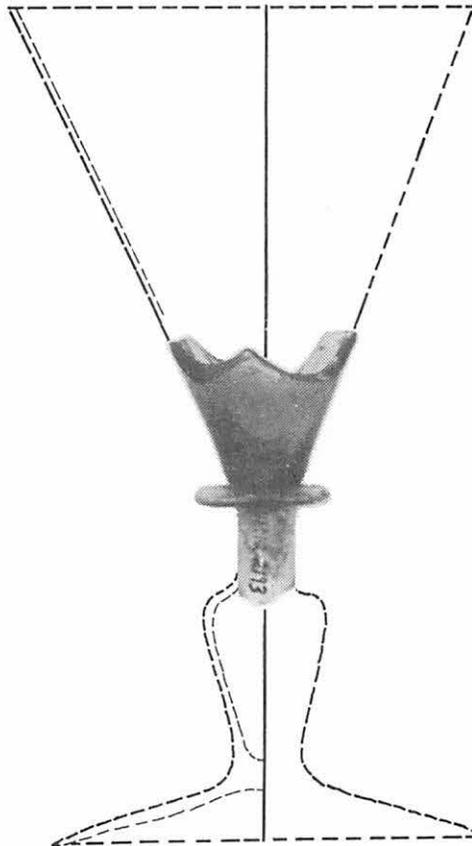
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BELLEISLE, NOVA SCOTIA, 1680-1755:

ACADIAN MATERIAL LIFE AND ECONOMY

BY

MARC CHARLES LAVOIE, B.A.

A Thesis

Submitted to the School of Graduate Studies

in Partial Fulfillment of the Requirement

for the Degree

Master of Arts

McMaster University

June 1987

## ABSTRACT

This thesis presents a functional analysis of the ceramics and glass remains excavated from two pre-expulsion (circa 1680 to 1755) Acadian houses at Belleisle (BeDi-2), Annapolis County, Nova Scotia. The history of each artifact variety is traced, including manufacturing techniques, and distribution routes from the factories to the Acadian houses where the artifacts were used and discarded.

The artifacts analysed are quantified and compared with similar information from other contemporaneous, domestic sites in eastern North America and France. Status differences are discussed. As a whole, the place of Acadian households in international, national and local markets is examined.

It becomes evident that the expanding, eighteenth century Acadian population at Belleisle benefited from the availability of a multitude of goods. This allowed them to develop a material life rather different from those of other Acadians, or the contemporaneous residents of the St. Lawrence Valley and New England. The ceramics and glass indicate that the Belleisle Acadians led a comfortable life.

## ACKNOWLEDGEMENTS

I wish to extend my gratitude to various institutions and individuals for their support and encouragement provided to me during the course of my research. First, however, it is to the Department of Anthropology, McMaster University, that I must express my gratitude for allowing me to pursue my research interests at the Masters level. This department maintains a liberal philosophy, one which allows a wide variety of research interests to coexist, and accomodates other topics of study.

My special thanks go to my committee members. I am most grateful to my advisor, Dr. William C. Noble, for his guidance, encouragement, and assistance in helping me to focus on the subject I chose for my thesis. Also, he edited my writing -- an arduous task in itself. I extend my thanks to Dr. Laura Finsten, whose graduate course entitled "Cultural Change" offered in 1983, was stimulating and proved a source of inspiration in my explanation of Acadian material life. Also, she proved to be a formidable editor. I am grateful to Professor Charles Stortroen, whose interest in my research has been constant, and was mirrored by mine in his discussions of European ethnology.

I am grateful to Mr. David J. Christianson, former graduate student at McMaster University and Project Director at Belleisle. It was he who suggested that I undertake the study of ceramics and glass from pre-expulsion Acadian sites. I also wish to thank Mr. Brian Preston,

Curator of History at the Nova Scotia Museum in Halifax; he approached me in 1982 to begin this research and was most supportive throughout its completion.

For information about the state of the domestic and American pottery industries in the eighteenth century, I wish to extend my thanks to the following persons: Dr. Alaric Faulkner, Associate Professor of Anthropology at the University of Maine at Orono; Professor Marcel Moussette of the Département d'Histoire at Université Laval in Quebec City; Mr. Jim Campbell, Artifact Collections Supervisor, Environment Canada, Parks, at the Fortress of Louisbourg in Cape Breton; I extend my special thanks to Mrs. Marie Elwood, Chief Curator of History at the Nova Scotia Museum in Halifax, for her very interesting information about Nova Scotia potters.

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Historian with the Department of Tourism, Recreation and Heritage, Government of New Brunswick, in Fredericton; Dr. Jean Daigle, Département d'Histoire, Université de Moncton in New Brunswick; Ms. Brenda Dunn, Project Historian at the Atlantic Regional Office of Environment Canada, Parks, in Halifax, Nova Scotia. I extend my gratitude to all.

While researching the origins of the Belleisle ceramics and glass, I made some inquiries at the Archaeological Research Section of Environment Canada, Parks, in Ottawa, Ontario. There, Ms. E. Ann Smith, Material Culture Analyst, provided very useful information and references about eighteenth century glass, and I thank her. Furthermore, I am most grateful to M. Gérard Gusset, Material Culture Analyst and ceramics expert, who responded to my numerous letters of inquiry, and was most helpful when I visited him at his Ottawa office.

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From July 1985 to March 1986, I was a Research Fellow working for the Archaeology Branch of the Department of Tourism, Recreation and Heritage, Fredericton, New Brunswick, where I was responsible to Dr. Christopher J. Turnbull, Provincial Archaeologist. Dr. Turnbull arranged for me to work for the Province four days a week, and gave me my Fridays off to work on this thesis. Later in 1986, I spent an entire month working on my thesis, with the help, interest, and encouragement of Dr. Turnbull who also gave me access to governmental word-processing services; there, Mrs. Laurie Robichaud and Mrs. Ginette DelFrate typed many versions of this thesis. Also, Mr. Angel Gomez y Miguelanez drafted some of the figures and tables in my thesis. I warmly thank them for their assistance and encouragement.

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Errors in interpretation that may occur in the following are entirely mine.

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## CHAPTER ONE

### INTRODUCTION

I know the mood of my "man in the street" only through the chart of it which he himself agrees to draw for me... the individual, narrowly restricted by his senses and power of concentration, never perceives more than a tiny patch of the vast tapestry of events, deeds and words which form the destinies of a group... (Bloch 1953:50).

### THEORETICAL SETTING

This thesis attempts to illustrate certain aspects of Acadian material life, from about 1680 to 1755, through an analysis of ceramics and glass from the excavations of two houses (Houses 1 and 2) at Belleisle, Annapolis County in Nova Scotia. The former date is based upon known ceramic and glass manufacturing histories, while '1755' represents the major historical event in Canadian history: the Acadian expulsion.

The approach adopted herein is based partially upon Fernand Braudel's (1972; 1973) approach in his history of the sixteenth-century Mediterranean, and upon refinements of his explanatory scheme in yet another major history (Braudel 1981). Essentially, Braudel (1972) examines the ordinary, everyday happenings which seem unimportant in large scale histories. He discusses three types of sequential history: 1) geographical time; 2) social time;

and 3) individual time. The last of the three is traditional history, that of individual people involved in a history of major historical events (Braudel 1972:21). Geographical time involves history of the natural environment, the human setting, and ever-recurring cycles, such as the seasons (Braudel 1972:20). Social time -- the type of history which interests me most -- is the history of human groups and groupings (Braudel 1972:21). The combination of these histories makes it possible "to convey simultaneously both that conspicuous history [of events] which holds our attention... and that other history... unsuspected by its observers or its participants..." (Braudel 1972:16). Braudel's (1972:16) "other history" is defined further as "material life", including "food, costume, lodging, technology, money" and the contents of households (Braudel 1981:23-24, 27).

In the present study an aspect of the material life of Acadians is made evident through the archaeology of historic sites. The examination of artifact collections using a functional analysis provides a window into eighteenth-century Acadian households. Quantification of these data and comparisons with collections from other contemporaneous domestic sites permit definition of similarities and differences among artifact collections, particularly between the ceramics and glass from a variety of houses.

Another benefit accrues from the knowledge gained from artifact histories. Depending on the availability, quantity and quality of the data, we can learn much about the production of artifacts from the raw

materials, the manufacturing methods, the shipment of objects, and the distribution routes of finished goods to the households where they were used and finally discarded.

The history of material items, particularly the ceramic and glass industries, combined with the traditional history of Acadia, yields not only a sequence of events for the development of a segment of eighteenth-century Acadian culture, but also divulges certain processes of its formation (Flannery 1972). Also, the artifact analyses offer a concrete and somewhat different historical source of information than the traditional history based solely on documents. Since most Acadians were illiterate, documentary evidence is based almost exclusively upon opinionated views from upper echelon French and English observers of the day (Coleman 1968:5). In short, the ceramic and glass analyses of both the Acadian houses excavated at Belleisle, compared with other sites and combined with traditional history, provides a more complete picture of eighteenth-century Acadian culture, than traditional history alone.

#### THE ARCHAEOLOGY OF DOMESTIC ACADIA

Eighteenth century Acadian encompassed present-day Mainland Nova Scotia, New Brunswick and southeastern Maine (U.S.A.). Its heartland, however, was essentially the shores of the Bay of Fundy and peripheral regions (Clark 1968), (Figure 1).

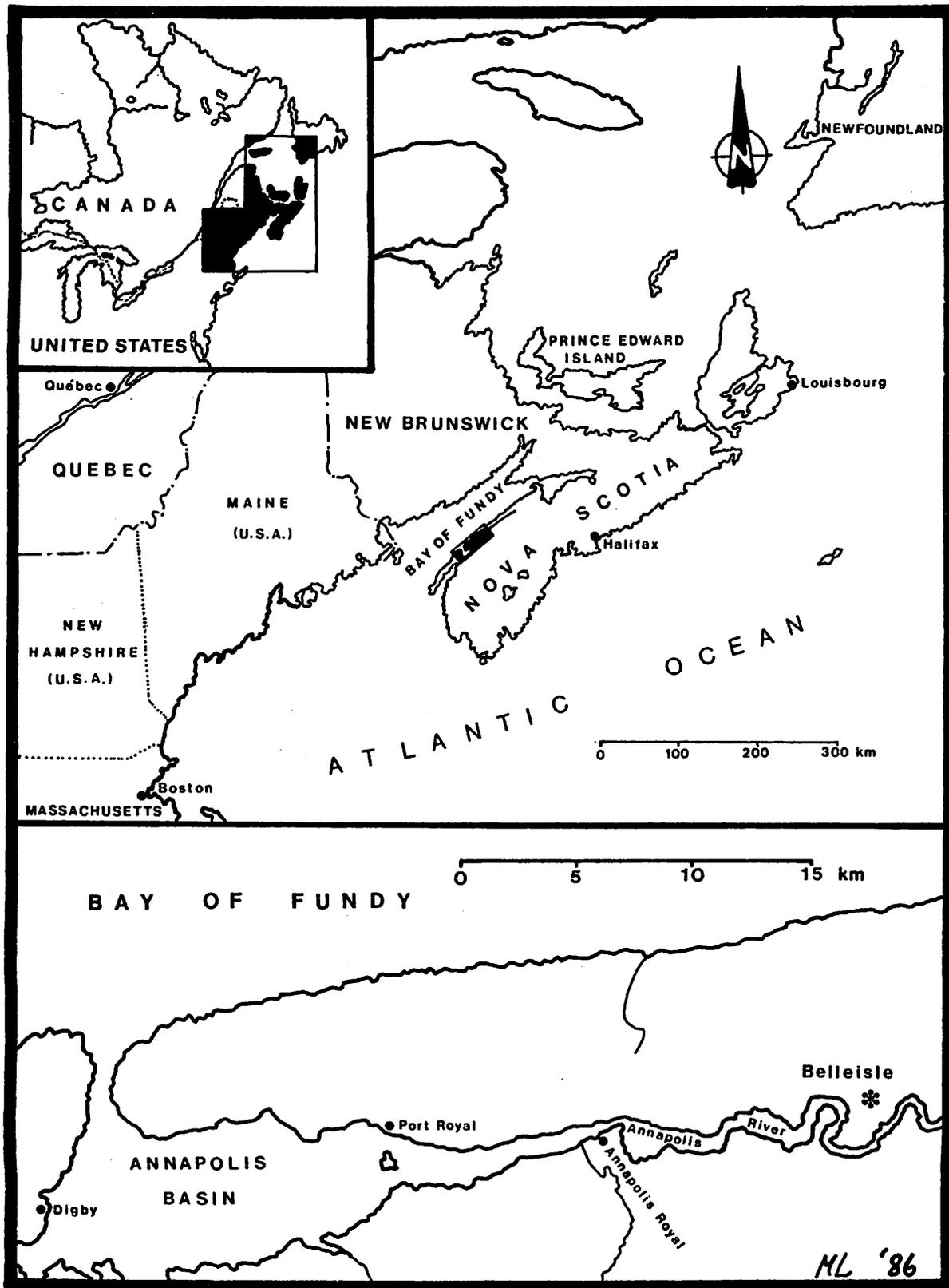


Figure 1. The Eastern Seaboard and the Annapolis Valley.

The following discussion of the archaeology of domestic Acadia excludes a survey of the archaeology of military sites and fortified trading posts.

In 1797, the archaeological investigation of Acadia commenced on Ste. Croix Island (now part of Maine, U.S.A.), when on separate occasions, Robert Pagan and Thomas Wright located and discussed the remains of de Monts' habitation of 1604-1605 (Cotter 1978:62-63; Ganong 1945:88, 90-91). Both individuals retrieved artifacts and noted their locations (Ganong 1945:88, 90-91). This work had resulted from a boundary dispute between the United States and Canada, where the Ste. Croix River -- then called the Scoodic -- was claimed to be the international boundary. However, the Americans claimed that the Ste. Croix was another river: the Magaguadavic. To prove that the Scoodic was indeed the Ste. Croix, Champlain's map of 1604 was used to locate de Monts' settlement on Ste. Croix Island -- known in 1797 as Dochet Island (Ganong 1945:86-87). The Boundary Commission recognized the validity of the fieldwork performed by Pagan and Wright, and archaeology undertaken in the 1950s and later substantiated the finds made 153 years earlier (Cotter 1978:62-63; Ganong 1945:84-86).

In 1938, C. Coatsworth Pinkney excavated in the vicinity of the Port Royal Habitation in Lower Granville Ferry, Nova Scotia, "although the reconstruction of the site was based largely on the basis of documentary information" (Rick 1970:13).

In 1950, excavations to prove the validity of the 1797 finds on Ste. Croix Island were completed by Wendel S. Hadlock of the University of Pennsylvania for the American National Park Service (Cotter 1978:64-65). In 1955, Harcourt L. Cameron, Professor of Geology at Acadia University in Wolfville, Nova Scotia, conducted brief excavations at the site of the Acadian village of Beaubassin (destroyed in 1751), northwest of modern-day Amherst, Nova Scotia (Nadon 1968:17, 19). Also in the 1950s, Cameron worked in Grand Pré, Nova Scotia (Nadon 1976:85).

Brief excavations were undertaken by John H. Rick (1970:13) at the Port Royal habitation in 1962. Five years later, Pierre Nadon, archaeologist for the National Historic Sites Service, surveyed to locate Acadian sites in the Chignecto Isthmus, and also in the Memramcook and Petitcodiac Valleys of southeastern New Brunswick, and from Minudie to Amherst in Nova Scotia (Nadon 1968). In 1968, Nadon directed the excavations of eight structures at the village of Beaubassin in Nova Scotia (Harris 1971:12-13). During the same year and in 1969, major excavations were completed on Ste. Croix Island. This work was directed by Jacob W. Gruber of Temple University, assisted by Elizabeth Gell and Charles W. Tremer (Cotter 1978:65).

In 1970, John S. Erskine, a naturalist, initiated a survey for Acadian sites in Belleisle, Annapolis County in Nova Scotia (Christianson 1984a:17). A year later, Brian Preston, Curator of History at the Nova Scotia Museum, Halifax, completed a survey of

reported Acadian sites in the Annapolis Valley and Minas Basin (Preston 1971). In 1972, he undertook partial excavations of the Acadian House 1 at Belleisle in the Annapolis Valley. This site appeared rich in pre-expulsion artifacts (Preston 1972:7). During the same year, E. Frank Korvemaker, archaeologist for the National Historic Sites Service, directed the excavations of the two Acadian houses at Grand Pré in Nova Scotia (Korvemaker 1972). In 1973, John Hill completed the archaeology at Grand Pré (Hansen 1984:1).

A return to Belleisle was effected in 1983, when House 1 was fully excavated, and excavations were begun on House 2, (Figures 2 and 3). This project was directed by David J. Christianson (1984a; 1984b), whose research objectives entailed an examination of the "settlement features and material culture associated with a pre-expulsion Acadian homestead" (Christianson 1984a:17). The field project was funded by The Devonian Group for Charitable Foundations of Calgary, The MacDonald Stewart Foundation of Montreal, Shell Canada Resources Ltd., and an anonymous Maritime Provinces Foundation (News Release, Nova Scotia Museum: July 7, 1983).

The present author assumed the task of analysing the ceramic and glass vessels from both Belleisle houses. This work was completed during my residency for the Master of Arts program at McMaster University, from 1983 through to June 1985. This thesis presents my written descriptions and results.

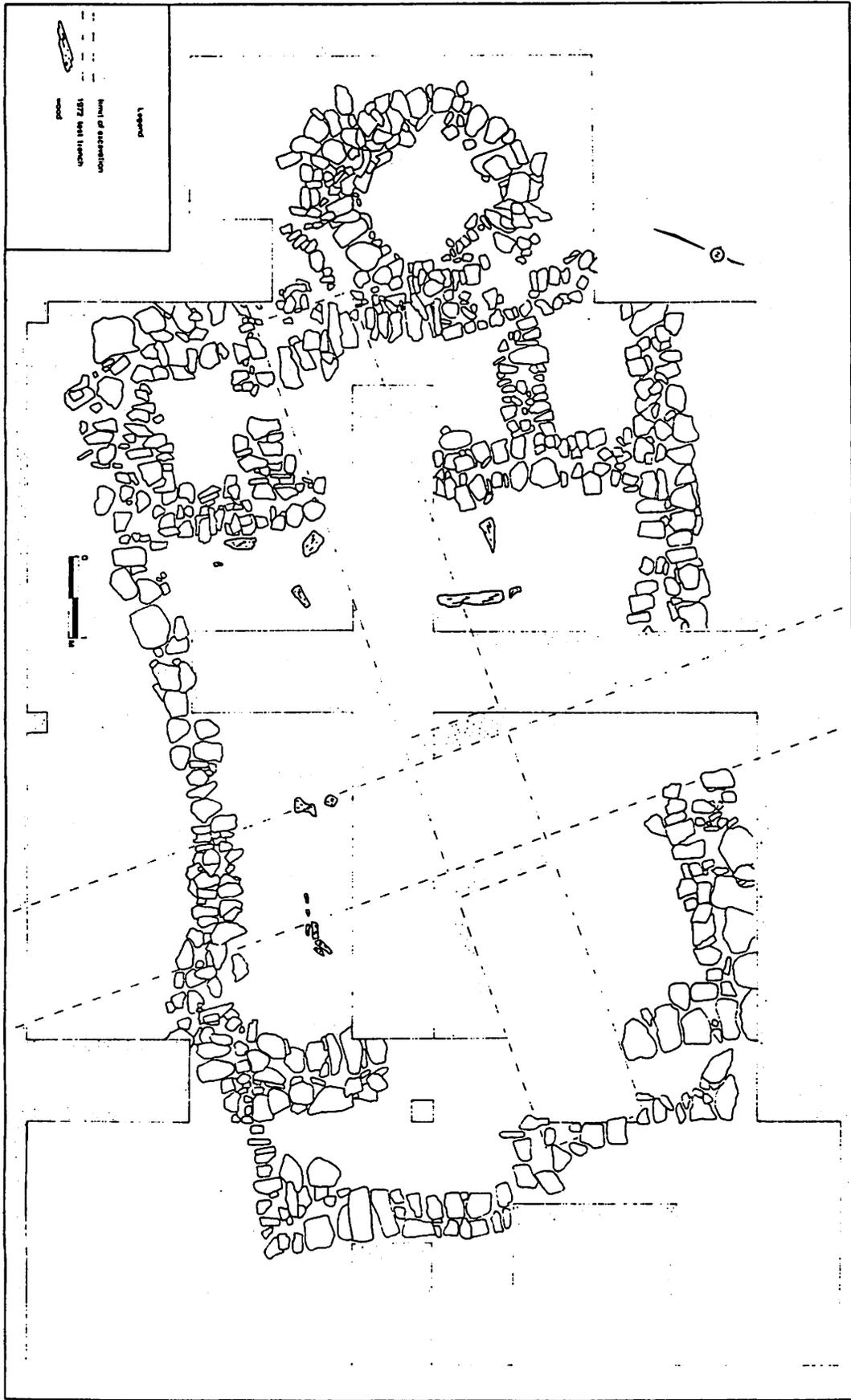


Figure 2. Belleisle House 1. (After Christianson 1984b:22)

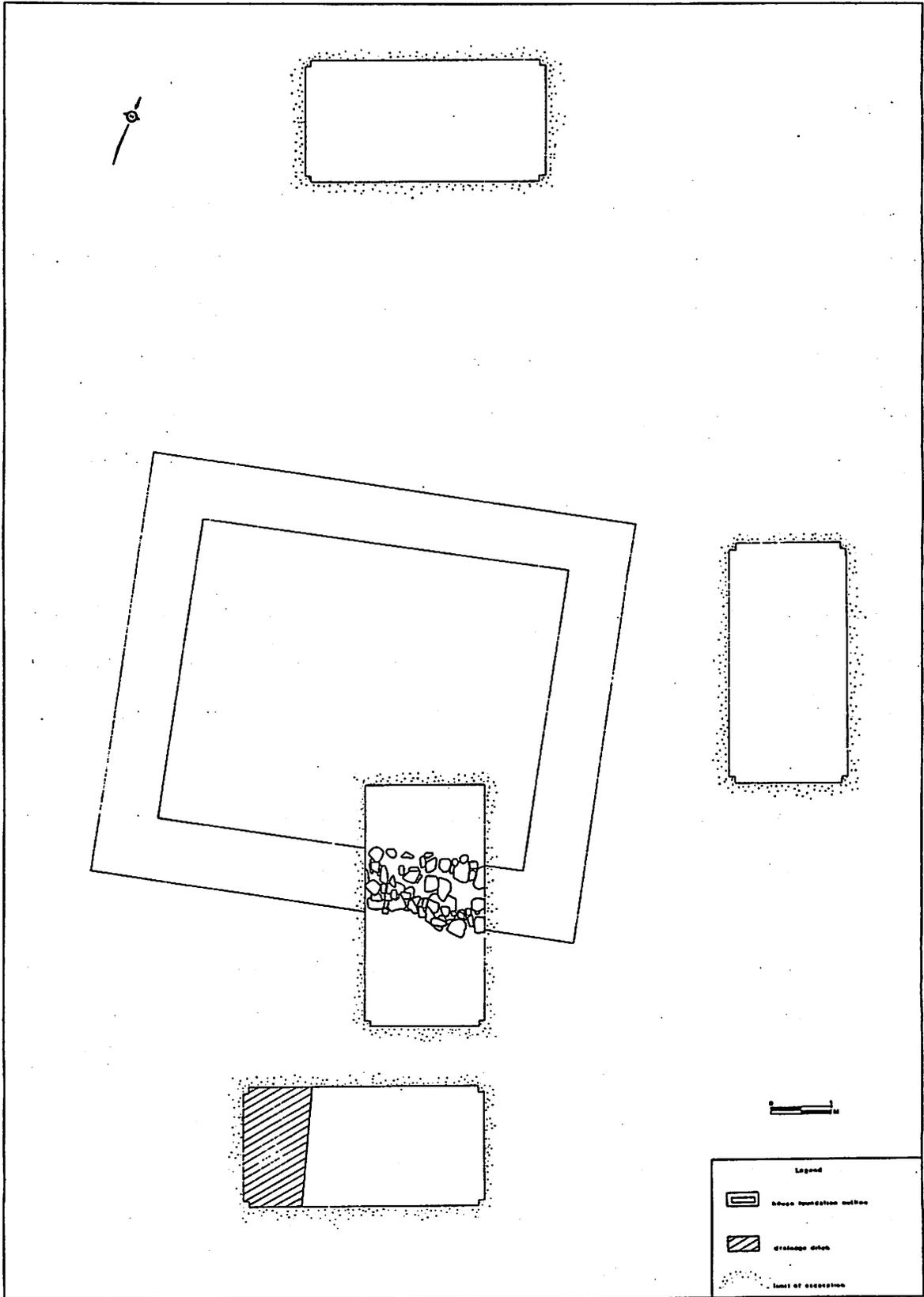


Figure 3. Belleisle House 2. (After Christianson 1984b:26).

**PRESENTATION**

The present study is divided into four main sections: 1) an historical background in Chapter 2; 2) a descriptive analysis of the ceramics and glass from the Belleisle houses (Chapters 3 and 4); 3) a comparative analysis of the Belleisle data with similar information from other contemporaneous sites (Chapter 5); and finally, 4) conclusions are offered in Chapter 6. Certain of the chapters' highlights can be indicated here.

Chapter 2 indicates that little is known about Acadian social life and economic activities in the eighteenth century, though some very interesting research has brought to light some of the peculiarities of Acadian material life. The same chapter outlines the major events in Acadian history, Acadian population growth, and the development of the Belleisle community.

In the analysis of the Belleisle ceramics and glass (Chapters 3 and 4), the origin of each artifact or variety of wares is determined; also, the age of each find is constructed from manufacturing histories, and plausible trade routes are traced for each artifact, or variety thereof. Such research depends heavily upon the availability and accuracy of artifact histories, but can lead significantly to general and precise studies on colonial trade.

In chapter 5, the data from Chapters 3 and 4 are summarized and compared with information about ceramic and glass finds from other contemporaneous domestic-sites in Acadia, New France and New England. Also, a historical study of the material life of the rural residents of Meaux, France, serves as a basis for further comparisons. Similarities and differences in the trade of distinct regions are made evident and are explained. Status differences become evident as the material goods owned by a number of individuals of historically known status, are compared.

The conclusions (Chapter 6), synthesize the information obtained from the artifact studies, and the comparative analysis is summarized for both Belleisle houses. The validity of this type of approach is reviewed. Also, statements regarding Acadian material life and economic activities are generated.

## CHAPTER TWO

## HISTORICAL BACKGROUND

## INTRODUCTION

This chapter outlines Acadian history from 1603 to 1755, emphasizing historical events within the Annapolis Valley of Nova Scotia. In particular, three topics are addressed: 1) the events, 2) the population, and 3) the Acadian use of marshlands. The summary of the military and trading history for the region will leave the reader with an idea of the geographic extent of Acadian settlement, while the second division treats the population in terms of growth and origins. The third section discusses the Acadian adaptive strategies to marshland environments and Acadians' degree of success at the Belleisle settlement.

The main settlement in the Annapolis Valley was Port Royal, renamed Annapolis Royal in 1710. It was a settled area rather than a village or a town, until about 1670 or 1680, as we will see in the historical sketch. Also, period documents, mainly censuses, mention three main regions of settlement at Port/Annapolis Royal, Minas and Beaubassin. This terminology is retained in the following historical sketch.

Etymology

The word 'Acadia' has two possible origins. First, it could be

derived from the place name 'Arcady' -- that region of ancient Greece known for its beautiful forests. In 1524, the Florentine explorer Giovanni da Verrazanno called one area of the American east coast by the same name and for similar reasons (Morison 1971:295). "Map-makers continually moved it eastward until L'Acadie became the French name for Nova Scotia, New Brunswick, and part of Maine" (Morison 1971:299). A second explanation proposes that 'Acadia' originates from the Micmac 'Cadie', meaning fertile land, as in Schenecadie, Tracadie and Schubencadie... (Rumilly 1981:9). There is no general agreement.

## THE EVENTS

### Establishing Port Royal, 1603 - 1670

In 1603, Henry IV commissioned Pierre du Gua de Monts to establish a fur trade monopoly in North America (Lapierre and Roy 1982:8). De Monts sailed from Le Havre on April 7, 1604, accompanied by Samuel de Champlain and Jean Pourtrincourt, among many others (Rumilly 1981:22). One month later, they arrived in Acadia. They explored the coast and selected a place for their trade post: Dochet/Ste. Croix Island at the mouth of the Ste. Croix River -- an island with very few trees and lacking a fresh water supply. Of the 79 individuals left to winter on the island, thirty-five died of scurvy (Ganong 1945:52). In the spring of 1605 the survivors, aided by colonists just arrived from France, dismantled their dwellings and took the frameworks by ship to Port Royal (Ganong 1945:55).

Port Royal was a better choice of settlement, but the French immigrants still were not acclimatized; more settlers died during the winters of 1605-1606 and 1606-1607 (Rumilly 1981:25). In 1606, Pourtrincourt replaced de Monts as "lieutenant général" of Acadia, but a year later the company disbanded, and the inhabitants returned to France (Lapierre and Roy 1982:12). It seemed that the French merchants financing the company spent large sums of money for insufficient profits. Pourtrincourt, however, financed his own return to Port Royal in 1610. His sons, a few soldiers and craftsmen accompanied him (Rumilly 1981:35-36). In 1613, the English captain Samuel Argall, with 60 soldiers, attacked and destroyed Port Royal, and it was not reoccupied by the French until 1636, though they continued to trade in Acadia, as we will see below.

In the interim, both England and France claimed ownership of Acadia: the former "on the basis of prior discovery" (John Cabot in 1497) and the latter "by right of prior settlement" (MacBeath 1979:24). In 1621, James I granted Acadia to Sir William Alexander, Earl of Stirling, under the name 'New Scotland' (MacBeath 1979:25). Sir Alexander 'the younger' and 70 settlers constructed "Charles or Scott's Fort" near Port Royal in 1629 (Rumilly 1981:55). The Scotsmen also suffered many deaths during the harsh winters; that of 1629-1630 claimed the lives of 30 men (Coleman 1969:1). In 1629:

England and France were at war, following on the Duke of Buckingham's disastrous attempts to relieve the

Huguenot port of La Rochelle, which was besieged by a Royal army (Eccles 1972:27).

At Quebec, Champlain did not receive the supplies he expected from France, for the ships and men of Lewis and Thomas Kirke forced him to surrender in July 1629 (Eccles 1972:28). Canada and Acadia became English possessions for a short four years.

By the Treaty of Saint-Germain-en-Laye of 1632, both Canada and Acadia were ceded back to France. In July, Isaac de Razilly and three hundred men sailed for Acadia. Two months later, they landed in La Hève, on the south coast of Nova Scotia (Coleman 1969:2). Razilly oversaw the peaceful removal of the Scottish settlers from Port Royal, but chose to establish his administrative centre in La Hève -- the decision of a trader rather than a colonist. Port Royal was reoccupied in 1636 when Razilly's successor, Sieur d'Aulnay, moved the capital from La Hève to Port Royal and granted land parcels to the settlers who had been arriving since 1632. Also, d'Aulnay travelled to France where he convinced 20 to 30 families to settle in Port Royal (Lapierre and Roy 1982:21; Rumilly 1981:73). Among those who came were "saltworkers to work on the marshes" (Massignon 1962:34). By 1642, there were 40 families in the settlement, and 50 in 1651 (Griffiths 1973:13; Rameau de Saint-Père 1889, I:92).

In July 1654, Englishman Robert Sedgwick layed siege to Port Royal. The Acadian resistance was brief; the men fled from the fort after

their scout was killed by the invaders. The conditions of surrender were humane: the Acadians were allowed to remain in English territory and continue to work their farms. The invading force retired to New England, leaving its newly conquered territory without a garrison (Rumilly 1981:97-98).

In 1657, Thomas Temple was appointed governor of Acadia. Huguenots residing in England were convinced to settle in Port Royal, something of an irony for many of their neighbours would be Catholics (Rumilly 1981:100).

France regained ownership of Acadia in 1667, when the Treaty of Breda was signed (MacBeath 1979:25). Thomas Temple, however, chose not to relinquish Port Royal until September 1670 (Massignon 1962:20). For the first time in the history of the colony, France, rather than a French mercantile group, claimed ownership of Acadia (Lapierre and Roy 1982:21).

#### French Administration, 1671-1710

From 1671 to 1710, Acadia was administered either directly from France, or in council with the intendant and governor of New France. Governors were also appointed in Acadia, but they were responsible to the governor of New France and the French Crown. France, through its officials, attempted to develop settlements and influence trade, but it seemed barely able to police its own officials, as evidenced below.

Substantial land holdings were ceded to "would-be" seigneurs in Acadia. The grants, however, were a source of trouble from the very beginning:

Seigneurial grants in the "greater Acadian" area may have been intended to be of the same kind as those in Canada but the majority of the grants made remained paper entities ... Grants were poorly described and often overlapped, and prior grants were rarely extinguished before new ones involving the same territories were made (Clark 1968:114-115).

Alexandre Le Borgne de Belle-Isle, however, was recognized officially as having seigneurial title to most, but not all, of the Port Royal lands (Clark 1968:119-120). Official grants to potential tenants indicate that Port Royal extended geographically from the mouth of the Annapolis River (Rivière Dauphin) to the present-day Granville/ Belleisle area (Coleman 1969:12). This is indicated by a land grant in 1679 from Sieur de Belle-Isle, residing in Port Royal, to Pierre and Mathieu Martin:

A parcel of land and of meadow [prairie] cultivated by them and on which they live, limited to one side by: on the east, the large meadow [Belleisle Marsh?] on the west the Domachin [?] brook, south, by the Dauphin River [Annapolis] and north by the mountain [North Mountain Range]. (Rameau de Saint-Père 1889, II:318), (my translation and emphasis).

Obviously, the seigneur was granting land already occupied and cultivated by the grantees. Undoubtedly, seigneur de Belle-Isle was attempting to reduce the number of squatters on his seignury by declaring them owners of the land they occupied. Elsewhere, similar

attempts were undertaken by Sieur de La Vallière, seigneur of Beaubassin. However, his attempts proved fruitless (Clark 1968:120).

France also attempted to regulate Acadian fisheries and trade. Certain Crown regulations could prove financially beneficial to her governor. Other regulations resulted in financial disasters. Around 1676, the Minister de la Marine, Jean-Baptiste Colbert approved the sale of fishing permits to New Englanders. In 1684, Louis XIV reversed Colbert's decision and imposed sanctions (Lapierre and Roy 1982:410). On August 8, 1684, Sieur de La Vallière, governor of Acadia, lost his post because he was selling fishing permits to New Englanders. He wrote his friend, Simon Bradstreet (governor of Boston) to inform him that he was very sorry that trading activities had been forbidden. When permitted, La Vallière had been most expedient in issuing permits. He had an agent in Boston, "Monsieur de Nelson ... with a number of permits [billets] to receive in Boston payments of the said rights" (Daigle 1976a:166, my translation). La Vallière's successor Sieur Perrot, governor from 1684 to 1687, also lost his post for his involvement in this illicit trade (Lapierre and Roy 1982:24).

Contraband, however, was a necessary evil. Since the Acadian population was small, France was not willing to send merchantmen to supply the Bay of Fundy (Daigle 1976a:163, 165) and, thus, New England traders were only too happy to respond to the Acadian demand. In 1687, Sieur de Meneval, governor of Acadia, issued orders forbidding

the use of English measures and replaced them with French equivalents (Daigle 1976a:163). Evidently, New England traders were influencing more than Acadian material culture.

The trade with New England grew to a large scale. Wheat, corn and furs were exchanged for textiles, iron objects, rum and agricultural implements (Daigle 1976b:54). In times of food shortages, New England supplied wheat and corn to Acadia. Grain shortages, however, were rare in Acadia; one occurrence was reported in 1699 (Daigle 1976a:162).

Trade permits were issued from both Acadia and Massachusetts. Charles de La Tour was in a partnership with two Boston merchants, Jonathan Usher and Gabriel Bernon (Daigle 1976b:60). When his ship was seized in Boston harbour, following Pierre Le Moyne d'Iberville's capture of Pemaquid in 1696, La Tour appealed a lower court decision in the "Court of Judicature" to regain his ship and its cargo (Daigle 1976b:59). La Tour's attitude shows that he was acting as a merchant, and would not be made to feel responsible for the military actions taken by New France against New England (Daigle 1976b:59).

Acadians became more involved in the New England trade. In a memoir dated June 30, 1697, a subordinate of Governor Villebon, M. Tibierge, wrote:

Every year the English bring to these places [Beaubassin, Minas and Port Royal] trade goods, brandy, sugar cane from the Barbados, molasses and the

utensils which are needed, taking in exchange pelts and grain, which has been a great boon during the recent years of famine in Boston. M. Dubreuil, Boudrot and le Marquis of Port Royal took shipments to them, for they have passports from both M. de Villebon and the English (Webster 1934:155).

Furthermore, Abraham Boudrot of Port Royal appears to have been involved in the trade as early as 1683 (Daigle 1976a:165-166, note 24). Still active in 1699 (Webster 1934:155), he must have established solid trading connections in Massachusetts.

The trading activities described above would seem to presuppose a state of relative peace between Acadia and New England, but this was not the case. Although it was under French rule, Nova Scotia was still considered a British possession (MacBeath 1979). Furthermore, this author would suggest that New Englanders preferred to have the Acadian market to themselves. Certainly, eliminating the competition would be to their financial advantage.

Sir William Phips attacked and looted Port Royal in May of 1690. Phips' incursion was followed by that of privateers in 1691 (Arsenault 1965:87; Webster 1934:9-10). However, the English did not occupy Port Royal. The English Governor of Acadia, Edward Tyng and 25 men were captured by a French man-of-war on their way to Acadia, and were freed by the French Governor of Acadia, Sieur de Villebon (Rumilly 1981:153). Four other English attacks on Port Royal were repelled: one in 1696, another in 1704, and two in 1707 (Coleman 1969:31-38; Rumilly 1981:167-168).

In 1706, Sieur de Subercase was appointed governor of Acadia (Rumilly 1981:200). He was very surprised that Port Royal had repelled many attacks, considering the poor condition of the fort and of its garrison. One of Subercase's first actions was to purchase shoes and socks for the French garrison from Boston merchants (Rumilly 1981:201). It is plausible that French soldiers were wearing such footwear when they repelled two New Englander attacks in 1707.

In 1708 and 1709, Acadian privateers from Port Royal were very active. During the summer of 1708, nine English ships were captured in one month (Rumilly 1981:210). In 1709, Acadian privateers captured or sank 35 English ships, made 470 prisoners and brought rich cargoes to Port Royal (Arsenault 1965:92).

The French and English raids came to an abrupt end in 1710. On September 28, 36 ships carrying one British and four New England regiments sailed into the Annapolis Basin. Sieur de Subercase and his 300 troops surrendered on October 13, 1710 and a negotiated peace allowed him and his soldiers to leave unarmed (Arsenault 1965:94,96; Rumilly 1981:219-220). From this time on, Port Royal was occupied by a British garrison, never again reverting to French control.

#### British Administration/Deportation, 1710 - 1755

In 1713, France signed the Treaty of Utrecht, ceding Hudson Bay, Newfoundland and Acadia (Mainland Nova Scotia), to England. However,

France retained ownership of Ile Royale (Cape Breton) and Isle Saint-Jean (Prince Edward Island), and conserved her fishing rights to the Grand Banks (McLennan 1978:1-2).

In order to protect her interests, France chose to erect a fortress in Louisbourg, Cape Breton. The first settlers arrived at the site in 1713 (McLennan 1978:12). Also, Acadians from Mainland Nova Scotia were given the opportunity to relocate in Cape Breton; only a minority, however, chose to go as very few Acadians elected to leave their prosperous farms (McLennan 1978:17, 34-35). Moreover, France could not offer much protection from Louisbourg. The final decision to locate the fortress in Louisbourg was not made until 1719, nine years after the British conquest of Annapolis Royal and six years after the Acadians had been asked to relocate in Cape Breton (Fry 1984:49-51). Work on the fortress was very slow, its construction nearing completion about 1743 (Fry 1984:49-51). The fortress was an impressive stronghold. However, it was taken twice: first, in 1745 by troops consisting mostly of New Englanders, (it was returned to the French in October 1748), and a second surrender to British troops occurred in July 1758 (Fry 1984:52-53; McLennan 1978:164, 181, 284-285).

Louisbourg was a fortified fishing and trading base, from which a few military expeditions into Mainland Nova Scotia were planned; it was also a base for French privateers (Fry 1984:51; McLennan 1978:49, 75-78, 218-229). From the Acadians' point of view, Louisbourg became

"an expanding market, which they shared with Boston" (Griffiths 1973:25). They came to the fortress from Baye Verte and the Bay of Fundy (McLennan 1978:77; Moore 1975:11-13; charts 1-3, chart 5, part 3). However, New England merchants continued to sail to Bay of Fundy settlements to sell their goods as the following 1731 entry from the journal of Robert Hale illustrates:

...Capt. Blin of Boston who has been a trader to Nova Scotia this many years, died about a month ago at Mushquesh [Missaguash/Beaubassin] and lyes [sic] on the plain below the town not far from y<sup>e</sup> pool, where he used to lay his sloop (Hale 1906:234).

Trade goods also came from Louisbourg or Quebec to Beaubassin via Baye Verte. The French engineer, Louis Franquet, reported that war supplies and food followed this route around 1750 (Rumilly 1983:239).

Until the founding of Halifax in 1749, the number of British troops in Nova Scotia did not exceed 200 (Griffiths 1973:28). In Annapolis Royal, Paul Mascarene, a nationalized Huguenot who was first an engineer and later became commander of the fort, attempted to secure a "benevolent neutrality" from the Acadians and hoped that they would work for the British Crown (Brebner 1967:22, 28). He was an able commander, bringing discipline to the Annapolis garrison, as well as securing the services of Acadians to make repairs to the fort ramparts (Brebner 1967:28). He also attempted to have a road constructed from Annapolis to Minas; but this effort proved fruitless (Coleman 1969:61-69).

At the beginning of the eighteenth century, settlement at Annapolis Royal extended from the mouth of the Annapolis River to modern-day Bridgetown (J. Daigle, Personal Communication: November 11, 1984; R. C. Harris, Personal Communication: September 14, 1984). About 1730, the limits were essentially the same, except in the vicinity of the fort, where Acadians had moved out (Coleman 1969:57; P.A.C. VI/210). In 1749, Acadians were established 50 km upriver from Annapolis Royal (Coleman 1969:74).

In March 1744, France declared war on England. Annapolis Royal was attacked by François Du Pont Duivivier accompanied by soldiers, Indians and a few Acadian volunteers. Duivivier encountered many difficulties, being unable to rally Acadian support and being refused quantities of supplies from the Minas residents (McLennan 1978:125-126, Pothier 1982:73-75). He retired to Louisbourg after naval support failed to arrive in the Annapolis Basin (Rumilly 1983:135, 141). In 1745, another French expedition on Annapolis Royal failed, largely because it lacked artillery to inflict damage on the English fort (Rumilly 1983:150-151). Two other attempts failed in 1746. The commander of these expeditions, Claude de Ramezay, blamed the failures on poorly equipped troops and the Acadians' inability to supply food: "We were often without bread...the settlers...only supplied promises" (Rumilly 1983:170, 175-176). Ramezay's raids were part of a much larger plan to reconquer Louisbourg and Mainland Nova Scotia. The French Crown dispatched half of its fleet under the command of the Duc d'Anville. The expedition was disastrous. Ships were lost or damaged during

storms and 1200 men died at sea, including d'Anville (Arsenault 1965:128; Rumilly 1983:169-171). Of the 15 men-of-war, eight frigates and 50 transports which left France, only half of the fleet arrived in September 1746, three months after its departure (Rumilly 1983:171). More ships and men were lost before the remainder of the fleet returned to France (Rumilly 1983:175).

In February 1747, Canadian troops and Micmacs attacked New Englanders stationed in Minas. Many New Englanders were killed; others were captured and expelled from the settlement (Rumilly 1983:181-182).

In 1748, Louisbourg reverted to France by the Treaty of Aix-La-Chapelle (Rumilly 1983:190). One year later, Halifax was established by the British general Edward Cornwallis as a response to the existence of Louisbourg (Griffiths 1973:28). The French responded by erecting two forts, Beauséjour and Gaspereaux, both at the Chignecto Isthmus, where the French believed Acadia began and Nova Scotia ended. The French forts were completed in 1751. French engineer, Louis Franquet, reported that both were flimsy structures, although Beauséjour had earthworks (Rumilly 1983:236-238). In late summer 1750, the British established Fort Lawrence within sight of Fort Beauséjour, but out of cannon range (Young 1980:23). The English also established a fort in Pisiquid (Minas area), "so Exposed to the weather that in deep snow it had been often possible to walk over the palisades" (Young 1980:22). A third military emplacement, Fort

Sackville, was established at the head of Bedford Basin (Halifax) and "a road eighteen feet wide had been made all the way from Halifax to Minas. Troops could be dispatched to the heartlands of Acadian settlement in a single day" (Young 1980:22). Continual improvements were made to all British fortifications.

Cornwallis returned to England in 1752. Captain Perigrine Thomas Hopson was governor for fifteen months, but was replaced by Colonel Charles Lawrence in 1753 (Arsenault 1965:146). Lawrence was worried about the growing number of Acadian refugees in Beaubassin, hoping to make their way to Isle Saint Jean (Prince Edward Island); many had been forced to take arms by the French authorities (Brebner 1931:286-287). Regardless of the quality of their training, these Acadians remained colonists, not soldiers; they were more concerned about their families than the faith of France in northeastern America (Rumilly 1983:324). The French administration took certain steps to instigate Acadian support. Sometime before 1752, Pierre Jacques de La Jonquière, governor of New France, instructed the Micmacs to permit loyal Acadians, a minority, to participate in raids, thus compromising the majority of the Acadian population, and provoking the British. Hence in La Jonquière's words: "more families [Acadian] will move within the territory we control" (Arsenault 1965:154). Invariably, the Acadians feared the Micmacs and the British (Arsenault 1965:154; McGee 1973:60).

The Micmacs had little to lose. Hostilities between the British and

the Micmacs "were almost permanent" (McGee 1973:59). It seemed that attempts at pacification based on trust, treaties, through gifts or trade did not work, or were too expensive. The British opted for a policy of genocide, until the Micmacs' ally (France) was no longer a threat, following the Treaty of Paris in 1763 (McGee 1973:61-68).

Governor Lawrence in concert with the governor of Massachusetts, Sir William Shirley, did not need much encouragement; both wanted to rid Nova Scotia of Acadians (Arsenault 1965:146-151; Rumilly 1983:171-172, 282-284). In 1754, they combined their forces to attack Fort Beauséjour, and the French surrendered on June 16, 1755. The next day, Fort Gaspereaux was ceded to the British without a military engagement. A few days later, Fort St-Jean (St. John River) was evacuated and set afire by French troops (Arsenault 1965:48; Rumilly 1983:325-326, 330). Mainland Nova Scotia was without a French military presence. The fate of the Acadian population would soon be determined, following military events in Ohio.

On July 9, 1755, General Edward Braddock suffered a humiliating defeat at the battle of Monogahela (Fort Duquesne [Pittsburg]) which enraged the British military in Nova Scotia and raised fears among the English colonists in Halifax that French forces would eventually reach them (Arsenault 1965:149; Rumilly 1983:334-335). Governor Lawrence decided to remove the Acadians from Nova Scotia while they were without French support, deporting the inhabitants of all communities by military transport. The expulsion began at

Beaubassin in August 1755; later in September and October, British troops were dispatched to Minas and Annapolis respectively (Arsenault 1965:166). From early November to December 8, 1755, 1664 Acadians from Annapolis were embarked on transports sailing for the American colonies (Coleman 1969:85-86). As in other Acadian settlements, buildings at Annapolis were destroyed by fire:

Captain John Knox recorded in 1757 [two years after the expulsion] that as one approached the fort from the river one could see the ruins of farms and extensive orchards of apple and pear trees heavy with fruit. And on further reconnoitering expeditions up the river he observed more ruins (Coleman 1969:86).

#### POPULATION

Until circa 1670, we know little about the size of the Acadian population. Furthermore, figures appear to be estimates rather than actual counts. During the period of French administration (1671-1710), at least eight official censuses of Acadia were taken. (Figures for the Port Royal area are summarized in Table 1.) The figures indicate fluctuations in the Port Royal population, but this is not true of every settled area. The Minas and Beaubassin censuses show gradual initial upward trends, followed by abrupt increases in the eighteenth century, especially after 1710, when the British took control (Figure 4). English/French conflicts, emigration necessitated by population growth, and the availability of unoccupied marshlands affected the location and size of the Acadian population (Arsenault 1965:81; Roy 1982:138). Furthermore, Acadians in transit to Prince

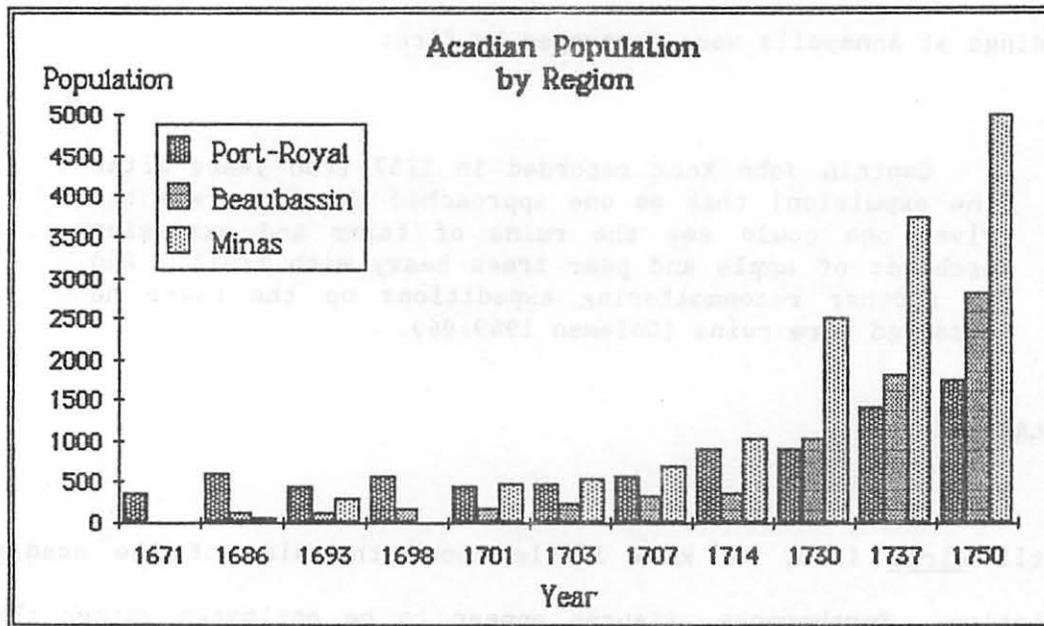


FIGURE 4. Population of Port Royal, Beaubassin, and Minas, 1671 to circa 1750. (After Clark [1968] and Roy [1982]). The 1750 figures are estimates (Clark 1968:200-212).

Edward Island (circa 1710-1755) inflated the population totals for Beaubassin. Moreover, the availability of larger unexploited marshes in Minas promoted greater immigration to Minas, rather than to other settled areas.

Acadian families were larger than Canadian and French families. Each Acadian family averaged seven children, and 30% of the families included 9 to 10 children (Griffiths 1973:14; Roy 1982:143, 145). The adult and child survival rate was also astonishing for the time:

Table 1. Port Royal\* Census, 1671 to 1707 (Adapted from Coleman [1969], Clark [1968], Gaudet [1906], Roy [1982]).

Census Year	Population	Cattle	Sheep	Pigs	Arpents ** Under Cultivation
1671	358	829	399	--	417
1686	592	643	627	--	377
1689	463	573	617	619	488
1693	500	955	1240	704	1298
1698	584	933	1136	576	1257
1701	456	715	768	462	--
1703	485	--	--	--	--
1707	566	963	1245	974	--

\* Port Royal is viewed as an area (Annapolis Valley) rather than a settlement by enumerators.

\*\* One arpent equals 0.342 ha. (Ross 1983:82).

often people aged 70 or 80 were enumerated in censuses (Arsenault 1965:81; Griffiths 1973:33). Furthermore, a large number of children survived to adulthood: 75 percent of newborns reached adulthood (Griffiths 1973:14; Roy 1982:142). The Acadians' successful exploitation of the marshlands provided nutritious and copious food, so much that normally certain crops became cash crops (Daigle 1976a; Webster 1934).

In New France, in comparison, there were about 2500 colonists around 1670 (Trudel 1968:142). The official census of 1754 listed 55,009 inhabitants, but the actual figure might have been greater (Frégault 1954:11-12; Mathieu 1976:212; Trudel 1967:94; 1968:142-151). As in Acadia, the population increase resulted from high birth and survival rates, rather than from immigration. On average, there were 60 births per 1000 inhabitants on a yearly basis, a large figure for the time (Mathieu 1976:212; Trudel 1968:151). Out of every 1000 children born in New France, 25 percent died before they reached their first birthday (Trudel 1968:15). How many reached adulthood is not known.

During the eighteenth-century, the population of France increased from about 18 to 25 millions, from 1690 to 1770 (Le Roy Ladurie 1975:361-366). This increase is relatively small compared to those of Acadia and Canada during the French Regime. However, Le Roy Ladurie (1975:373) indicates:

... It appears, in particular, that the formidable

French-Canadian fertility mirrors somewhat ... the already prolific population of the extreme western regions of France, where so many Quebec [New France] colonists originated. (my translation).

Generally speaking, the relatively slow population growth was the result of wars and late marriages.

Also, occasional famines and epidemics took their toll, the latter being more frequent than the former in eighteenth-century France (Le Roy Ladurie 1975:361-366). More children were born in urban rather than in rural areas; but, 55 percent of the children born in cities died before their first birthday, compared to 45 percent in the countryside (Le Roy Ladurie 1975:373-374; 592, note 9). All things considered, in eighteenth-century France there was a general improvement in the quality of life and more people lived longer than in the previous century; famines were not common and the last of the plague was seen in 1720, in Marseille (Le Roy Ladurie 1975:386,389-390; Mandrou 1974:141-144).

The examination of the censuses also reveals Acadian origins. Massignon (1962:74) indicates that more than half of the Acadians came from that region of France known as the West-Centre Provinces: Poitou, Aunis, Saintonge and Angoumois -- along the coast of the Bay of Biscay, approximately from La Rochelle south to Bordeaux, and inland, from Poitiers south to Angoulême (Figure 5). Another quarter of the population came from Brie and Normandy (Figure 5). The

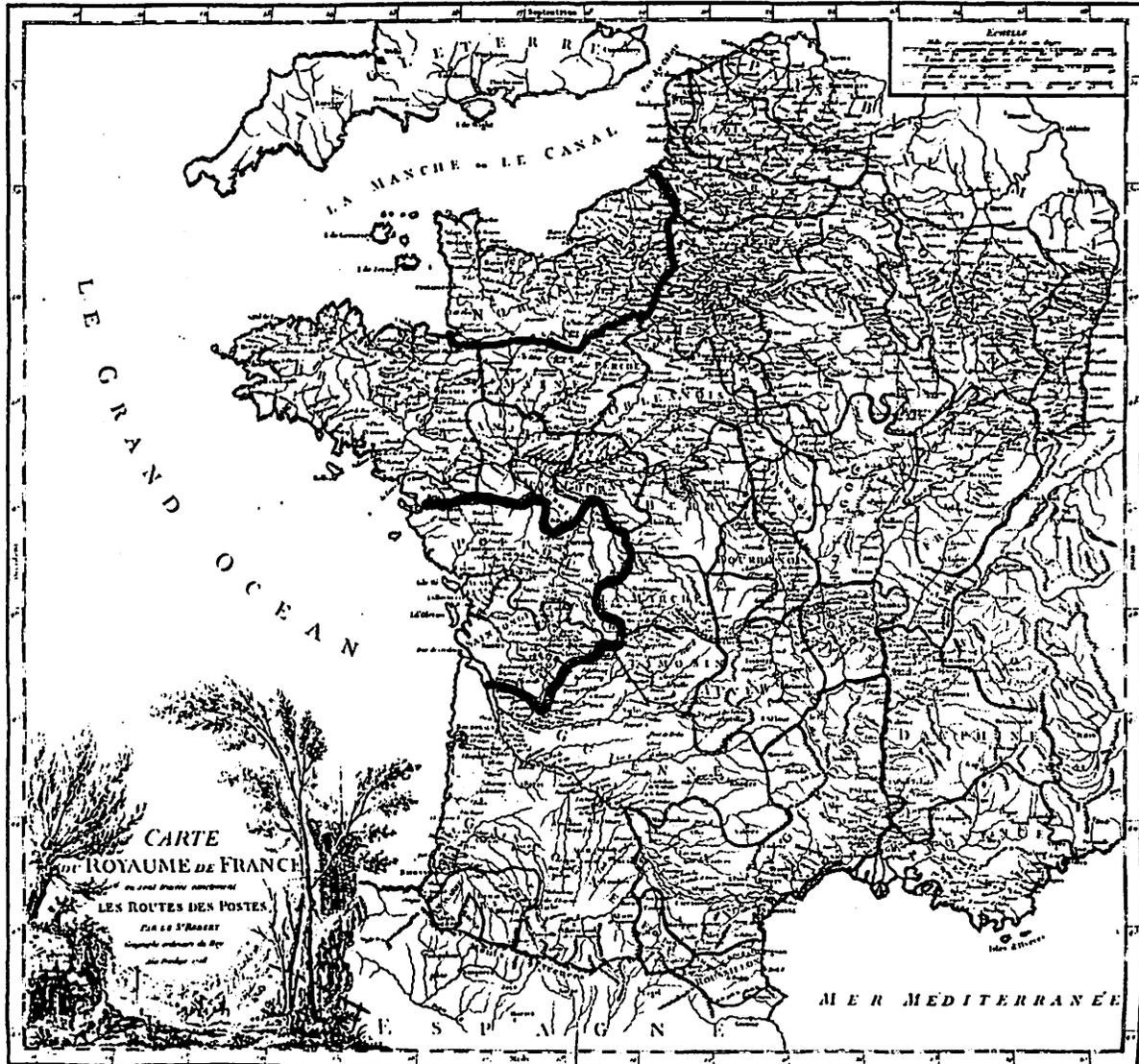


FIGURE 5. West-Centre Provinces of France and Normandy. From a 1758 map by Sieur Robert. (After: Trudel [1968:144]).

remainder consisted of peoples from other regions of France, as well as Canadians, Huguenots and a least one Irish family (Massignon 1962:69, 71, 74). French immigrants did not come to Mainland Nova Scotia after 1713:

From the Treaty of Utrecht (1713) to the Treaty of Paris (1763) ... the majority of Acadians remained under British control. Fisherman and colonists sent by the French government to Isle Royale [Cape Breton] and Ile Saint-Jean [Prince Edward Island] ... were in contact with hundreds of Acadians emigrants to these islands: but these two elements of the population were clearly separated in French censuses, and in the areas discussed above, they did not fuse (Massignon 1962:41), (my translation).

Massignon (1962) does not explain the lack of fusion. I would surmise that the post-1713 French immigrants were 'engagés', settlers contracted to exploit a parcel of Crown land for a period of two or three years, after which they renewed their contract, or returned to France or elsewhere. The second type of incoming colonists discussed by Massignon (1962) were fishermen; most returned to France on a yearly basis. During their stay in Cape Breton or Prince Edward Island, some fishermen manned the land stations where fish was dried on flakes, while others fished.

In comparison, 40 percent of the immigrants to New France came from the northwest of France: Normandy, Île-de-France, Paris, and Brittany. Another 25 percent originated from southwestern France: Poitou, Aunis, Saintonge, Île-de-Ré (west of La Rochelle), and Île-d'Oléron (west of Rochefort), (Trudel 1968:145). After 1663, the

port of La Rochelle became the principal supplier of goods to New France. From that date, more colonists originated from the southwest of France (Dechêne 1974:94-95; Trudel 1968:145). About 65 percent of the immigrants came from rural areas, but colonists also came from large urban centres, such as Rouen, Paris, La Rochelle, Poitiers and Bordeaux (Dechêne 1974:95).

In summary, from about 1632 to 1670, it is difficult to estimate the number of immigrants to Acadia because of the lack of census taking. Beginning in 1671 and until about the end of the French Regime in Mainland Nova Scotia (1713), censuses indicate a continuous population increase in Acadia as a whole, fluctuations in Port Royal and steady increases in Minas and Beaubassin. Also, the same censuses reveal information regarding the origins of the settlers. During the British control of Acadia (1710-1755), the population increased dramatically in Minas and Beaubassin, and to a lesser degree in Annapolis Royal. Undoubtedly, Acadians moved away from the British administration at Annapolis Royal, some making their way to Ile Saint-Jean (Prince Edward Island), via the settlements in the Chignecto Isthmus (Clark 1968: 346-349; Coleman 1969:31).

#### THE ACADIAN MARSHLANDS

...the heartland of Acadia was formed by small communities contiguous to the salt-marshes surrounding the Bay of Fundy. These settlements, supported largely by marshland agriculture, were located along dyked tidal marsh portions of rivers and streams (Christianson 1984b:6).

Most Acadians' livelihood depended upon the successful exploitation of diked marshlands. Initially, the method of draining marshes was introduced by sauniers (saltworkers) and peasants from the French provinces of Aunis and Saintonge, where marshes were exploited and saltworks operated (Massignon 1962:34; Rumilly 1981:89). Ganong (1903:176-177) presents an excellent summary of the process of diking:

... The sea is shut out by dikes ... triangular in section built of marsh mud [sod] itself, often with a core of stakes and brush ... the removal of salt takes place naturally by action of the falling rain which washes through the drains [ditches] into the sea ... to allow rain water to drain off ... is accomplished by a system of open ditches ... at the [outlet of which is] placed under the dike a wooden sluice in which hangs a "Clapper" [gate] hinged at the top and inclining outwards toward the river at the bottom ... When the tide is out the presence of the fresh water opens this; when the tide rises its weight tightly closes it.

The construction of dikes represented a great effort in which many men moved from one field to the next, as indicated by the French surgeon Dièreville, who travelled to Port Royal in 1699:

As the lands are owned by several men, the work upon them is done in common. if they belonged to an individual, he would have to pay others, or give the men who worked for him, an equal number of days devoted to some other employment; that is the manner in which it is customary for them to adjust such matters among themselves (Webster 1933:95).

The Acadians' efforts were rewarded by plentiful crops, as witnessed by observers of the day: Cadillac in 1692, Dièreville in 1699, Mascarene in 1720, and Morris in 1746 or 1747 (Coleman 1968:10;

1969:49-50; Ganong 1930:86; Webster 1933:95). Much grain -- corn, wheat, barley and rye -- peas, oats, flax and hemp were grown in these fields and apple, pear and cherry trees were also plentiful. Cabbages, beets, onions, carrots, turnips and other vegetables were abundant (Clark 1968:164-166; 242-243; Coleman 1968:13; 1969:49; Webster 1934:128).

Plausibly, the cash grains were harvested in late July, August and early September. Dièreville wrote that late summer was harvest time (Webster 1933:101). In August 1744, the residents of Beaubassin refused to accompany Sieur Duvivier on his expedition against the British to Annapolis Royal, because they were harvesting. In Duvivier's words: "Their crops pressed them. I did not want to detract them from their work" (Pothier 1982:74, my translation). Furthermore, according to a cursory examination of shipping lists from Louisbourg in 1737, 1740 and 1742 (years for which the data were available) no vessel arrived from any of the Acadian settlements in August (Moore 1975:11-13, charts 1-3). Except for August, Acadian shipping spanned the period from May or June until the end of September (Moore 1975:11-13, charts 1-3). It thus appears that Acadian efforts were concentrated on the harvest in August of every year.

Domestic animals were kept in the marshlands. Chief among them were cattle, which grazed on the saltmarsh hay (Christianson 1984b:6; Coleman 1968:9). The number of sheep, however, began to exceed the

quantity of cattle at the end of the seventeenth century and throughout the 1700's (Table 1). Mutton was eaten, but sheep were kept for their wool as most Acadian women wove (Coleman 1968:23-25; Hale 1906:233; Rumilly 1983:238). Pigs were also raised (Clark 1968:179, 246; Coleman 1968:16-18). Meat from domestic animals was supplemented by wild game and fish.

Houses were built near the edge of marshes or on upland islands within a marsh (Christianson 1984b:5, fig. 3; P.A.C. V1/210 Annapolis Royal 1753). Generally speaking, houses were built of logs, "the cracks filled with moss or clay" (Coleman 1969:19). At Port Royal in 1687, the French clerk, Gargas, wrote:

All the houses are low, made of pieces (logs) of wood, one on top of another covered with thatch, that in which the Governor lives being the only one covered with planks (Morse 1935,I:179).

During his travels in the Bay of Fundy in 1731, Robert Hale (1906:231) noted that houses in Chignecto Bay were low, timber structures, with sharp roofs "not one house being 10 feet to the Eves [sic]".

Communication and travel usually utilized canoes and boats on the rivers flowing through the marshes. Large boats up to about 30 tons were built by Acadians (Coleman 1968:36). There were also paths and cart roads between settlements (Coleman:1968:35; 1969:61).

Acadians in Belleisle

The general discussion of Acadian daily life behind us, now we can examine the community of Belleisle. According to a 1679 land grant, Sieur de Belle-Isle ceded a parcel of land with its eastern limit in the Belleisle marsh (Rameau de Saint-Père 1889, II:318-319). Eight years later, 74 Acadians resided on the Belleisle marsh (Table 2) and it was the largest settlement in the Annapolis Valley.

Table 2. Belleisle Census of 1687-1688. After Morse (1935,I:144-154)

Husband and Wife (2 adults)	Boys <sup>1</sup>	Girls <sup>2</sup>	Houses	Guns <sup>3</sup>	Cattle	Sheep
24	29	21	10	4	72	122
74						

1. Five boys were older than 15 years of age (Morse 1935;I:144). Gargas, the enumerator, may have noted the number of boys old enough to join the military or to establish a family?
2. Two girls were older than 12 years of age. (Morse 1935,I: 146).
3. Guns, represent firearms which are not pistols. Two of the latter type are listed for Port Royal in a category of their own (Morse 1935,I:154).

The principal settlement, Port Royal, included one priest, a nun, 29 Frenchmen and 26 Indians (Micmas?), for a total of 57 persons, 17 fewer than at Belleisle (Morse 1935,I:144-148). The number of cattle and sheep in Belleisle was also large compared to other late seventeenth-century Acadian communities (Coleman 1969:15-18) and it is plausible that there was at least one gun per household (Table 2).

The later census of 1707 indicates that there were 49 people in Belleisle (Table 3). I surmise that the population decreased as a result of the 1704 and 1707 attacks on Port Royal; the people probably moved up river or to other settlements. Furthermore, the difference of 25 individuals, from 1687-1688 to 1707 may represent the movement of three or four families (Tables 2 and 3).

Table 3. Belleisle Census of 1707 (After J. Daigle, Personal Communication: November 11, 1984, and R. C. Harris, Personal Communication: September 14, 1984).

Name	Husband and Wife (2 adults)	Boys	Girls	Houses	Guns	Cattle	Sheep	Pigs
Pierre Godet	2	--	--	1	1	22	12	22
Germain Savoye	2	6	4	1	2	22	33	14
Claude Terriot	2	--	--	1	--	--	--	--
Jean Dupuis	2	1	3	1	1	15	24	12
Pierre Lanoue	2	--	--	1	--	--	--	--
Pierre Lanoue Jr.	2	1	1	1	1	6	10	8
Guillaume Blanchet	2	4	2	1	6	32	38	14
Antoine Blanchard	2	--	--	1	1	2	3	4
Laurent Doucet	<u>2</u>	<u>5</u>	<u>4</u>	1	1	12	12	10
	<u>18</u>	<u>17</u>	<u>14</u>	<u>9</u>	<u>13</u>	<u>111</u>	<u>132</u>	<u>84</u>
		49						

The 1707 census is certainly more precise than that of 1687-1688, for it contains the name of each household head and the number of individuals for nine families. Certain possessions are also enumerated by family (Table 3). In order to obtain a more detailed demographic development of the Belleisle community, an Acadian genealogy (Arsenault 1965) and the Port Royal censuses of 1671 and

1686 were consulted. They contain information about the individuals mentioned in the 1707 census. Specific information regarding Pierre Godet, Claude Terriot, Jean Dupuis and Guilleaume Blanchet, however, could not be located.

Germain Savoye was a member of the second generation of Savoyes; he married in Port Royal around 1680 and was "established up river" in the same year, plausibly in Belleisle (Arsenault 1965:511). In 1686, he had two sons and owned six head of cattle and eight sheep (Rameau de Saint-Père 1889,II:398). The figures for 1707 show that he had prospered (Table 3). Pierre Lanoue Sr. was a cooper who would not state his age in the 1671 census (Gaudet 1906:6). His occupation probably explains why he did not own farm animals, although his only son, Pierre Lanoue, Jr. took to farming in Belleisle and may have been keeping his father's livestock. Lanoue Jr., born around 1685, was in his early twenties in 1707 (Arsenault 1965:439). This would account for the size of his family and holdings, if they were solely his (Table 3). Antoine Blanchard, born in 1680, was married in Port Royal in 1707 (Arsenault 1965:352). It is probable that he and his wife had just arrived in Belleisle when they were enumerated. Laurent Doucet was in his late thirties in 1707 (Gaudet 1906:4; Rameau de Saint-Père 1889,II:398). His family was the second largest at Belleisle, after Germain Savoye's (Table 3). In summary, the Belleisle community consisted of a variety of individuals, some obviously prospering, others beginning to establish themselves in the community.

The Belleisle marsh is named "Bellisle" on a 1710-1711 map by De Labat; seven structures are shown in the marsh, all of equal proportions (Morse 1935,II:Map F). Plausibly, they represent houses. There were eight family names in 1707 (Table 3) and it is possible that the number of houses was seven in 1707. Claude Terriot and his wife may have been farm employees living in another family's house, while Pierre Lanoue Sr. and his wife could have been living in their son's house; this would help explain the lack of livestock and material goods (guns) for each of these individuals in the 1707 census (Table 3), and also account for seven contemporaneous structures (probably houses) on the De Labat 1710-1711 map.

A 1714 census made by Felix Pain, a Récollet missionary in Minas, indicates that most of the individuals listed in 1707 (Table 3) were still at Belleisle in 1714 (Rameau de Saint-Père 1889, II:404). While the actual area of residence is not listed for these people, the 1714 census has the names grouped in the same order as they appear in the 1707 census (Rameau de Saint-Père 1889,II:404). I surmise, therefore, that the individuals were still Belleisle residents. By 1714, a few changes had occurred in the Belleisle population. Pierre Lanoue Sr. died sometime before 1714, for only his widow is enumerated in 1714. Antoine Blanchard and his wife, married in 1707, now had two daughters and a son (Rameau de Saint-Père 1889,II:404). Furthermore, the number of children had increased in some families and decreased in others, some family members had moved away (Rameau de Saint-Père 1889,II:404). Finally, the 1714 census indicates the presence of

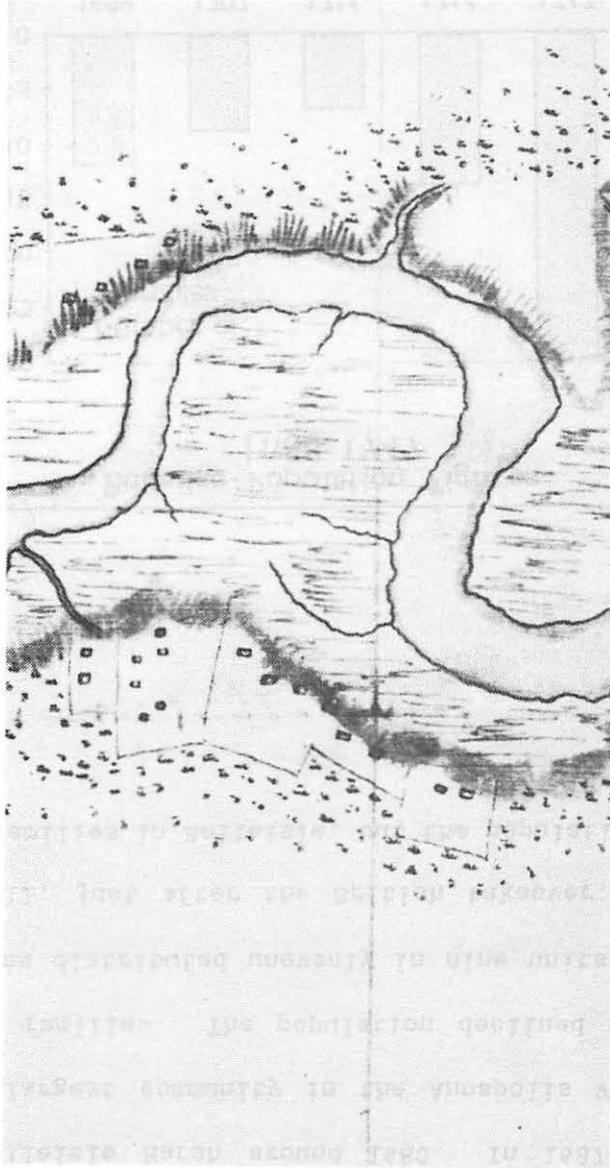
perhaps five new families in Belleisle, those of Jacques Nantais, René Blanchard, le Marquis, (perhaps the merchant trading with Boston in 1697 [Webster 1934:155]), Jean Emmanuel, and Germain Savoye Jr. (In the 1714 census, these names are inserted among the names known to have been in Belleisle in 1707, [Rameau de Saint-Père 1889,II:404]). Thus, by 1714 it would appear that there may have been as many as 14 families in Belleisle.

A 1733 map, amended in 1753 by the British surveyor George Mitchell, shows 16 structures in the modern-day Belleisle/Granville area (Figure 6). Undoubtedly, many are dwellings, but outbuildings may also be represented. In 1749, the British officer Charles Morris produced a Map of Nova Scotia; two settlements are named in the Annapolis Valley: Annapolis Royal and Belleisle (Christianson 1984b:7; 3, fig. 4). Morris also left a detailed description of the Annapolis Valley:

...The inhabitants [of the Annapolis Valley] are settled on this River [sic] on both sides from Goat Island near thirty miles into the country, in small parcels then [ten] or fifteen familys [sic] together where the Soil [sic] is good and where they have marshes to raise their bread and corn on Bell Isle is the most considerable village, where about thirty familys [sic] are settled within the compass of two miles (Coleman 1969:74).

I could not locate pertinent data post-dating Morris' 1746-1747 figures, a problem probably related to the impending expulsion activities.

Figure 6. Belleisle 1733/1753, by George Mitchell. (P.A.C. VI/210/Annuaire Royal 1753).



In summary, the first Acadian colonists were beginning to establish farms in the Belleisle Marsh around 1680. In 1687-1688, Belleisle represented the largest community in the Annapolis Valley, totalling 74 people or 12 families. The population declined substantially by 1707 to 49 persons distributed unevenly in nine units of eight family names. About 1711, just after the British takeover, there may have been only seven families in Belleisle, but the population increased

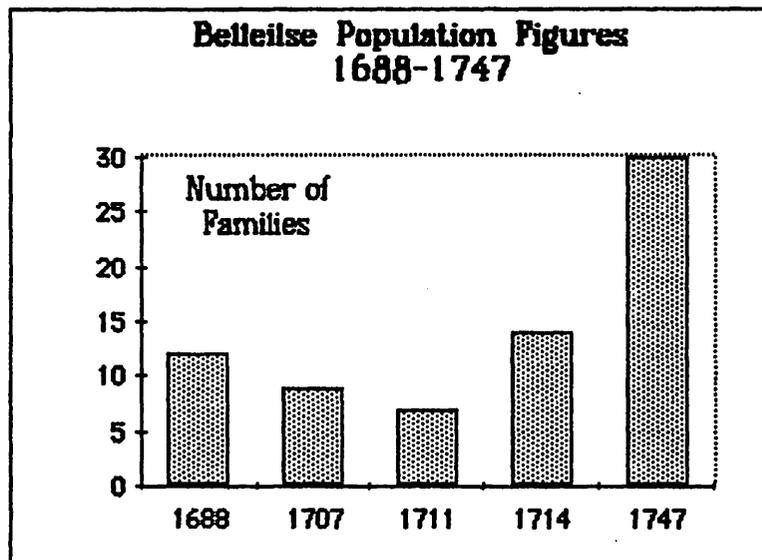


Figure 7. Belleisle Population, 1688-1747.

from some 14 families in 1714, to about 30 around 1747 (Figure 7). The major trend from 1714 onward was the result of natural growth and population movement into Belleisle. Possibly this community sought

stability during the British Regime and anticipated economic growth through wider trade opportunities with New England and Louisbourg.

#### SUMMARY

The first European attempt to settle the Annapolis Valley in Nova Scotia was initiated by Sieur de Monts in 1605. It was not until 1636, however, that Sieur d'Aulnay intentionally brought in colonists, among them "sauniers" -- workers in saltworks and experts in diking marshes. From this infancy until about 1670, the settlement did not flourish, because of the intermittent, even erratic, interests demonstrated by its administrators. Also, English-French conflict over the ownership of Acadia proved to be a source of instability.

From 1670 to 1710, Acadia was administered by France. In 1671, the first official census showed a population of mixed ancestry, French Catholics and Huguenots, the result of pre-1670 French and English colonization attempts. That same census revealed that most Acadians derived from the West-Centre provinces of France: Poitou, Aunis, Saintonge and Angoumois. Other settlers originated from Northern France and Canada. From 1670 to 1710, the influx of colonists into Acadia came primarily from France. During the same time period, France's attempts to regulate settlement and trade proved fruitless. The trade that did develop, however, was founded on necessity; Acadians needed finished goods, and New England grain and foodstuffs.

Merchants from both colonies traded together regardless of French or British policies to the contrary. In 1710, the French jurisdiction ended abruptly with the capture of Port Royal by combined New England and British troops.

From 1710 to 1755, there were no incoming settlers from France to Mainland Nova Scotia. The growth of the Acadian population, however, was dramatic. This probably resulted from an overall prosperous population having plentiful resources. Acadian trade from 1710 to 1755 was undertaken directly with New England, Louisbourg and to a lesser extent, New France. Peace was signed in 1713 between the French and British, but shortly afterwards the French established Louisbourg in 1719, and the British founded Halifax in 1749, and smaller forts were also established. In 1754, the three French Forts in Acadia became English possessions, leaving only the French Fortress of Louisbourg in Cape Breton. In August of 1755, the British, fearing the return of French troops into Mainland Nova Scotia, initiated an expulsion policy and deported the Acadian population.

## CHAPTER THREE

### CERAMICS ANALYSIS

In order for there to be a mirror of the world, it is necessary that the world have a form. (Eco 1983:120).

#### INTRODUCTION

The ceramics from Belleisle represent pottery obtained, used and discarded by Acadian occupants of two houses excavated in the Annapolis Valley in 1983. This chapter analyses the variety of wares recovered, describes the vessel shapes identified, and traces the respective manufacturing origins of wares, where possible. A concerted effort has been made to date this Acadian pottery of the pre-expulsion period, as well as to offer a summary of the known potteries in Acadia and New France from 1655 to 1755.

Theoretically, the approach utilized herein is particularistic (South 1977:10-11) in that it focuses upon problems of basic identification and chronology of the Belleisle pottery. This type of approach follows that of material culture analyst such as Ivor Noel Hume who writes:

A fragment of pottery the size of a fingernail can be readily identified as to its composition, its approximate date of manufacture, and sometimes even its factory. (Noel Hume 1975:13).

Noel Hume does not proceed beyond this, except when he tries to associate particular assemblages with historical documents and site

location, thus attributing artifacts to certain individuals in a community. However, as Stanley South (1977:10-11) points out:

The fact that Noel Hume uses the particularistic approach does not mean that the descriptive classifications and data emerging from his work cannot be used for other purposes... Nevertheless, Noel Hume's dedication and intensive concern with identification, chronology, and time of arrival of artifact types in this country [United States] have resulted in a series of formal-temporal artifact types of considerable classificatory value.

### Ceramics Terminology

In the analysis of the Belleisle ceramics, the terminology utilized is standardized with that of other historical archaeologists and material culture analysts, as well as that employed from 1978 to 1979 at the Fortress of Louisbourg, Cape Breton, Nova Scotia. Furthermore, some terms have been adapted from Dorothy M. Griffiths' (1978) article on use-marks in historic ceramics. Where a new term has proven necessary in the analysis, it is defined herein.

Figure 8 presents standard terms to describe ceramic bowls of two different shapes. One has a conical body, while the other illustrates a bulbous-bodied bowl with an everted rim. Figure 9 shows two plates' cross-sections, one with a footrim, the other with a footring. Both styles have a rim, brim or marli, brink and side. These terms were not repeated in order to present uncluttered renditions of either vessel variety. Figure 10 shows two salt-glazed stoneware mugs or tankards.

Figure 8. Bowl Terminology.

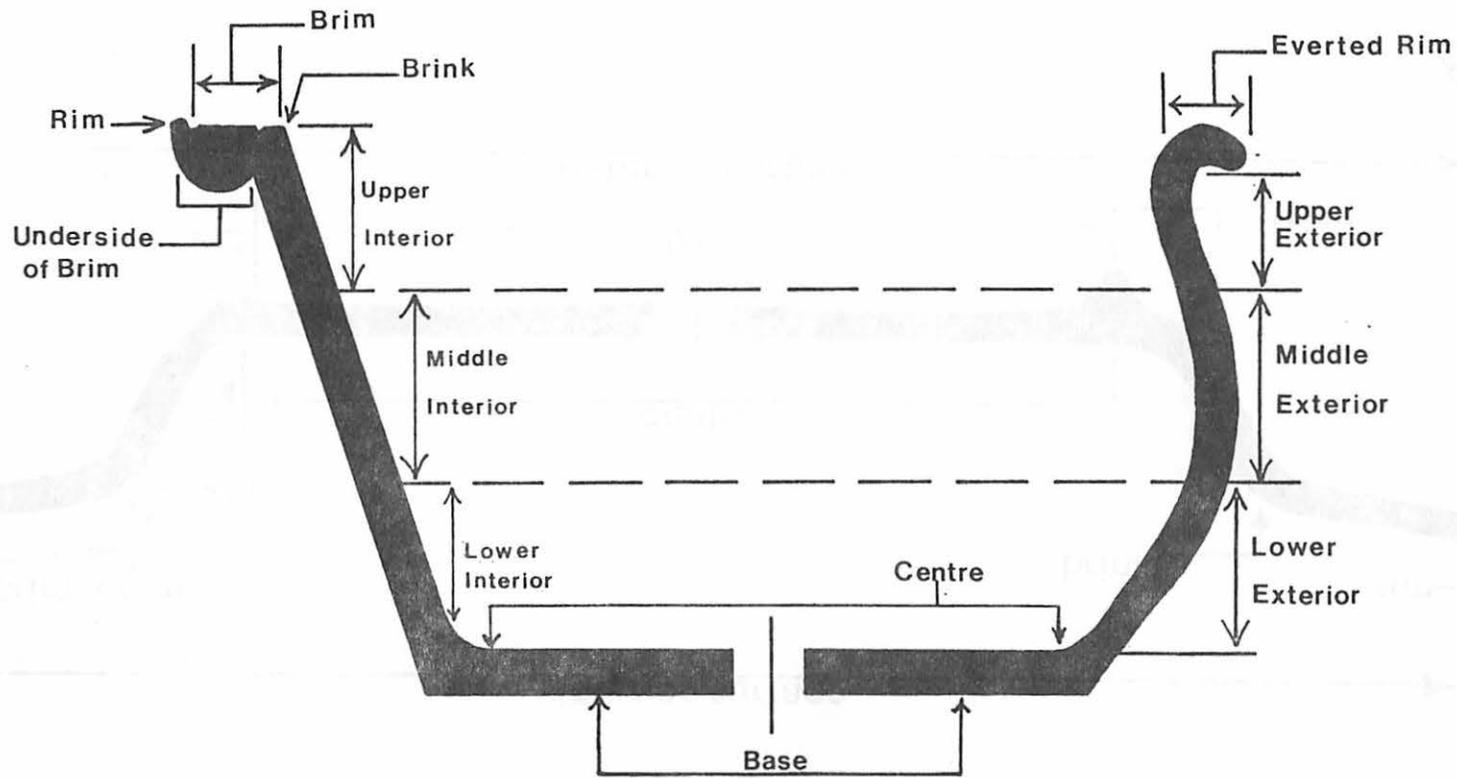
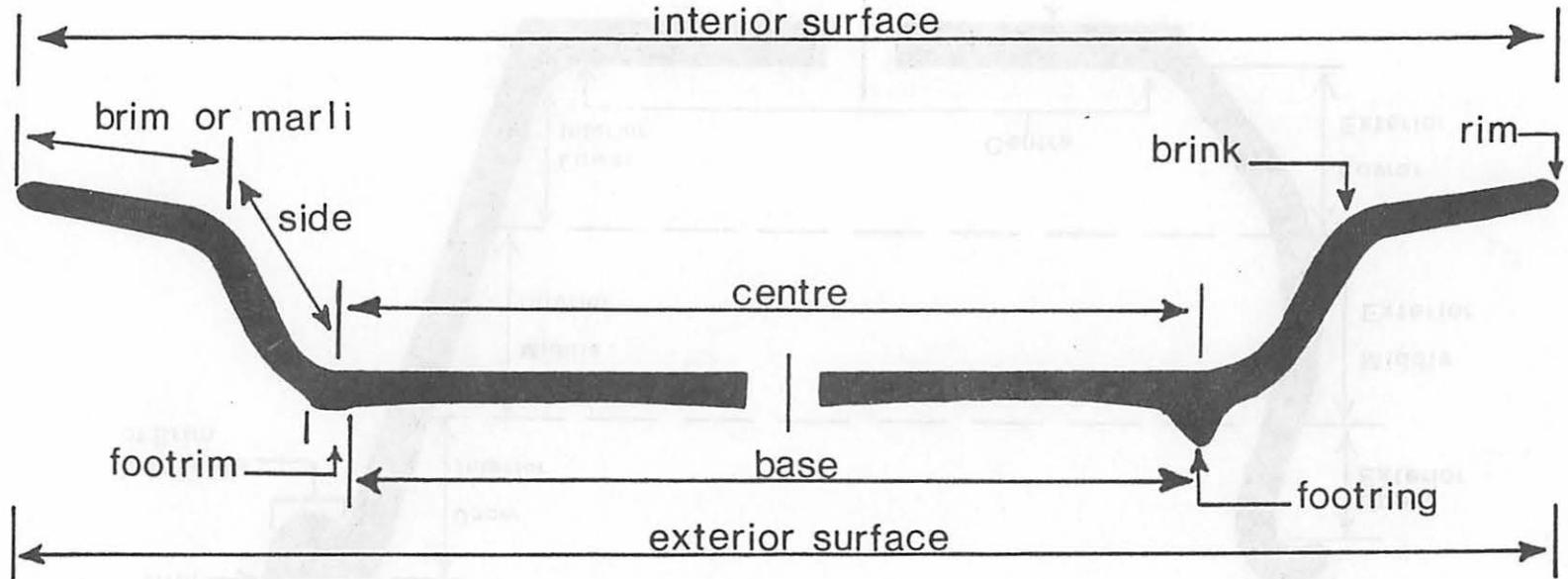


Figure 9. Plate Terminology



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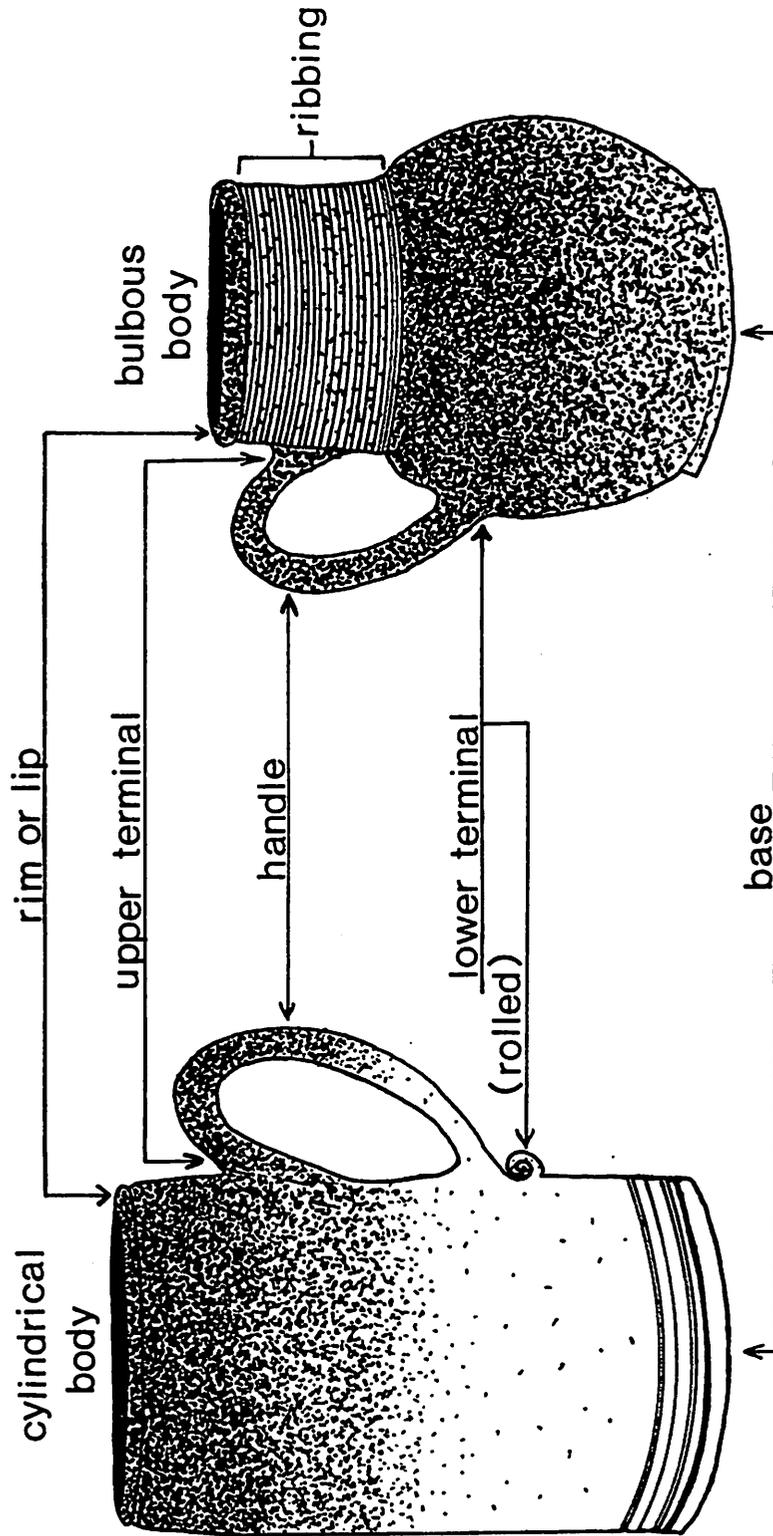


Figure 10. Tankard/Mug Terminology.

The terms used here to describe the handles of both objects are applicable to any vessel with one or more vertical handles, such as cups, jugs or pitchers, jars and bottles. Terms used to describe a pitcher are provided in Figure 11. The disc base also occurs on jars and mugs. It can be noted that cylindrical and bulbous-bodied vessels have upper, middle and lower exterior and interior sides, as in Figure 8.

The principal potting centres in Western Europe are shown in Figure 12. Also, the principal ports mentioned in my discussion of pottery wares are illustrated in the same figure.

Pottery is essentially clay baked to a certain degree of hardness, a quality varying as a rule with the intensity and duration of the firing (Honey 1952:4). Savage and Newman (1974:231) distinguish earthenware from stoneware as follows:

Earthenware is pottery which has been comparatively lightly fired, and in which the clay particles have a point to point attachment; its is porous until glazed. Stoneware is [generally] clay mixed with a proportion of fusible material, and it is therefore impervious even when unglazed.

'Body' 'fabric' and 'paste' refer to the appearance of a vessel's clay; they are used interchangeably herein. The term 'body', however, should not be confused with 'body sherd' which refers to a pottery fragment which is not part of a vessel's rim, brim, brink, neck, shoulder, base and handle. The colour of various Belleisle pastes has

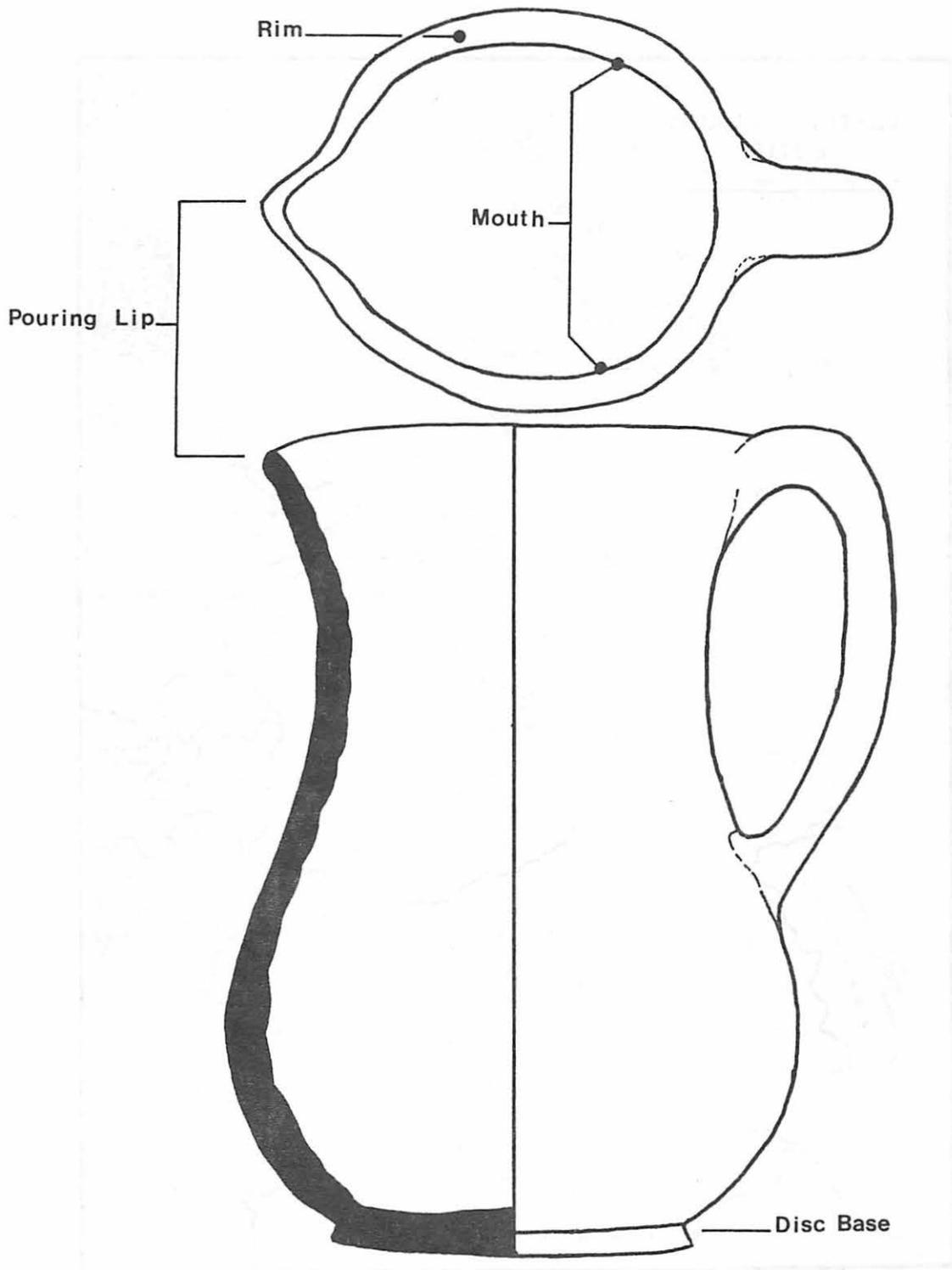


Figure 11. Pitcher/Jug Terminology.

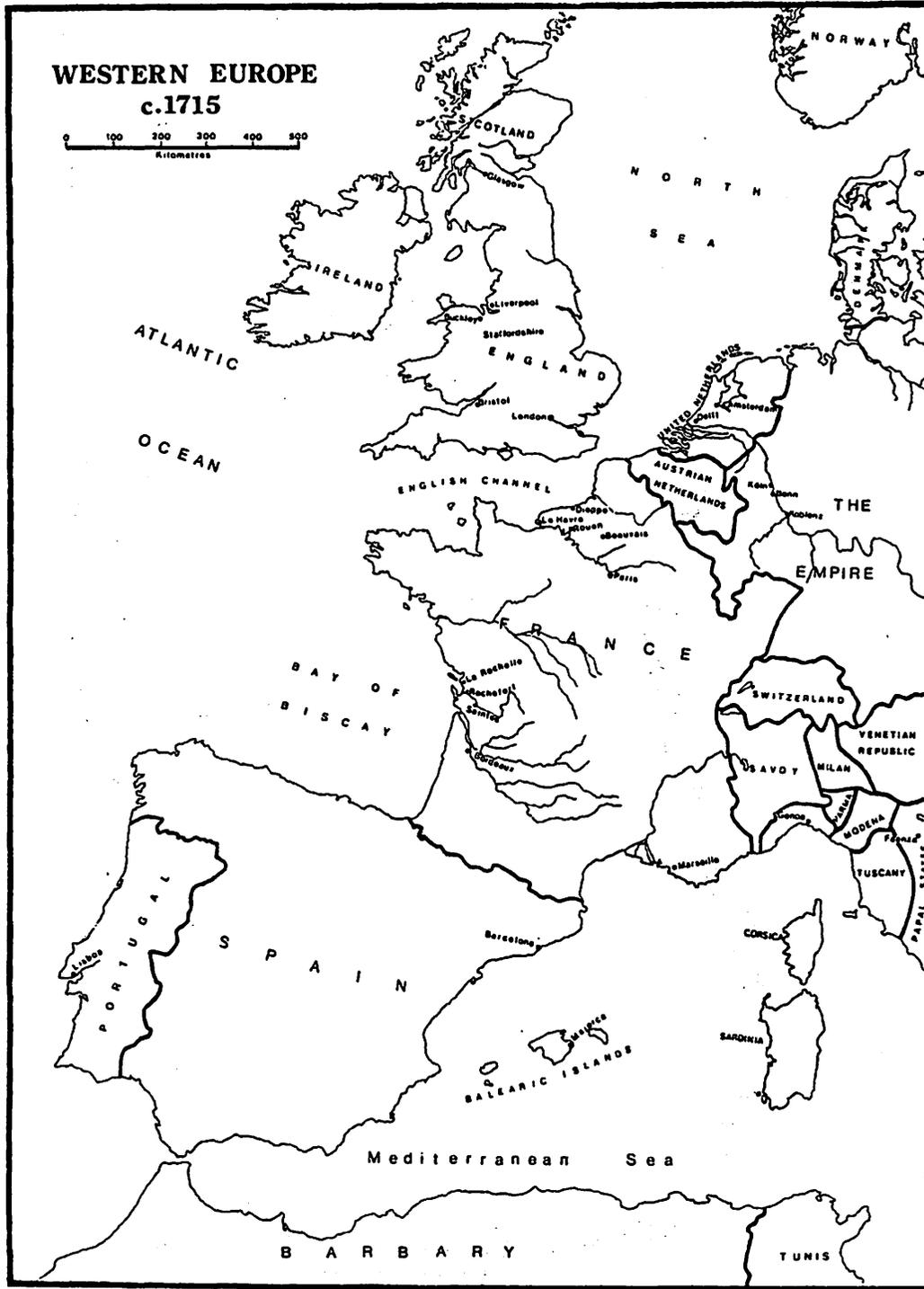


Figure 12. Principal Potting Centres in Western Europe.

been described using the Munsell Soil Color Charts (Munsell n.d.), and the Munsell Book of Color (Munsell 1969). The latter is the "Matte Finish Collection" as opposed to any other produced by the Munsell Color Company. Colours were determined using artificial laboratory lighting. The ideal use of the charts would utilize natural light.

"Mohs' Scale of Hardness" permits the identification of sclerometric or 'scratch' hardness of minerals (Whitten and Brooks 1972:221). To estimate the hardness of the potteries from Belleisle, common equivalent of the scale have been used as listed by Whitten and Brooks (1972:222). A finger nail scratches at about 2.5, a copper coin 5.0, a window glass fragment at 6.0, a knife blade 7.0, and a hard file at 8.0. The degree of hardness of each pottery ware is indicated beside the subheading for each ceramic description, and while it is difficult to separate effectively relative hardness and durability, within a ware category, hardness differences are observed between coarse earthenwares (2.5 to 6.0), refined earthenware (2.5 to 5.0+), and stonewares (6.0 to 8.0+).

#### Potteries in New France and Acadia

The analysis of the Belleisle ceramics indicates that pottery was obtained from western Europe and New England. However, it is important to examine the state of the industry in Acadia and New France to indicate whether or not local potteries existed in Acadia before 1755, or whether potteries were developed in New France before

that date to cater, however superficially, to demands for utilitarian objects throughout eastern Canada.

Mainland Nova Scotia contains many clay beds suitable for pottery production, some occurring in the Annapolis Valley (MacLaren 1972:4). This latter clay is reddish in colour, soft and stoneless, and is adequate for the production of bricks, drains and flower pots (MacLaren 1972:4). To date, archaeology has not revealed the presence of a pre-1755 kiln in the valley. The earliest documentary evidence indicates the presence of a brick kiln in Minas Basin. In 1774, two travellers to the area noted that bricks were made there: "and the bricks have a good appearance; but they sell them at twenty shillings per thousand, which is a very high price" (Robinson and Rispin 1981:7). Pottery was produced in the Lunenburg area (Mahone Bay) by John Michael Heinrichs in 1787 (MacLaren 1972:8). The January 19, 1788, issue of the Halifax paper The Weekly Chronicle contains an advertisement placed by the merchant George Bell stating that he had for sale not only imported earthenware, but also "this country-made earthenware -- jugs, crocks, milk pans, etc., etc." (M. Elwood, September 26, 1985: personal communication).

In the Annapolis Valley there was a pottery operating in the nineteenth century. In late August of 1983, Mrs. Marie Elwood, Chief Curator of History at the Nova Scotia Museum in Halifax, kindly showed the author pottery vessels made by a Mr. Halfyard of Grandville Ferry -- down river from the Belleisle Marsh. The pots exhibit bodies and glazes which duplicate those of New England coarse earthenwares. The

earliest evidence for Halfyard's pottery can be found in the journal of Captain John Harris of Clements, Nova Scotia. The entry dated June 6, 1823, reads as follows:

Strong Wind Squally and Rain 8 am Went over to Mr. Halfyard With the Nelson took on Board A Load of Crokery Ware and Went to Digby. Returned home in the eving [sic] after a rough Days [sic] Sailg [sic] --.  
(D.U.A.1).

It is not known exactly when Mr. Halfyard began his potting activities, but he could have been potting earlier during the nineteenth century (M. Elwood, August 31, 1983: personal communication).

At the Fortress of Louisbourg in Cape Breton, "Maritime" or "Quebec" pottery has been unearthed, but it seems to be a late eighteenth or early nineteenth century manifestation, as sherds of this ware have been retrieved only from the surface levels of excavations (J. Campbell, October 28, 1983: personal communication). However, during the eighteenth century, Louisbourg builders used bricks produced at Mira Gut, about ten kilometres north of the fortress (Krause 1974:51; McLennan 1978:52; Webster 1971:87). The brick kiln was not operational until 1727, but as noted by an observer in 1753, it produced good quality bricks (Innis 1929:115-116; McLennan 1978:52). However, it appears that earthenware vessels were not produced there. Furthermore, Louisbourg builders preferred the better quality New England bricks, shipped primarily from Newbury Port and Boston in Massachusetts (Krause 1974:51; Moore 1975:6, 60). Comparisons of the

ratio of Mira bricks to those from New England used in construction have yet to be undertaken.

In present-day New Brunswick, John Thomas operated the earliest known pottery at Portland in 1814, where he produced utilitarian wares (Webster 1971:88).

In modern-day Prince Edward Island, the "Spring Park Pottery" was operating from 1864 to 1885. It appears to be the earliest pottery in Prince Edward Island (Webster 1971:91-94).

Potting activities began in present-day Quebec around the mid-1600s, and continued into the eighteenth century (Table 4). The information in Table 4 indicates that six of the 16 potters practised their trade for a single year only, and that seven potters (four in the Quebec region, and three in the Montreal region), made pottery for periods longer than five years. I surmise that the short-lived potteries probably were unable to operate successfully because of competition from already existing potteries and an influx of European wares into the St. Lawrence Valley. Barbeau (1941:13) indicates that quantities of ceramics were purchased by various institutions in Quebec City during the first half of the eighteenth century, but unfortunately he does not provide documentary evidence for the origins of these wares.

As early as 1686, and well into the eighteenth century, the French colonial administration appeared more concerned with securing an

Table 4. Quebec Potters, 1655-1755. (After Desjardins 1980:195, 199-200; Gaumont 1965:23, 31; 1978:82,89; Langlois 1978:8, 26, 60-61, 69-70, 92, 105, 112, 114, 119, 127, 129).

Name	Place	Supposed Years of Production
Nicholas Pré	Québec	1655-1662
Gabriel Lemieux	Lauzon or Lévis Québec	1658-1665 1665-1702
Jean Aumier	Charlesbourg	1672-1715
Auban or Aubain Salomé	Québec Boucherville (?)	1694 1705
Martin Masse	Québec	1688
Jacques Millot	Beauharnois	1703
Louis I and II Divelec/ Diveleque	Longueuil Sault-au-Récollet	1728 1722-1755
Jean-Baptiste Bertrand	Montréal (?)	1728(?) - 1735(?)
Pierre Daignan	Montréal (?)	1730(?)
Guillaume Duval	Fort Saint-Frédéric, New York; Charlesbourg	1743-1745 1751-1752
Claude-François Simbler	Charlesbourg	1747
Pierre Petit	Québec	1749
Paul Bertrand	Montréal (?)	1741(?) - 1749
Jean Favrillya	Québec	1752
François Jacquet	Québec	1752-1777

adequate supply of bricks and roofing tiles from local potters, (Roy 1916). However, while some of these objects were successfully produced in Quebec City in 1688 and later into the eighteenth century (Roy 1916:162-168), archaeological research indicates that many floor tiles were imported from Marseille and bricks were imported from France (Moussette 1982:56-59).

Moussette (1982:12-60) has identified 37 varieties of coarse earthenwares in his study of the contents of two Quebec City latrines used during the second half of the eighteenth century and the beginning of the nineteenth century. Of these, he lists seven possible types of coarse earthenwares produced in the Quebec region. Two (varieties 4.2.1.1 and 4.2.4) are described as French products in the Fort Michilimackinac collection, Michigan (Miller and Stone 1970:52, fig. 24e [Moussette 1982:28-32]; 57, fig 28b, 58, fig. 29 [Moussette 1982:41-42]). The second type was recovered in a pre-1740 context at Michilimackinac (Miller and Stone 1970:57).

It is not surprising that Miller and Stone (1970) identified the Quebec pottery as a French earthenware, as the potting and sometimes the body and finish of such objects reflect the workmanship of colonial potters trained in France, or potters who received their training locally, but from master potters originally trained in France and trying to compete with imported French products. In his analysis, Moussette (1982:13, tableau 3) reports 127 vessels out of 556, of probable Quebec or St. Lawrence Valley origin. These display soft and

porous reddish bodies with some air pockets; the fabric also includes quartz sand and sometimes mica (Moussette 1982:28, 36, 40-42, 44, 45). Furthermore, the vessels' lead glazes indicate a definite attempt to duplicate the finish found on contemporaneous French coarse earthenwares. This is particularly true of varieties 4.2.2.4, 4.2.5.1, 4.2.5.2, and perhaps variety 4.2.5.3 (Moussette 1982:41-42, 44-45).

Finally, Moussette's 37 coarse earthenware types include 15 types from mainland Europe, seven English varieties, three types presumed to be from New England or of English influence, and five unidentified wares, aside from the seven types of probable Quebec origin.

From 1728 to 1780, 140,600 kg of earthenware, 317,460 kg of faience, and 13,605 kg of stoneware were shipped from France to Canada, Louisiana and the West Indies (Langlois 1978:9). In 1747 alone, 80,000 objects (about 114,000 kg) were shipped to the colonies (Langlois 1978:9). Such quantities would have fulfilled most local demands (Langlois 1978:9). It is important to remember that many Quebec potteries operating during the seventeenth and eighteenth centuries were short-lived, or simply part-time businesses (Langlois 1978). It must also be emphasized that Moussette's (1982) study of coarse earthenwares identified in Quebec City represents historical events post-dating the mid-eighteenth century, and while many of the vessels he describes predate 1750, it was not until the last quarter of the eighteenth century that local coarse earthenware production

increased (Moussette 1982:62). However, exceptions are noted in the eighteenth century. For example, bricks were "produced in New France and brought to [the town of] Quebec for export" (Reid 1953:29). In 1752, an unspecified quantity of bricks -- either French or Quebec products -- were shipped from Quebec to Louisbourg (Moore 1975:60). Another example concerns the Quebec potter François Jacquet (Table 4), who entered an agreement with the Quebec merchant Pierre Révol, to supply earthenwares to Gaspé area residents (Blanchette 1975:190). Archaeology in 1975 revealed the presence of Quebec pottery -- perhaps Jacquet's -- at the "Penouille 3" site, across the bay from Gaspé, in a context of the French Regime (Blanchette 1975:189-190).

Barbeau (1941:13) writes that in 1713, one Quebec City potter was employed in mending pots for the "Hotel Dieu" -- the city's hospital. This clearly indicates that ceramic vessels were not easily obtained at Quebec during the early eighteenth century, and were expensive to replace. Finally, while some potters did practise the trade, other individuals listed as potters in period documents did not necessarily make pottery. Material evidence would support such documentary statements, but overall, the available data suggests that the pottery industry for the Quebec region, during the first half of the eighteenth century was in a nascent state, and not in a position to influence Acadia greatly.

## COARSE EARTHENWARE

Coarse earthenware is a relatively soft and porous, unvitriified pottery made from natural clays from which many impurities have been removed (Barber 1908:5; Savage and Newman 1974:103; Webster 1969:II-III). It is fired at a relatively low temperature, about 1000°C (Gaumond and Martin 1978:64-65; Webster 1969:II). Because of its porosity, a coarse earthenware has to be coated with either a lead glaze, or a combination of a slip and lead glaze. Slips consist of fine clay particles mixed with water (Barber 1908:5), that either are painted onto vessels' surfaces, or pots are dipped into them. On certain wares, a slip can be used as part of the decoration in the form of dots, lines, or a combination of different coloured slips can be used to form a marbled finish. Glazes on coarse earthenwares usually take the form of lead powder dusted onto the vessel prior to firing (Barber 1908:5). Barber (1908:5) describes the final appearance of a glazed vessel:

The heat of the kiln melts the lead, which covers the surface as a transparent glass, sometimes being entirely clear and colourless, but, in the commoner varieties of ware, usually possessing a yellowish tint. Glaze composed largely or entirely of lead intensifies the colour of the clay, making it appear darker, as though covered with a heavy coating of varnish.

### French Coarse Earthenwares (Plates 1-3)

White to Pink Body, Green-Glazed (Hardness: 5.0 - to 5.0 +).

Fourteen vessels from House 1 and ten from House 2 have a white to

pink body with ferric or ochrous nodules and white quartz inclusions (Munsell 1969:5Y 9/1). The majority of the sherds also display a whitish slip (Munsell 1969:10GY 9/2), covering the interior of some mixing bowls, and sometimes both the interior and exterior surfaces of mugs, bottles and storage jars. Finally, each vessel has been covered, at least partially, with a light to dark green (copper oxide) lead glaze (Munsell 1969:5GY 5/6).

Mixing Bowls. Five mixing bowls from House 1 and three from House 2 have slipped and glazed interiors, and plain exteriors. Two of the House 1 specimens are represented by large rim and body sherds. One vessel has a 32.0 cm rim diameter, while the other has a rim diameter of 26.0 cm (Appendix 1, Nos. 1 and 2). Both have conical cross-sections and display flat brims with two incised lines on their outer perimeters; they also have raised rims and rounded brim undersides as illustrated in Figure 8 (left). Base fragments are absent for these two bowls. A third mixing bowl from House 1 is somewhat smaller having a 22.0 cm rim diameter (Appendix 1, No. 3). It has a slightly upcurved brim and raised rim. The fourth mixing bowl from House 1 is represented by a thick and slightly upcurved brim fragment (1 cm thick), and lacks a raised rim (Appendix 1, No. 4). The fifth and last mixing bowl in the House 1 collection is represented solely by one 9.0 mm thick base fragment (Appendix 1, No. 5). This sherd has a dark green glaze, and lacks the whitish slip identified on the first four mixing bowls.

The first mixing bowl from House 2 is a thickly-potted vessel with a pink body (body sherd = 1.5 cm, rim = 1.3 cm), (Appendix 2, No. 1). It has a raised rim and a flat brim with a rounded and convex underside. Its rim diameter is 34 cm. Evidence for a second House 2 mixing bowl consists of six body sherds and one brim fragment (Appendix 2, No. 2). This vessel is thin (4 to 7 mm) with two upper interior side fragments displaying manually-turned incised lines. A third mixing bowl in this category is represented by six fragments each with exfoliated glaze (Appendix 2, No. 3). These sherds exhibit a very thick slip (1.0 mm). Brim fragments for this vessel were not unearthed, but two rim sherds have a raised and slightly rounded rim cross-section.

The Belleisle mixing bowls had multiple domestic uses. They could have been used to mix and prepare food, to store and serve victuals, and for dairy usages such as keeping milk, separating cream, or simply letting milk curdle (Genêt, Décarie-Audet and Vermette 1974:245; Séguin 1972:111). Sometimes, larger mixing bowls also were utilized as wash basins, "Terrine à Savonner" or "Bassine" (Genêt, Décarie-Audet and Vermette 1974:245; Séguin 1972:57). Such vessels were valued and essential objects in everyday life and began to be replaced by tin mixing bowls towards the end of the eighteenth century (Genêt, Décarie-Audet and Vermette 1974:245).

Colander. One colander comes from House 2 (Appendix 2 No. 4). It is represented by a basal sherd and a rim fragment (Plate 1c,f).

The interior and exterior surfaces of the latter sherd are glazed. The basal fragment retains portions of two holes, each 5.0 mm wide, which were perforated from the interior centre before the colander was glazed and fired (Plate 1f). The cross-section of the colander's brim differs from those of mixing bowls in that its inner brim underside is flat while the outer perimeter is raised and convex (Figure 13). The exterior surface is flat and exhibits a single incised line around the outer perimeter. The underside of the brim may have facilitated stacking and removing of the colander from a mixing bowl, since only its raised outer perimeter would rest upon a mixing bowl's brim. The rim diameter of this colander measures 24.0 cm.

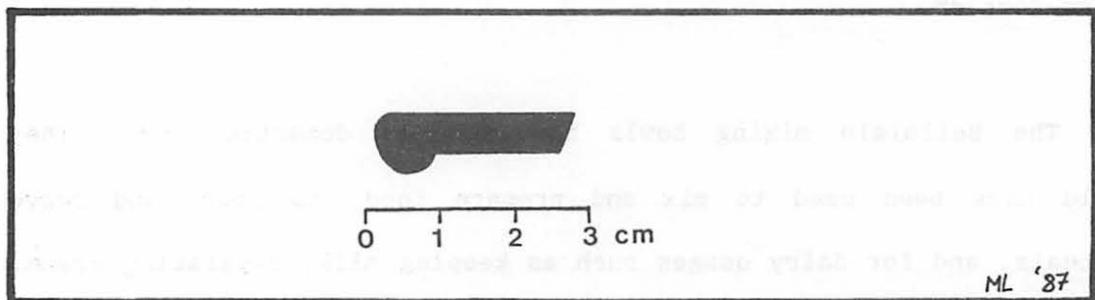


Figure 13. Cross-Section of French Colander's Brim.

French colanders from the Fortress of Louisbourg, Cape Breton, and another from the Place Royale collection in Quebec City, differ markedly from the Belleisle example. One of the Louisbourg specimens has a rounded rim, two horizontal handles and three hollow legs (Barton 1981:12, Fig. 2, No. 14). Another lacks handles, displays an everted rim and has rectangular draining holes (Barton 1981:15, Fig. 5, No. 49). A handleless colander from Place Royale, "égouttoir",

exhibits an everted rim and three legs similar to the first Louisbourg colander, described above (Genêt, Décarie-Audet and Vermette 1974:113, fig. 4). The Belleisle colander may have had legs and handles, but there is no evidence to support this.

Colanders used in New France were of wood, tin, pewter, copper or earthenware (Genêt, Décarie-Audet and Vermette 1974:113; Séguin 1972:97-100). They were used to drain liquids from cooked or preserved vegetables, fruits and possibly cheeses.

Mugs. Six French coarse earthenware mugs were unearthed during the House 1 excavations, but none was recovered from House 2. The most complete mug (Figure 14) displays a globular body with a 6.3 cm in diameter disc base and a flat vertical handle (21.6 cm wide). This handle has a plain posterior surface and a reeded anterior surface consisting of three wide, vertical ribs (Appendix 1, No. 6), (Figure 14). Two complete mugs from the Fortress of Louisbourg duplicate the style and shape of the Belleisle example (Barton 1981:14, fig. 4, Nos. 38 and 39). They have rolled drinking lips, shaped by everting the rim of the vessel and pressing the edge against the upper exterior side of the mug. The Belleisle example probably would have had a similar rim finish.

Three other House 1 mugs are represented by disc-base fragments (Appendix 1, Nos. 7-9), whose bases range in size from five to six cm (No. 7 = 5 cm, No. 8 = 5.5 cm, No. 9 = 6 cm). One base (No. 8)

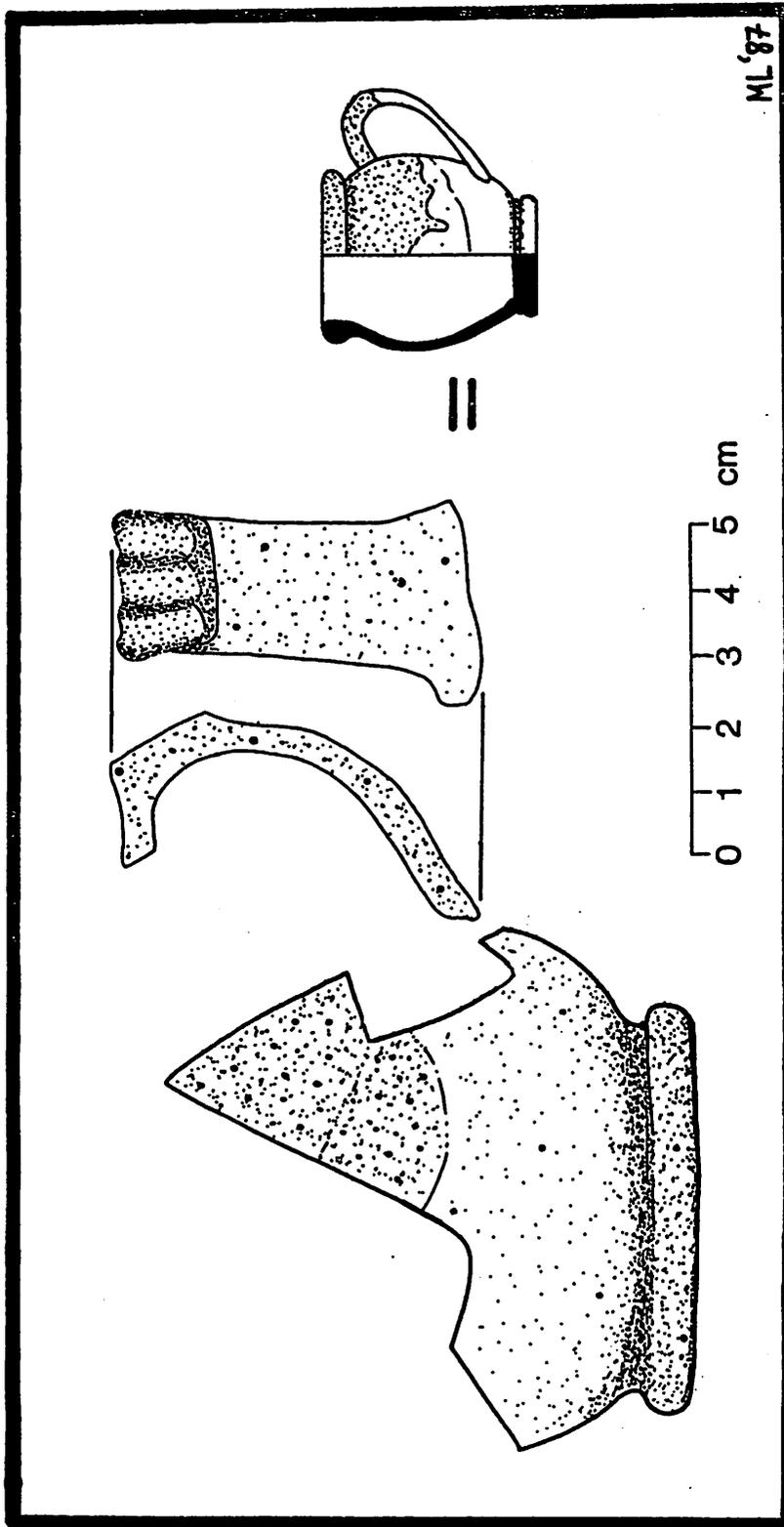


Figure 14. French Mug from Belleisle House 1.

retains a portion of its lower side, indicating a globular body; another (No. 9), also has a globular body, a rolled lip, and a 9.0 cm rim diameter.

The fifth mug also has a disc base and a handle, as revealed by a body sherd with a lower handle terminal. Moreover, two rim sherds from this mug indicate that it had a rolled rim, 9.0 cm in diameter (Appendix 1, No. 10). Evidence for a sixth and last mug of this style consists of a single rim sherd with an everted rim, 8.0 cm in diameter (Appendix 1, No. 11).

Such mugs in the Louisbourg collection were dipped first into a white slip solution and then partly into a copper-rich lead glaze (Barton 1981:13). Three of the Belleisle mugs exhibit just such a finish (Nos. 6, 9 and 10). Vessels in this style are common in the Louisbourg and Place Royale collections, and have been discussed by Steponaitis (1979:54), in Louisiana's 'Tunica Treasure'. Various functions, however, have been suggested. Barton (1981:13) discusses three types: drug jars, jugs and pots. His third type pots, are herein referred to as mugs in the Belleisle collection. Jugs and drug jars have cylindrical not globular, bodies, lack handles and appear to be larger than the Belleisle vessels (Barton 1981:14, fig. 4, Nos. 34-36). Steponaitis (1979:54) also describes mugs as pots. Lafrenière and Gagnon (1971:33, plate 6; 34, fig. 9; 36, plate 7) categorize such vessels as pitchers, even if they lack pouring lips. However, their specimens appear to be much larger than the Belleisle

mugs. Genêt, Décarie-Audet and Vermette (1974:208), refer to mug-size vessels as "pots", and indicate that they served many functions, including the storage and cooking of food. It is strongly believed here, however, that the Belleisle specimens were too small to serve as cooking pots. In an eighteenth-century painting by Nicholas Maes, entitled "La Bénédicité", a small mug with pouring lip, and comparable in size to the Belleisle specimens, is shown being used as a personal soup container (Steponaitis 1979:55). Thus, mugs probably served to hold beverages broths, soups, and stews.

Coarse earthenware French mugs appear to have been either handleless or have one or two vertical handles (Genêt, Décarie-Audet, and Vermette 1974:208). Two of the Belleisle mugs have a single handle, while the remaining lack such appliqués. Steponaitis (1979:62, C.40 and C.49) describes and illustrates handleless vessels that probably were pots or jars. However, the 'Tunica Treasure' vessels are somewhat larger (about 15.5 cm in diameter) than the Belleisle mugs (Steponaitis 1979:62). Classifying the Belleisle vessels as 'mugs' indicates a more specific function derived from the eighteenth-century New France term "pot à boire" (Genêt, Décarie-Audet and Vermette 1974:209).

Storage Jars. Two storage jars were recovered at Belleisle, one from each house. The jar from House 1 is represented by a single body sherd with an exfoliated interior and a slipped and glazed exterior (Appendix 1, No. 12). The exterior displays an impressed geometric

motif consisting of two parallel, horizontal rows of squares under the slip and glaze, and probably on the lower area of the upper exterior side (Figure 15). Similar decorations have been noted for two unidentified vessels from Fort Sainte-Marie-de-Grace, La Have, Nova Scotia, dated 1632 to 1651 (Lavoie 1981:10, fig. 1). It is, therefore, possible that the impressed motif on the Belleisle storage jar represents an older, late seventeenth century vessel. On the other hand, the ware may well have survived into the eighteenth century. The upraised motif would certainly have provided a better grip to the jar than a smooth surface.

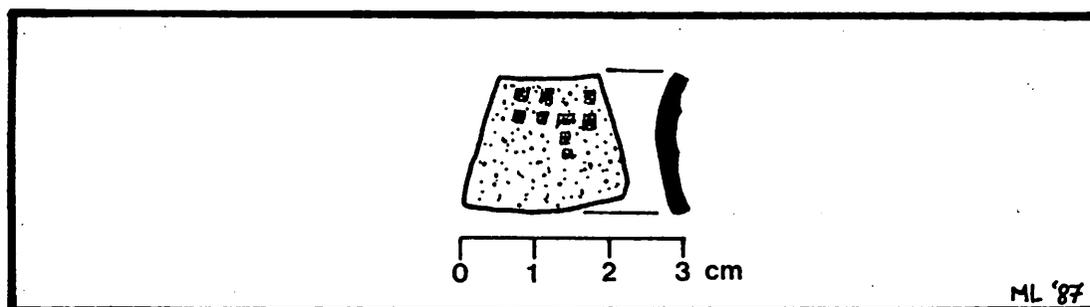


Figure 15. Impressed Decoration on French Storage Jar.

The storage jar from House 2 is represented by body and rim sherds (Appendix 2, No. 5). It has slightly outflaring cylindrical body, a rolled lip, and a 10.0 cm rim diameter. Three parallel incised lines encircle the upper exterior, below the lip. The body sherds exhibit a yellowish green interior glaze, and all the sherds indicate that the vessel's exterior was covered with a slip and dipped into a green glaze. However, the glaze is very uneven, stopping just

below the rim on some sherds and extending down to the middle of the body on others.

Similar storage jars in Saintonge slipware differ in surface finish from the Belleisle specimens (Barton 1981:13, fig. 3, No. 24; 24, fig. 4, No. 32). This type of vessel was used for transporting and storing water, cooking and lamp oil, or for other liquids (Genêt, Décarie-Audet and Vermette 1974:145-146). Such jars often had wooden lids and were covered with wicker sleeves (Genêt, Décarie-Audet and Vermette 1974:146). While there is no direct evidence that the Belleisle jars were fitted with wicker sleeves; such sleeves might explain why so little care was taken with the exterior glaze on these vessels.

Bottles or Jugs. The Belleisle collection contains two bottles or jugs, one from each house. The House 1 example is thinly potted (4 to 5 mm thick), (Appendix 1, No. 13) and has a glazed interior, a slipped exterior with little evidence of a green glaze. The pottery fragments for this vessel include upper shoulder and neck sherds (Figure 16). The House 2 bottle has a thicker body, 6 to 7 mm thick (Appendix 2, No. 6). This second jug has a green lead-glazed interior and a slipped and green-glazed exterior. Moreover, the glaze on both surfaces appears considerably thicker than that found on the House 1 bottle.

More complete examples of this vessel type have been found in the

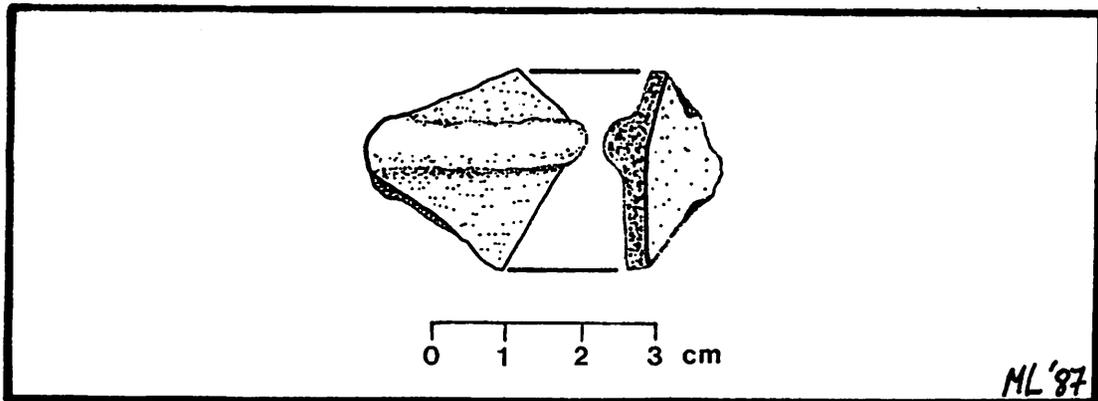


Figure 16. Upper Neck Sherd from French Bottle.

Tunica Treasure (Steponaitis 1979:44, C-88; 45, C-6), in the Louisbourg collection (Barton 1981:18, fig. 8, No. 7), and in the wreck of the Machault, sunk in 1760 at Restigouche, New Brunswick (Barton 1977:52, fig. 6a). According to Barton (1981:18), these "harvest bottles" are very common in the southwest of France. The illustrations in Barton (1981) and in Steponaitis (1979) show vessels with bulbous bodies, and a constricted neck with a single vertical handle attached from the neck to a lower terminal just below the shoulder. Bottles such as these or cruches were used to carry and store water, olive oil, vinegar and lamp oil. (Genêt, Décarie-Audet and Vermette 1974:102-103).

Unidentified Vessel. Excavations in House 2 uncovered one unidentified white to pink fabric vessel with a green-glazed interior and slipped exterior (Appendix 2, No. 7). The artifact is insufficient to permit precise identification, except that the sherd represents part of a pot with a cylindrical body.

Discussion. The green-glazed white-fabric ware was manufactured at La Chapelle-des-Pots (Charente Maritime), in the Saintonge region of southwestern France (Barton 1977:66, type 1). This ware is readily recognizable among the sherds found in quantity in waste heaps at La Chapelle-des-Pots (Barton 1981:16, type L2).

The coarse earthenwares shipped to the colonies during the seventeenth and eighteenth centuries were not high quality products because local clays of varying quality were used (Chapelot et al. 1972:80). Chapelot et al. (1972:36) mention at least two types of clay: the more plastic, "argile grasse" that fires well as it partially vitrifies, and the "argile plus maigre" or regular potting clay used in the production of most earthenwares. The "argile grasse" occurs in large concentrations within the "argile plus maigre" (Chapelot et al. 1972:36), but it is from this former, better quality clay that the earthenwares described in this section were produced. Contrary to Chapelot et al's. (1972:80) statement regarding the quality of seventeenth and eighteenth century products, the Belleisle white-bodied green-glazed wares are quality products when compared to red-bodied pottery from the same region. Conceivably, they could have had a longer use-life than other coarse earthenwares.

The green-glazed white-bodied wares were probably shipped from Port-Berteau down river to La Rochelle, or the naval base at Rochefort (Figure 12), (Barton 1981:9). On the warships Machault, this type of coarse earthenware was excavated along with Chinese Export Porcelain

which had been packed in straw, but the packing material for the coarse earthenwares remains unknown (Barton 1977:47; Wade 1980:4). Most of the ceramics were stored in barrels in the port section (left side) of the Machault's bow (Barton 1977:47, Wade 1980:4). The production of such wares probably declined after 1750, because of competition from the faience factories and other more durable imported wares (Chapelot et al. 1972:81).

Red Body, White Slip and Varying Lead Glazes (hardness: 2.5+ to 5.0). At Belleisle three vessels, two from House 1 and one from House 2, are included in this category. One specimen from House 1 consists of neck, body and basal sherds (Appendix 1, No. 14). Their fabric is red (Munsell 1969:10YR 7/4) and displays white feldspathic inclusions, red ochrous and probably ferric particles and mica. A whitish slip completely covers both the interior and exterior surfaces of these sherds (Munsell 1969:10GY 9/2). The interior lead glaze is yellowish-brown (Munsell 1969:7.5Y 7/8), while the exterior lead glaze is dark green (copper oxide), resembling that found on the white-bodied green-glazed coarse earthenwares described above (Munsell 1969:10GY4/4 and 5/6). This exterior glaze covers the neck and upper body sherds, but is either absent, or only in blotches on the lower body and basal fragments. The vessel is a pitcher or jug with an ovate body and a straight, or slightly constricted cylindrical neck (Plate 2 a and b). This vessel type is illustrated for the Machault collection (Barton 1977:48, fig. 1; 49, fig. 2), and was also identified at Louisbourg (Barton 1981:16, fig. 6, Nos. 55 and 56).

Genêt and Kirjan (1978:78, and top figure p. 79), and Lafrenière and Gagnon (1971:31, plate 4), write that such vessels were used at the end of the seventeenth and the beginning of the eighteenth centuries in Quebec. Thus the Belleisle example could have been obtained and used sometime from the end of the seventeenth century to 1755.

A second vessel from House 1 represents a small storage jar or mug. A single sherd for this vessel exhibits a rolled rim, 10.0 cm in diameter, and a slightly constricted neck (Appendix 1, No. 15; Plate 2c).

The vessel from House 2 is represented by two body sherds which are insufficient to permit precise functional identification, but it could have been a jug, storage jar, or a vessel with an ovate body, (Appendix 2, No. 8).

The above were produced in the Saintonge region (Charente Maritime) of France, where pottery works were operating during the seventeenth and eighteenth centuries. Similar wares occur in the Louisbourg collection (Barton 1981:10, type L1), in the "Maisons Estève et Boisseau", Place Royale, Quebec City (Moussette 1982:48-49, variety 4.2.7.1), and in the "Tunica Treasure" (Steponaitis 1979:45).

Chapelot et al. (1972:36) describe white and red clays for the Saintonge region, and it is clear that pottery of this type was made from 1710 to 1763 (Chapelot 1978:108). Like the white-bodied

green-glazed ceramics from Saintonge, this red-bodied ware was shipped from Port Berteau, down river to La Rochelle or Rochefort (Barton 1981:9; Chapelot 1978:109). In Europe, the ware is distributed principally along the western European littoral, in England, the Channel Islands, in French ports north of Bordeaux, and the Low countries (Barton 1981:9).

White Fabric, Yellow Glaze (hardness: 5.0 to 6.0). This coarse earthenware exhibits a hard and dense white fabric (Munsell n.d.:5YR 8/3), with no inclusions, except for an occasional small ochrous pebble (Barton 1981:31, type L8). Vessels of this type have well-turned bases, and a bright yellow pure-lead glaze (Munsell n.d.:7.5YR, 7/8), (Barton 1981:31).

Two vessels of this variety occur in the Belleisle collection, one from each house. The House 1 specimen, represented by two body sherds with exfoliated interiors (Appendix 1, No. 16), are insufficient to permit further description. The vessel from House 2 is a storage jar probably with a bulbous body (Appendix 2, No. 9; Plate 3). Its well turned base measures 15.0 cm in diameter, and has a steep lower side.

Such vessels were produced in the Bauvaisis region of northern France, and Louisbourg examples have been traced to potteries in Martincamp near Sorrus (Barton 1981:33; Chapelot 1978:110). The Belleisle vessels came from the same general region. In France, they must have been shipped overland to Dieppe, or by river transport to Le

Pink to red fabric ceramic objects have been described in the 'Tunica Treasure' (Steponaitis 1979:50, Type B); and vessels with the same finish as the Belleisle House 2 pitcher are discussed by Moussette (1982:39, variety 4.2.2) from the Place Royale collection, and from Louisbourg by Barton (1981:35, Type L10). A painting by Chardin (circa 1747) includes a pitcher closely resembling the House 2 specimen (Steponaitis 1979:51). Moussette (1982:39) attributes this ware to Southern France, particularly to the Vallauris-Biot region, near Marseille. Barton's (1981:35) type L10 has been described as French and bears some similarities to southwestern French types L1 and L4, (Barton 1981:10-16, type L1; 23-27, type L4). If these wares are from Vallauris-Biot they probably would have been shipped from Antibes to Marseille, in the Mediterranean, and then to Rochefort or La Rochelle, whence to the Colonies. If they were made in the Saintonge region, they probably would have been shipped on the Charente River to Rochefort or La Rochelle, and then to the colonies. Further research in France would permit a clearer understanding of the origins and distribution of these wares. Currently, Moussette's (1982) identification is perhaps more credible than Barton's (1981), as these wares exhibit bodies similar to coarse earthenwares produced in the northern Mediterranean.

Northern Mediterranean Wares (hardness: 5.0- to 5.0-)

Included under this rubric are six flanged-bowls or rim plates from House 1, and two from House 2. They have soft and porous, red bodies

(Munsell 1969:7.5YR 6/10), which display small air pockets or vesicles (Moussette 1982:52, variety 4.2.7.4). The fabric of all the Belleisle examples have mica and the thicker sherds occasionally exhibit small red, ferric inclusions as well as white feldspathic particles. The mica in burned specimens shows in the form of black specks. The interior surfaces of all vessels have been covered with a yellowish-white slip (Munsell n.d.:5Y 8/3; Munsell 1969, 2.5Y 9/2). The plates' exterior surfaces are plain, except for some partially slipped rim sherds, where the liquid clay has overflowed from the interior. The slips are covered with a clear and very thin lead glaze, and the best preserved example, from House 1, is decorated with a copper-rich green glaze, in the form of lines and other motifs (Munsell 1969:10GY 6/4; Plate 4, left).

The first plate from House 1 measures 34.0 cm in its diameter (Appendix 1, No. 19), with a brim diameter of 18.0 cm. This vessel's height is estimated to be 7.0 cm, based on the slope of the brim and the curvature of the vessel's side. This flanged-bowl, like all other specimens from Belleisle, has a slightly rounded rim in cross-section. The marli is 5.0 cm wide, and the brim's decorations include a single green line on its outer and inner perimeter. Zigzagging lines fill the space between the two lines (Plate 4, left).

Two brim sherds represent a second plate (Appendix 1, No. 20). It has a 34.0 cm rim diameter and a brim 5.0 cm wide. Glazed and slipped decorations have eroded away. A third plate from House 1

consists of brim and rim fragments, and of side sherds (Appendix 1, No. 21); most of these fragments have been burned and have lost most of their glaze and slip (Appendix 1, No. 21). This plate has a 28.0 cm rim-diameter. The fourth and fifth plates are represented by one rim sherd each and have a 30.0 and 34.0 cm rim diameter, respectively (Appendix 1, Nos. 22 and 23). The evidence for a sixth and final plate of this type from House 1 consists of a small unmeasurable rim sherd (Appendix 1, No. 24).

One plate from House 2 has a 26.0 cm rim diameter (Appendix 2, No. 13), and this specimen, like most of those from House 1, has lost most of its glaze and slipped decorations. A second and last plate from House 2 is represented by a single rim and brim sherd (Appendix 2, No. 14). The rim measures 26.0 cm in diameter.

Only one rim plate in the Belleisle collection exhibits green trailed-slip decorations. Similar specimens from the Machault (Barton 1977:55-58, type 2), and Louisbourg (Barton 1981:36-38, type L12) are decorated with copper (green), iron (brown) and iron and manganese (purple) trailed-slips in the form of swags and zigzags as well as "circles of dots", on the vessels' brims (Barton 1977:56; 1981:37). A common feature to all Louisbourg examples is a central green whorl (Barton 1981:37).

Barton (1977:66) originally thought that these wares were produced in northern France. However, the fabric's similarity to that of south

and southwestern French wares, led him to later suggest in his Louisbourg report that they were made in the northern Mediterranean (Barton 1981:67). Chapelot (1978:110) and Moussette (1982:52, variety 4.2.7.4), concur with this latest interpretation.

In Europe the spread of Northern Mediterranean wares has been documented by Barton (1981:38):

Pieces of such wares are known in Jersey and Guernsey, Channel Islands, but have not been so far traced or identified in England, nor have they been traced to any of the archaeological collections in the south of France.

In eastern North America, while such wares have been documented in the Louisbourg and Machault collections, Moussette (1982:52) adds that they were found at Place Royale, Quebec City, and at Montreal's first "Hôpital Général". Invariably, these wares occur only on eighteenth-century French colonial sites (Moussette 1982:52).

The coarse earthenwares were probably shipped to Marseille, and from there to Rochefort or La Rochelle, and then to the Colonies. It is also possible that they were shipped directly to the New World from Marseille.

Iberian Jars (hardness: 2.5- to 2.5)

There are two Iberian jars in the House 1 collection. The fabric

varies in colour from white to pinkish-white (Munsell 1969:5YR 8/1 to 5YR 9/2), and is very coarse with black inclusions, quartz sand, mica, and grey pebbles. The body is not slipped or glazed. However, some quartz inclusions vitrified either when these vessels were fired or during one of the Belleisle house fires, or both.

One vessel, an amphora, is represented by shoulder and lower neck fragments (Appendix 1, No. 25). Unlike earlier Roman amphora, eighteenth century examples do not have handles. The Belleisle specimen has a 30.0 cm shoulder diameter (Plate 5). A single upper body sherd represents a second amphora (Appendix 1, No. 26). The fabric exhibits glassy bubbles indicating a high quartz content. It was burned during the first house fire, as it was recovered in a deep stratum of the excavations.

Two different amphora shapes have been identified at Louisbourg. Most common are "carrot-shaped" vessels; other amphorae have been described as "squash-shaped" (Barton 1981:40; 42, fig. 29; 43, fig. 30). One Belleisle specimen is "squash-shaped" (No. 25). The shape of the second amphora remains unknown. Barton (1981:40) describes lids for carrot-shaped amphorae:

Associated with these three amphorae [sic] are two dics of unglazed flattened clay which had been cut on the wheel and are used as the base for lids or seals of either wax or resin poured over them to prevent the contents of the jars from leaking.

Squash-shaped amphorae could have been sealed in this manner, but Barton (1981) does not discuss their closures.

Amphorae are present in Quebec City sites, and in French Ports with close trading relationships with Spain (Chapelot 1978:110). We do not know exactly where they were produced, perhaps in Spain, Portugal or Italy (Barton 1981:40, type L13B; Chapelot 1978:110). Amphorae contained olives or olive oil:

As early as the end of the seventeenth century the use of olive oil is important in Quebec city, and documents, notably after-death inventories show that it was kept in earthenware jugs or jars (Chapelot 1978:110; my translation).

Originally, the Belleisle amphorae probably contained olive oil. Later other liquids such as apple cider, and even water in the winter time could have filled the amphorae. Olive oil was shipped to Louisbourg from France in 1737, 1742, 1752, 1753 and 1954, and from the French Caribbean Isles in 1737, 1740, 1743, 1752 and 1754 (Moore 1975:40). Actual volumes imported are not available, except for '182 caves' sent from the French Caribbean Isles in 1740 (Moore 1975:40). Littré (1874:513) writes that a 'cave' was a box divided into compartments into which liquor and perfume bottles were stored.

Olives were also shipped from France to Louisbourg, in unknown quantity in 1737, ten cases in 1752, in 184 flacons (glass bottles) in 1753 (Moore 1975:42). Prices are unknown.

New England Coarse Earthenwares (hardness 5.0 to 6.0-), (Plate 6).

Also referred to as "Anglo-American Ware", this pottery type is represented in the collection by nine vessels from House 1, and three from House 2. The fabric is soft and porous, yellowish-red to red (Munsell 1969:2.5YR 6/8, 5YR 7/4, and 10YR 7/4) and displays air pockets. Unlike the red western European coarse earthenwares, this ware lacks inclusions, except for the occasional mica particles and fine gravel. All but one of the Belleisle specimens are lead glazed. One specimen from House 2 has a trailed-slip decoration on its exterior surface (Appendix 2, No. 15). Anglo-American coarse earthenwares typically exfoliate, or laminate.

No wares from any other source found at this site [Fortress of Louisbourg] do this. This tendency seems to have occurred during firing or transportation and in some instances before disposal. This emphasizes that the source of these wares must be from some particular place rather than from a widespread area of New England for it must be related to the nature of the clay, its preparation, or its method of firing. (Barton 1981:50).

All Belleisle specimens exhibits exfoliation.

Mixing bowl. One mixing bowl in the House 1 collection is represented by a single basal sherd, with a 16.0 cm diameter (Appendix 1, No. 27). The interior has a yellowish-red lead glaze (Munsell n.d.:5YR 5/8 to 6/8), and the exterior is plain.

Posset Cup. One posset cup is present in the House 1 collection (Appendix 1, No. 28). Posset cups are drinking vessels usually with two vertical handles (Savage and Newman 1974:229). The Belleisle specimen has a bulbous body, a straight neck and an 8.0 cm rim diameter. The lead glaze on both surfaces varies from a light to dark yellowish-red, giving the vessel a marbelized finish (Munsell n.d.:5YR 5/8 and 6/8).

Pitcher. A pitcher (Appendix 1, No. 29) is represented by a single rim sherd with a portion of a drawn-out pouring lip. Another sherd reveals that the pitcher has a disc base. The body exhibits mica and small black particles that appear to be very fine gravel.

Bottles. There are two bottles from House 1, each represented by neck and lip sherds. One has a red body (Munsell 1969:5YR 7/4) and a brownish, marbelized glaze (Munsell 1969:5YR 5/2), (Appendix 1, No. 30). Its rim measures 3.0 cm in diameter. The other larger bottle (Appendix 1, No. 31) has a 4.0 cm rim diameter. It has been burned, but appears to have the same glaze as the first bottle.

Storage Jar. House 1 yielded three storage jars. One is represented by body sherds with a plain exterior and dark brown interior glaze (Munsell n.d.:10YR 3/3). (Appendix 1, No. 32). Its body thickness ranges from 6.0 to 7.0 mm, and a single neck sherd indicates an outflaring neck, and perhaps an everted rim.

A second storage jar is represented by a lower body sherd 5.0 mm thick and a well-potted disc base (Appendix 1, No. 33). Since identical bases can occur on both large storage jars and chamber pots (Barton 1981:50, fig. 36, Nos. 1 and 2), the Belleisle specimen may not be a storage jar. The fabric is reddish-brown (Munsell n.d.:5YR 5/3), but the sherds are burned. The black glaze on both surfaces (manganese oxide), (Munsell n.d.:5YR 2/1), has bubbled in areas, the result of intense heat from a fire.

A third storage jar from House 1 is represented by 156 body and basal fragments (Appendix 1, No. 34). It is second only to the western Mediterranean amphorae in size and sherds average 8.0 to 15.0 mm in thickness. The body is cylindrical, but slightly bulbous and the disc base measures 14.0 cm in diameter. Its fabric is yellowish-red (Munsell 1969:2.5YR 6/8). Both surfaces are dark reddish-brown lead glaze (Munsell, n.d.:5YR 3/2), but much glaze has bubbled away because it was exposed to a fire.

Unidentified Vessel. The last vessel of this type from House 1 is represented by two middle or upper body sherds (Appendix 1, No. 35), with a yellowish-red fabric (Munsell 1969:2.5YR 6/4), and their surfaces were covered with a transparent lead glaze. Its function is unknown.

Specimen from House 2. The most complete vessel is a small storage jar (Appendix 2, No. 15). It has a constricted neck and a slightly

everted rim, 16.0 cm in diameter. The body is yellowish-red (Munsell 1969:10YR 7/4), and has a mottled glaze, the result of manganese particles sprinkled onto the glaze (Munsell 1969:10YR 6/6). Also, on the exterior are trailed-slip lines (Munsell 1969:10YR 8/6).

Another storage jar has a yellowish-red body (Munsell 1969:2.5YR 6/8) and a transparent glaze (Appendix 2, No. 16). A single upper body sherd has been glazed on both surfaces, but the lid sherds were glazed only on their exterior. The upper body sherds suggest a constricted neck. The lid was flat, with a drawn out nipple on the exterior surface of one fragment.

Unidentified vessel. A third and last vessel could not be identified (Appendix 2, No. 17). Sherds representing this vessel have plain exteriors, showing a yellowish-red body (Munsell 1969:10YR 7/4), and a transparent glaze on their interiors.

Discussion. Sixteen types of Anglo-American coarse earthenwares were imported at Louisbourg probably from 1715 to 1753 (Barton 1981:49, 50-63, types L15 to L30). Five possible New England coarse earthenwares were recovered from Place Royale (Moussette 1982:33-34, 38, 47, 50). The Belleisle examples could be included in Barton's types L15 (Mottled Ware), L16 (Fine Red Ware), possibly L24 (Soft, Red, Fabric, Internally Black-Glazed Ware), and type L28 (Soft Pink-red Fabric), (Barton 1981:50-52, 57, 61).

Much of the trade between New England and Louisbourg was conducted from Boston, in Massachusetts. One successful potter in Boston, operated a pottery from 1670 to 1700 (Watkins 1950:19). The first major pottery centre was situated in Charlestown from 1709 to 1712 producing vessels with tan bodies and yellow slips (Watkins 1950:24). The industry's heyday occurred from 1740 until 1775 (Watkins 1950:26).

Other small and short-lived potteries existed along the coast, but Charlestown almost certainly was the source, for most if not all the pottery exported to Acadia and Cape Breton. Another could have been the Bayley potteries (1723-1799) in Newbury Port, Massachusetts (Watkins 1950:48-61). Much work remains to be done to understand the varieties of Anglo-American coarse earthenwares made in each factory, during the eighteenth century (Barton 1981; Turnbaugh 1983).

Anglo-American coarse earthenwares were shipped to the Bay of Fundy region and to the Fortress of Louisbourg by Boston Merchants, and perhaps by the potters themselves. Also, it is possible that Acadian boat owners could have sailed to Boston and to Louisbourg to obtain these wares. Earthenware vessels were shipped to Louisbourg in 1737 and 1743, but quantities are not documented (Moore 1975:73), and these could be English rather than Anglo-American. Barton's (1981:49) suggests that New England wares could have been shipped to Louisbourg from 1715 to 1748, is supported by Lunn (1973:179, fig. 3) illustration of Anglo-American wares from a circa 1740-1755 archaeological context at Louisbourg. The French Louisbourg residents

used New England pottery together with other varieties of coarse earthenwares. However, during the three years when Louisbourg was controlled by New England troops, from 1745 through 1748 (McLennan 1978:147, 181), greater quantities of New England and English coarse earthenwares may have been shipped to the fortress.

English Coarse Earthenwares (hardness: 5.0 to 6.0), (Plates 6 and 7).

Seven vessels of English origins, three from House 1 and four from House 2, can be attributed to two areas of England: Buckley in North Wales, and the Staffordshire region.

Buckley Coarse Earthenwares. A mug or tankard from House 1, and a press-moulded plate from House 2 come from Buckley. The tankard is represented by two basal sherds exhibiting a well-turned base (Appendix 1, No. 36). The fabric is a yellowish-buff colour (Munsell 1969:2.5YR 8/4), and is very fine with large quartzite inclusions. Both surfaces are covered with a thick lead glaze whose dark brown colour probably resulted from manganese and iron inclusions in the glaze (Munsell 1969:2.5YR 2/0). The glaze has pooled in the exterior grooves around the base, and in the interior centre. This tankard could have been made as early as 1690 and no later than 1750. (Davey 1975a:237, fig. 3.2; 1975b:2, plate 3; 1976:18).

Plate. A press-moulded plate from House 2 has a yellowish-white body (Munsell 1969:2.5YR 9/4) (Appendix 2, No. 18). Its fabric is

dense but porous, and appears laminated. The vessel's exterior is plain, but its interior surface has a white slip (yellow when glazed), as well as brown and dark brown slips (Munsell 1969:10YR 8/6 yellow, Munsell n.d.:7.5YR 4/4 brown, and 7.5YR 3/2, dark brown). All slips occur in spots and blotches, and are commonly referred to as "marbled" (Moussette 1982:18; Savage and Newman 1974:186).

Eighteenth century plate moulds were made of clay and fired to render them hard and durable (Cooper 1968:99). Fragments from three moulds, along with press-moulded slipwares were recovered from a circa 1720 to 1750 archaeological context in Buckley (Davey 1976:18). English potters also used wood, alabaster and plaster of Paris moulds by the mid-eighteenth century (Cooper 1968:99). Some Buckley slipwares (Davey 1976:19) appear very similar to the Belleisle example. The two known early Buckley potteries began operation sometime between 1690 and before 1755 (Davey 1976:18-19).

Barton (1981:66) reports five Buckley coarse earthenware vessels with shiny black glazes and white trailed-slip decorations, from Louisbourg. Barton (1981:66) mentions that it is remarkable that there are so few fragments of these wares at Louisbourg, as they are common in America. Vast quantities of Buckley creampans, storage jars and pitchers were shipped to the American colonies from Liverpool (Noel Hume 1970a:133). Therefore, the Belleisle specimens may have been obtained from New England. It is also possible that Belleisle vessels were purchased at Louisbourg, where they would have been obtained from New England.

English Mottled-Brown Wares and Slipwares. Three unidentified vessels, two from House 1 and one from House 2, have a mottled-brown glaze on both their interior and exterior surfaces. Earthenwares with such a finish are sometimes referred to as "Rockingham Glazed". However, this term is very misleading, because it refers to a brown lead glaze finish, mottled with dark brown to black streaks or blotches, resulting from manganese and iron inclusions in the glaze (Cox and Cox 1983:108; Davey 1975b:2; Savage and Newman 1974:246). This finish does not appear to have been in use at Rockingham until about 1770, and was used extensively after 1806 (Cox and Cox 1983:108). Savage and Newman (1974:56) describe this finish in conjunction with hard-bodied, white earthenwares produced at Rockingham around 1796. The mottled-brown glaze on beige to red bodies has been reported in Buckley in early eighteenth century contexts (Davey 1976:18-19), and as a Staffordshire product for the same time period, at Tutter's Neck in Virginia (Noel Hume 1968a:48, fig. 9). Excavations in Tamworth, Staffordshire, revealed pottery attributed to the period circa 1680 to 1720 with a light-buff body and a mottled-brown glaze (Sheridan 1980:283).

The Belleisle examples display two different clay bodies. One of the House 1 vessels has a fine, porous beige fabric with black inclusions (Munsell n.d.:7.5YR 8/4; Appendix 1, No. 37). The other two (Appendix 1, No. 38; Appendix 2, No. 19), have fine, porous red bodies, free of inclusions, and mottled-brown glazes (Munsell 1969:7.5R 6/6 body; 2.5 YR 2.5/2 and 6/14, glazes). All three could

have been produced in Buckley or in Staffordshire.

Their functions remain unknown, but all three vessels have cylindrical or bulbous bodies. One of the two House 1 vessels (No. 38) exhibits horizontal ribbing on its exterior surface, a design that has been identified on Buckley and Staffordshire mugs (Davey 1975b:3, No. 3; 1976:19; Kelly 1973:25), (Plate 7c).

Two other vessels from the Staffordshire area were recovered from House 2. Both exhibit a fine but porous body, whittish yellow in colour with small black particles (Munsell 1969:10YR 9/2). Both were covered with a white slip and a lead-glaze (Munsell 1969:10YR 8/6). The fabric is harder than that of the other English coarse earthenwares (6.0 on Mohs' scale). Certain technical improvements produced pottery with paler and stronger bodies (Weatherill 1970:3; 1971:12). Plastic "ball clay" vitrifies when fired and when mixed with Staffordshire clays, produces whiter and stronger pottery. White or ball clay was first used at the beginning of the eighteenth century and by 1740 large quantities were utilized (Weatherill 1970:3). The mixture of clays disqualifies these wares as coarse earthenwares. Rather, they are refined earthenwares. The manufacturing process of these products is documented as early as 1686 by Dr. Robert Plot, in his "Natural History of Staffordshire":

When the potter has wrought the clay either into hollow or flat ware, they [the objects] are set aboard to dry in fair weather, but by the fire in foule,

turning them as they see occasion, which they [the potters] call whaving. When they are dry they stouk them, i.e. put ears and handles to such vessels are require them...being dry, they then slip or paint them...later they are glazed (Wedgwood and Ormsbee 1947:10-11).

Rackham (1951:5) describes the glaze of these wares:

The iron almost always present as an impurity in the ore [lead ore] gave the transparent glaze so produced a more or less strong yellow tone, causing the underlying clays to appear cream-coloured, buff, warm red or rich dark brown consistently with the colour acquired by them in the firing.

Jar. One of the House 2 specimens is a jar represented by a large base and lower side fragment (Plate 8b). (Appendix 2, No. 20). Its disc base is 8.0 cm in diameter.

Posset cup. The other vessel is a posset cup (Appendix 2, No. 21), represented by two rim sherds (10.0 or 12.0 cm rim diameter), with a slightly everted lip, seven body sherds, and one lower side fragment with an interior slipped decoration. The design is incomplete, but consists of thin dark-brown lines on the interior (Plate 8a.). Since the lines are equidistant, the slip must have been applied with a slip 'can' with multiple spouts.

Discussion. The Louisbourg collection contains many English slipware vessels, similar to those from Belleisle (personal observation). The Place Royale collection has examples of Staffordshire slipware (Moussette 1982:17-21, varieties 2.1-2.3). The

Place Royale posset cups lack interior decorations, but have slipped dots and horizontal lines on their exterior surfaces (Moussette 1982:114, fig. 14). Noel Hume (1970a:134) considers such wares as "between the coarse earthenwares and the refined tablewares..."

Slipwares made in Staffordshire, which are nearly impossible to distinguish from Bristol products, were exported to the American colonies until the 1700s (Noel Hume 1970a:134-135; Weatherill 1971:89, map 6). Staffordshire wares were also shipped to Chester, close to Buckley (Weatherill 1971:89, map 6). Pack horses carried one crate of pottery at one time, to a market or a port where it would be exported to the New World, and in the 1750s horse-drawn carts were used for the same purpose (Weatherill 1971:89-90).

Weatherill (1983:16) suggests that between 1660 and 1815, each crate contained anywhere from fifty to five hundred pieces, and that Staffordshire potters shipped large quantities of their wares between 1734 and 1760 (Weatherill 1971:80). Bristol received Staffordshire slipwares by boats cruising down the Severn River, which had been loaded from horse crates or carts at the end of their overland journey from Burslem or Stoke-on-Trent to Bridnorth (Weatherill 1971:89, Map 6). Finally, wares were taken overland to Willington, after 1700, and from there by boat on the River Trent to Hull (Weatherill 1971:89, map 6). Therefore, it is quite possible that during the first half of the eighteenth century, Staffordshire slipwares were shipped to the American colonies from Bristol, Chester, Liverpool and Hull. They

could have been obtained by Acadians in Boston, and perhaps Louisbourg, or brought into the Port Royal area and to Louisbourg by New England merchants.

Unidentified Coarse Earthenware (hardness: 5.0 to 6.0-), (Plate 9)

The origin of one jar recovered from House 1 remains unknown (Appendix 1, No. 39). Its two sherds have a beige fabric (Munsell 1969:2.5Y 8/4), similar to those found on refined earthenwares, being soft, porous, and free of inclusions. Both the interior and exterior surfaces are slipped and exhibit very thin transparent lead glaze (Munsell 1969, 2.5Y 8/2). The source of this small vessel is unknown.

**TIN-GLAZED REFINED EARTHENWARE**

Belleisle yielded twenty-five tin-glazed refined earthenware objects, fourteen from House 1 and eleven from House 2. This pottery type has a soft and porous, refined body, free of inclusions. Colour ranges from pale yellow to beige to red (Munsell 1969:7.5Y 9/2, 10Y 9/4, 7.5 6/10). The fabrics are covered with tin glazes, that vary in thickness, colour and finish from one object to another.

The process of refined earthenware manufacture is complex. Tin-glazes are less resistant and usually thicker than lead glazes. (Brongniart 1854, II:20-25). They consists of quartz sand, lead, calcined tin-oxides, and an alkali such as soda, potassium hydroxide,

or marine salt (Brongniart 1854, II:25; Genêt 1980:17, 20; Lane 1970:1). Tin glazes have an aesthetic advantage over lead: they hide the earthenware body. In addition, they can be dried before firing and their porosity lends itself well to the application of painted decorations (Genêt 1980:17). A major drawback, however, is the glazes' inability to resist to multiple exposures from intense heat (Genêt 1980:19). Not surprisingly, vessel shapes represent objects used in food consumption and storage, as well as pharmaceutical containers and chamber pots, rather than cooking vessels.

Tin-glazed earthenware was first used by Mesopotamian potters during the ninth century (Genêt 1980:17; Rackham 1952:2). Islamic potters used tin glazes on pottery around the tenth century (Genêt 1980:17). They introduced this ware to Spain during the fourteenth and fifteenth centuries, and from there it was brought to Italy by Majorcan traders (Genêt 1980:17; Rackham 1952:2). Tin-glazed refined earthenwares became known as 'Majolica' in Spain, 'Faience' in France, 'Delft' in Holland, 'galleyware' an 'delftware' in England (Garner 1937:43; Genêt 1980:17-18; Hannover 1925:92; Noel Hume 1977:1-2). faience and Delft were first produced by master potters from Italy -- the better known Italian centre being Faenza, hence the French name 'Faience' -- during the sixteenth century and after (Giacomotti 1963:10; Havard 1909:20; Lane 1970:8). In England during the late sixteenth century and later, potters from Holland and others trained locally, made tin-glazed earthenware. Italian influence in designs could still be seen in early English vessels (Genêt 1980:17-18; Noel Hume 1977:1). By the end of the seventeenth century each country seems to have

developed particular styles, but potters copied some of the designs from abroad. Albeit, certain surface finishes and decorative styles have been attached to particular factories or regions of production, based on extant specimens preserved in museums or other collections. Complete tin-glazed vessels usually can be traced to their country of origin, but with fragments identification becomes more difficult.

Refined earthenwares were subjected to multiple firings. The clays were washed, dried and pulverized, and water was added to obtain the desired consistency (Genêt 1980:18). Vessels were wheel-thrown or moulded and fired to a "biscuit" state (Genêt 1980:18; Savage and Newman 1974:44). The biscuit vessel was dipped into a tin glaze or enamel and left to dry. When dry, vessels were decorated with pigments and fired for a second time, or decorated vessels were covered with a transparent glaze before the second firing. The latter technique was used widely in Italy and Holland, and for a short time from 1720 to 1730 in England (Genêt 1980:18). Whether decorated or not, tin-glazed objects were fired at temperatures ranging from 750 to 900° c (Giacomotti 1963:11; Genêt 1980:18). Some vessels were submitted to a third firing, at lower temperatures, after adding colour enamels to the existing glaze and decorations (Genêt 1980:19).

Many European potters tried to copy the finish of Oriental Blue export porcelains (Genêt 1980:18; Giacomotti 1963:11-12; Palmer 1976:9; Rackham 1952:2). Until the eighteenth century, the finish was all they copied. Porcelains, unlike refined earthenwares, are

vitriified and translucent when viewed by transmitted light (Savage and Newman 1974:227). Tin-glazed refined earthenwares only look like porcelains: the clays and glazes used in their production do not even resemble China clay (kaolin) and China rock (petuntse) used in the porcelain paste, and the tin-glaze was never as hard as the feldspathic glaze of porcelains which fuses at about 1250 to 1450° c (Garner 1970:4; Griffiths 1978:80; Palmer 1976:9,15; Savage and Newman 1974:117).

Belleisle Refined Earthenwares (hardness 2.5 to 5.0+), (Plate 10)

Because of the identification problems, the Belleisle refined earthenwares are classified according to function, based on vessel shape. Where it could be determined, the country of origin is specified.

Plates. Five press-moulded eating-plates were recovered from House 1, and two from House 2. A first plate from House 1 is represented by three brim and rim fragments, and a basal sherd (Appendix 1, No. 40), and has a 30.0 cm rim diameter. It exhibits a yellow fabric and a white glaze with some pin holes on its exterior surface. Such imperfections are common on Delft (Genêt 1980:59), but pin holes also occur on faience at Louisbourg. The plate has blue-painted lines of varying width on its brim and on the outer periphery of its interior centre (Munsel 1969:10B 5/6), (Plate 10f.). Its exterior surface is not decorated.

A second plate from House 1 has a yellow body, and its marli and interior surface are decorated with blue-painted lines (Munsell 1969:7.5B 4/6 to 5/6; Appendix 1, No. 41). The rim is scalloped, and the exterior surface is plain but has blue specks in the glaze from cobalt oxide inclusions.

Neither plate (Nos. 40 and 41) is like common faience shipped to the colonies. The most abundant type of faience plates in National Historic Sites collections is decorated with a single blue band on a concave brim (Long 1973a:3). These plates have flat bases and steep-curved outside walls (Genêt 1980: plate 2; Long 1973a:3; 15, Nos. 1-3 ; 1973b:4-5, and fig. 5). Both the decoration style and general form differ from the Belleisle specimens. However, Moustier, Nevers and Rouen plates have well-defined marlis (Dunton 1971:14, plate 2;15, plate 3;17, plate 6). The Belleisle specimens closely resemble delftware in their decoration and general appearance (Noel Hume 1977:34, fig. 24). Noel Hume (1977:34) dates his delftware plates to the second quarter of the seventeenth century. Others (Bloice 1971; Garner 1937) have dated similar vessels to the late seventeenth and early eighteenth centuries, suggesting that Noel Hume's dates are too early. The Belleisle plates are English products made around circa 1680 to 1740 (Bloice 1971:99; Garner 1937).

A third plate from House 1 is represented by lower side and basal fragments (Appendix 1, No. 42). It has a yellow body, blue-painted decorations consisting of thin lines and cross-hatching (Munsell

1969:7.5B 2.5/10), and an orange-painted design in the form of an asterisk (Munsell 1969:2.5YR 6/8) (Plate 10g.). Its footrim is worn. The cracked glaze which has peeled off in places, is characteristic of English vessels, and is due to their non-porous fabric (Britton 1982:15; Genêt 1980:49). The addition of "Kwaart" or "coperta", a translucent glaze over the tin glaze and painted decorations (Genêt 1980:18), produced a more lustrous finish than that of the other Belleisle plates. This process was used widely in England from 1720 to 1730 (Genêt 1980:18). The decorations on this vessel are duplicated on a mug made in Bristol, dated circa 1707 (Britton 1982:86-87, plate 6.1), and one eighteenth century delftware cup from Fort Michilimackinac exhibits the same design (Miller and Stone 1970:34-35, Fig. 15, i). The Belleisle plate, therefore, is an English product, made in Bristol around 1710 and no later than 1730.

A fourth plate from House 1 has a red body (Munsell 1969:7.5R 6/10), a white glaze, and interior brown-painted lines (Munsell 1969:5Y 3/2), (Appendix 1, No. 43; Plate 10c.). The red body is characteristic of some Faience vessels (Genêt 1980:31). A brown pigment was used initially by French potters at the end of the seventeenth century (Giacomotti 1963:11). The general appearance of the body, glaze and decoration permit me to classify this plate as Rouen faience. However, a "muddy-brown" decoration was also used by delftware potters from Lambeth (Garner 1937:52). The Belleisle plate was produced between the end of the seventeenth century and before 1755, when the Belleisle settlement was destroyed.

A fifth and last plate from House 1 is represented by basal sherds with a yellow body, a white tin glaze, painted interior black lines (Munsell 1969:10B 2.5/1) and blue decorations, probably flowers (Munsell 1969:10B 8/2), (Appendix 1, No. 44). The provenance of this plate could not be determined.

A first plate from House 2 consists of lower side and basal sherds with a yellow fabric, a white glaze, with blue-painted lines and geometric motifs on this vessel's interior (Munsell 1969:7.5B 2.5/10), (Appendix 2, No. 22). While this object is not complete enough to permit comparisons with extant specimens, its general appearance is that of an English plate, and it is tentatively attributed to this country.

A second plate from House 2 differs greatly from those already discussed (Appendix 2, No. 23). It has a yellow body duplicated in illustrations of delftware (Noel Hume 1977: facing page 36). Its exterior is white tin-glazed and the vessel has a footring, V-shaped in cross-section. Its interior surface is decorated with white flowers, apparently with four heart-shaped petals, standing against a blue background (Figure 18, right; Plate 10e.). Fire has destroyed portions of the decoration.

The decorative motif used here may have originated in France. The Nevers "Persian" decoration consisting of a variety of flowers and birds on a blue ground dates from the middle of the seventeenth century (Giacomotti 1963:23, plate 5). Innumerable attempts were made

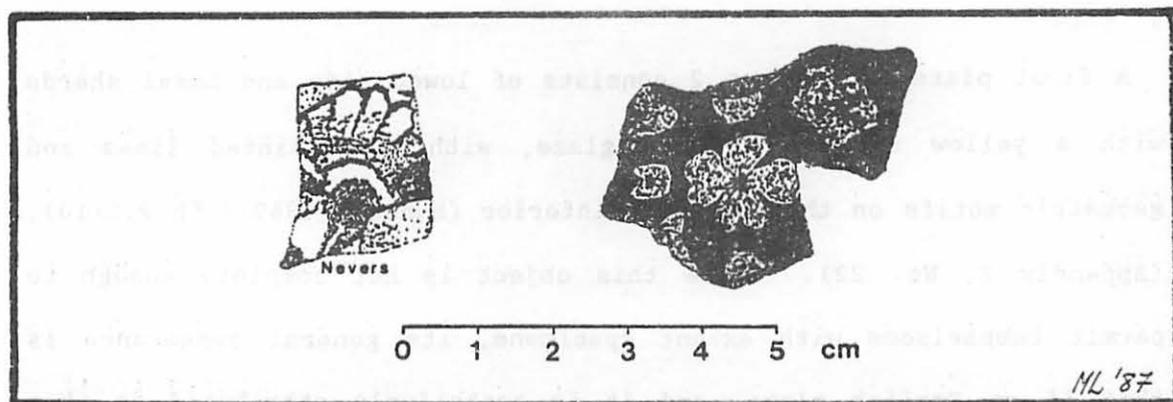


Figure 18. Bristol Plate and Nevers Vessel Fragments.

to copy the Nevers blue ground, especially at Delft, Rouen and Saint-Omer (Giacomotti 1963:23, plate 5, pp. 86-87, plate 19). Delftware potters used coloured grounds on plates after about 1730 (Britton 1982:234-235; Garner 1948:15). The design could also be an imitation of Chinese "Plum" designs (Garner 1970:plate 71). This English plate must have been obtained sometime between circa 1730 and before 1755.

Bowls. Two bowls from House 1 and three from House 2 may be chamber pots, but no handle fragments were found. Two bowls, one from each house, are represented by sherds with a yellow body and a white glaze. (Appendix 1, No. 45; Appendix 2, No. 24). Both have V-shaped footings and an everted lip. Further description is not possible

since these vessels are represented by small sherds which could not be mended. Their origin, therefore, remains unknown, although both French and English potters made vessels of this type (Genêt 1980).

Another bowl or chamber pot from House 2 is represented solely by body sherds with a yellow body and a white glaze (Appendix 2, No. 25.) One sherd displays an unidentified blue-painted decoration on its exterior surface. The vessel's provenance and age could not be determined.

The last two bowls were produced in England. Both display yellow bodies a white glaze, and a manganese purple ground (Munsell 1969, 7.5Y 3/0 and 4/0). The House 1 specimen has this decoration on both its interior and exterior surfaces, with two parallel purplish-lines overlying it on the upper interior surface (Appendix 1, No. 46; Plate 10h). The purple ground is present only on the interior surface of the House 2 pot (Appendix 2, No. 26). Both vessels have everted lips. The House 1 specimen's rim is 14.0 cm in diameter. The House 2 example could not be measured. The purple ground is diagnostic of English late seventeenth and eighteenth centuries' tin-glazed earthenwares (Britton 1982:234, 236; Genêt 1980:50, and plate 73a; Honey 1952:47; Noel Hume 1977:33, plate 23; 35, plate 25; Miller and Stone 1970:40; 41, fig. 19). Both bowls are English products made between circa 1680 and 1755.

Cups. House 1 yielded three cups and House 2, one. The most

complete is from House 2 (Appendix 2, No. 27). It has a yellow body and a white tin glaze on both surfaces. The exterior surfaces of the rim sherds are decorated with a manganese purple ground. The handle fragment (1.7 cm by 7 mm wide) is decorated in a similar fashion, and is oval in cross-section. An English mug (1640-1670), is discussed by Noel Hume (1977:33). It has a bulbous body, a vertical but slightly outflaring upper side and rim, a handle which appears to be oval in cross-section, and either a disc base or a flared-out footring. The Belleisle fragments are identical. Noel Hume's (1977:33) dates are too early. This seems to be a general problem with Noel Hume's (1977) study (Barton 1979:126). The Belleisle mug could have been produced during the late seventeenth century, and before 1755, since the grey ground is common during the first half of the eighteenth century, as shown above.

Each cup from House 1 is represented by a single sherd. One is a handle fragment, round in cross-section and 9.0 mm thick (Appendix 1, No. 47). It is characterized by a yellow body and a grey glaze that has been subjected to heat from a fire. A second cup (Appendix 1, No. 48) has a yellow fabric and a white glaze with horizontal yellow lines (antimony oxide [Munsell 1969, 2.5Y 9/9]), and manganese-ground vertical streaks, above or below the horizontal yellow lines (Munsell 1969:2.5Y 7/0 and 8/0; Plate 10d.). This cup could also be a very small bowl, and is of English origin. A third and last cup survives as a single rim sherd with a yellow body and a white glaze (Appendix 1, No. 49). It has a slightly everted rim like that of French

lighteenth century jam pots produced between 1700 and 1755 (Genêt 1980:plates 39d, 54d).

Porringer. House 1 yielded one porringer with a beige body and a white tin glaze (Appendix 1, No. 50). Its horizontal handle had punched out circles or hearts, no doubt, to provide a better grip. French porringers had solid handles, sometimes with moulded decorations (Genêt 1980:plates 19, 57). Bloice (1971:124, fig. 54, Nos. 56-60B) illustrates porringers with "lobed handles" made at Norfolk House, Lambeth from 1680 to 1737, duplicating the style of the Belleisle specimen. Therefore, the House 1 porringer is a Norfolk House product, made sometimes from circa 1680 to 1737.

Pharmaceutical Pot. The House 2 assemblage contains an English pharmaceutical pot, represented by two rim sherds and a lower body fragment with a yellow fabric and a white glaze (Appendix 2, No.28). Its approximate height is 4.0 cm. Overall, this miniature jar had a slightly everted lip and globular shape, rather than a cylindrical body. Noel Hume (1970a:205; 1977:63, fig. IV, Nos. 21-22) dates similar specimens to the late seventeenth and eighteenth centuries. They are common on eighteenth century sites, at Place Royale (Genêt 1980: plate 82), and at Norfolk House, Lambeth, a London delftware kiln where they were produced from circa 1680 to 1737 (Bloice 1971:99). Pharmaceutical pots became less ornate as the delftware industry developed, and their body shapes changed from cylindrical to cup-shaped, around the end of the seventeenth century (Lothian 1960;

1962; Noel Hume 1970a; 1977). The Belleisle specimen could have been produced as early as circa 1680 and before 1755.

Unidentified vessels. Three unidentified vessels came from House 1 and four from House 2. One vessel from House 2 could be a jar, or even a bottle. It has a beige body and a light-blue glaze on both its interior and exterior surfaces (Appendix 2, No. 29). The exterior surface of this vessel displays a flower with many petals, in purplish-blue, and a blue-ground covers a portion of the petals of this flower (Figure 18, left). Although the motif is incomplete, it closely resembles decorations found on some 'Nevers Style' faience in the Place Royale collection (Genêt 1980: Plates 18, 356, 44b, 47g, 54a, 56f). 'Nevers Style' faience covered with a light blue glaze and darker blue and purple decorations were made between 1680 and after. The Belleisle sherd is a French pot decorated in the 'Nevers Style' and could have been obtained at the end of the seventeenth century, and before 1755. However, vessels decorated in the Nevers Style were not necessarily produced at Nevers:

The faience in the Nevers style probably comes from this important centre but it can come from other pottery works which began to produce the Nevers Style during the eighteenth century. Among these factories, those of Marseille and La Rochelle imitated the Nevers Style during the first half of the eighteenth century (Genêt 1980:35), (my translation).

Three other unidentified vessels, one from House 1 and two from House 2, have a yellow fabric and a white glaze. The House 1 vessel has a

blue ground and painted decorations on its exterior surface (Munsell 1969:10B 5/6), (Appendix 1, No. 51). One vessel from House 2 displays a plain interior, and an unidentifiable blue-painted exterior decoration (Munsell 1969:10B 5/6), (Appendix 2, No. 30). The other unidentified vessel's exterior is decorated with blue to bluish-purple (Munsell 1969:7.5 5/6) painted lines of varying width (Appendix 2, No. 31).

Another House 2 vessel has a reddish body and a white glaze (Munsell n.d.:7.5YR 7/4), (Appendix 2, No. 32). Its interior surface shows blue-painted lines (Munsell 1969:6BP 3/8). It could be a plate, but three small sherds are insufficient for identification.

The last two unidentified tin-glazed objects are both from House 1. One has blue-ground decorations over a white glaze on its interior, and a plain exterior surface (Appendix 1, No. 52). The second vessel is represented by a single sherd with a yellow fabric and a white exterior glaze with green dots and lines (copper oxide), (Appendix 1, No. 53). Its interior glaze has peeled off.

Finally, 18 refined earthenware fragments are either too small or too weathered to permit any identification. Ten are from House 1, and eight are from House 2.

Discussion. The Belleisle residents did not obtain their tin-glazed refined earthenware from a single source. While both houses contained

many vessels of undertermined provenience, English products are predominant in both assemblages. Possible Lambeth vessels were identified in both Houses, and a possible Bristol plate is present in the House 1 collection. French refined earthenware is represented only in both houses, by a plate from House 1 and an unidentified vessel in the 'Nevers Style' from House 2. By 1710, the supply of French faience may have been curtailed. However, faience could have been obtained from Louisbourg.

The Lambeth material (English) must have been shipped directly from London to the American Colonies, and then to the Bay of Fundy and perhaps to Louisbourg. The Bristol plate may have followed a similar route. However, it is plausible that it was shipped to the New World via London.

It is also plausible that English vessels exhibiting the same decorations (i.e. purple ground) were obtained contemporaneously by the occupants of both houses, or that one house owner, having seen such delftware in another house, chose to obtain similar vessels. Alternatively, the occupants of both houses may have obtained whatever pots were available from any New England merchant, regardless of decorative styles. This is supported by the fact that no two vessels from either house are exactly alike. Therefore refined earthenwares were not bought in sets.

The unidentified vessel in the 'Nevers Style' could have come

directly from that town or from Marseille, or even La Rochelle (Genêt 1980). Nevers wares may have been shipped to New France together with northern Mediterranean and southern French coarse earthenwares to New France, later finding their way to Belleisle through trade.

It was not until the eighteenth century that refined earthenware factories were to develop fully. In France, during the seventeenth century and the beginning of the eighteenth century, faience was a high quality ware produced by a small number of potteries. Around 1710 or 1720, the rise of a French merchant class, the development of maritime commerce, and the ever increasing colonial population promoted the establishment of more refined earthenware potteries (Chapelot 1978:105-106). The necessary capital for creating or expanding factories at La Rochelle, Bordeaux and Nantes originated with merchants and ship owners (Chapelot 1978:106).

During the late seventeenth century, the growth of delftware production was stimulated by the increasing local demand and colonial market. In 1695, however, taxes were imposed on earthenwares and other goods to support the cost of war with France (Garner 1937:58). Seven "Earthenware-houses" existed in London, two in Bristol, and one at Norwich "which is since broke" (Garner 1937:59). These figures indicate that most English refined earthenware at the end of the seventeenth century came from London, although Bristol produced small quantities.

The French warship Machault sunk in Restigouche in July 1760 contained many French coarse earthenwares and Rouen Brown Faience. However, this warship also contained a variety of English refined earthenwares probably from Lambeth and Liverpool (Long 1973b:4; Wade 1980:5). This delftware was meant to supply the colonies, especially Montréal, where the Machault was heading when she took refuge in Restigouche (Wade 1980:5-6). It is quite surprising to read about Lambeth and Liverpool delftware in a French warship, during the final months of the Seven Years' War. Lambeth vessels may have found their way to France via Holland, or they might have formed part of an English vessel's cargo, captured by the French, and then shipped to New France (Wade 1980:6).

#### STONEWARE

Stoneware is composed of plastic clay and fusible sand and fired at a high temperature, between 1150 and 1400 degrees centigrade (Décarie-Audet 1979:21-22; Oswald, Hildyard and Hughes 1982:15; Savage and Newman 1974:275). The sand is needed to reduce the clay's plasticity for easier shaping, and minimizes the risk of cracking and splitting during firing (Gusset 1980a:142). Stoneware is impervious to liquids whether glazed or unglazed.

The two basic kinds of stoneware are: "coarse" and "refined". The Refined stonewares add 'Kaolin', feldspar or flint, to the plastic clay and fusible sand (Décarie-Audet 1979:21). The Rhenish-Grey and

English-Brown stonewares in the Belleisle collection are coarse, while the English White Salt-Glazed are refined stonewares.

Rhenish-Grey Stonewares (hardness 7.0 to 8.0), (Plate 11)

Rhenish stonewares are well documented as early as the sixteenth century, and certain varieties were produced before the 1400s (Hannover 1925,1:196-199; Havard 1909:14-15). These wares were exported to Elizabethan England, first by Dutch traders and later during the late sixteenth century, by Belgian, English and German merchants to England (Henstock 1975:219). Sixteenth century attempts to establish English trade monopolies appear to have had little success (Henstock 1975:220-222). Exports to European countries, the British Isles, and the New World continued until about 1800, although various national industries took a share of the Rhenish products' market. In the American Colonies, for example, fragments are dated to the period 1600 to 1625 (Noel Hume 1982:170, fig. 9-1), while other specimens have been found in later seventeenth and eighteenth centuries contexts (Noel Hume 1967:350; 1970a:276-285). England imported many Westerwald mugs and jugs between 1650 and 1775 (Noel Hume 1967:349). France primarily imported wine bottles (Gusset 1980a:162), which are represented on French Colonial sites at the Fortress of Louisbourg in Nova Scotia, and Fort Beauséjour in New Brunswick (Gusset 1980a:195-197).

The present study, will concentrate on the time period 1660 to circa

1775. Stonewares from the Westerwald district including the Horh, Raeren/Grenzhausen potting centres will be discussed. These seem to have been the main sources of Rhenish-grey stonewares at late seventeenth and eighteenth centuries North American sites (Brain 1979:77-81; Gusset 1980a:149; Noel Hume 1967:349; 1970a:280). The shapes most commonly encountered on colonial sites include: "mugs, jugs, tankards and bottles of various sizes...They are thickly potted, bulky and buff, beige or bluish-grey in colour (Gusset 1980a:142).

The Westerwald tradition originates in the late sixteenth century. Beginning in 1581, and for more than half a century the Rhineland was a battlefield (Brain 1979:77; Noel Hume 1967:349). Therefore, master potters from Sieburg and Raeren moved southward near Koblenz to establish new potting villages in Grenzhausen and Horh (Brain 1979:77; Noel Hume 1967:349; Solon 1892:94-122).

Because the master craftsmen from Raeren were in charge of the Grenzhausen factories, and because they had brought their Raeren techniques and, more important, their decorative moulds with them, it is difficult and sometimes impossible to distinguish between wares made in Raeren and those made after the move to Grenzhausen (Noel Hume 1967:349).

During the seventeenth and eighteenth centuries two styles developed from the Raeren/Grenzhausen tradition: "Grenzhausen I", the older style, is characterized by a gradual simplification of the Raeren decorations, moulded, stamped and some incised decorations, and the use of either blue or purple pigments to highlight decorative motifs;

"Grenzhausen II" is a continuation of design simplification characterized by a greater usage of incised motifs, and of both cobalt blue and manganese purple pigments (Gusset 1980a:151-153). As early as 1691, many Grenzhausen II objects produced solely for export display appliqué likenesses of English monarchs (Gusset 1980a:153). Such medallions were not identified on the Belleisle specimens, but other decorations associated with the medallions on objects excavated from other sites, resemble decorative motifs discussed on the Belleisle Rhenish-Grey stonewares.

The Belleisle Specimens. There are eleven Rhenish-Grey stoneware vessels in the collection, six from House 1 and five from House 2. These include five bulbous-bodied mugs or jugs from House 1, three cylindrical-bodied tankards and a chamber pot or storage jar from House 2, and two unidentified vessels, one from each house.

All were made from the same clay type, and have a dense fabric with a few visible quartz sand grains. Some sherds display air pockets and a few black inclusions. Finally, the body occurs in two colours: beige (Munsell n.d.:5Y 7/3) and grey (Munsell n.d.:between 5Y 7/1 and 6/1). The fabric of certain vessels is layered beige and grey. Each vessel's interior has potting rings. All vessels are salt-glazed, where a handful of salt is thrown into the kiln at the height of firing, there results a pitted surface of "orange peel" effect on wares, except in areas where cobalt and manganese pigments are present. The salt reacts with the clay, and pitting results

(Burton 1904:13; Gusset 1980a:169; Noel Hume 1967:350).

Three of the bulbous-bodied vessels have appliqué moulded medallions (Appendix 1, Nos. 54-56). All medallions are round but some have "rosette-like" centres (Figure 19, left) while others have "scroll-like" centres (Figure 19, right). Both are beige in colour, but the latter has been covered with a grey slip. The same is also true of this vessel's interior. This slipped-decoration might have been an attempt by Rhenish potters to market beige-bodied wares as grey stonewares.

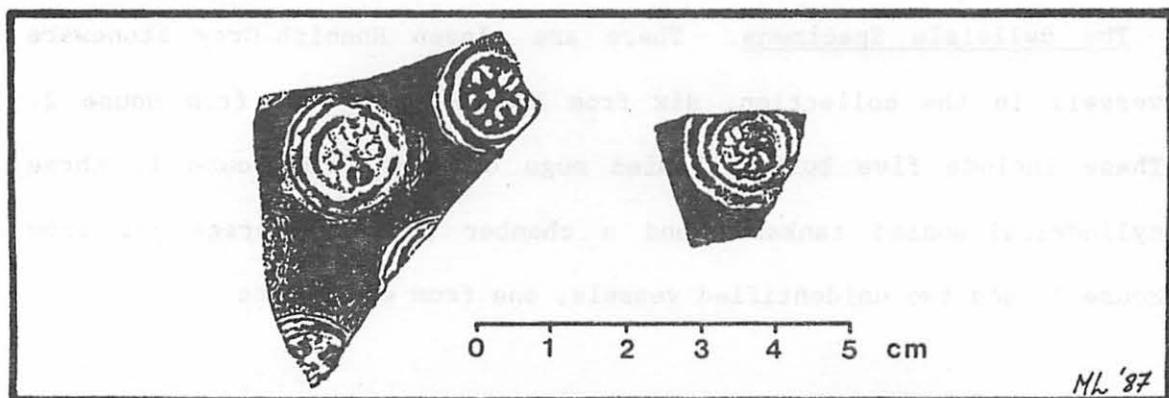


Figure 19. Medallions on Early Rhenish Stonewares.

The most complete mug or jug with "rosette-like" medallions has a wedge-shaped drinking-lip (Plate 11a; Appendix 1, No. 54), that is standard on Rhenish stonewares (G. Gusset, April 25, 1984:personal communication). Below the rim is a single cordon. A series of horizontal incised lines enclosed by an upper and lower blue-painted band, is on the neck of this mug or jug (Plate 11a.). Where the medallions are absent, the body is covered with cobalt-oxide. This blue ground is present on all three Belleisle specimens and is

irregular. A circular depression, where cobalt oxide has pooled spans the outer perimeter of each appliqué motif, indicating that they were applied with a round stamp.

Complete examples (Noel Hume 1967:351, Fig. 3 right, Fig. 4 and Fig. 5, right) have tapered bases decorated like the neck just described, but with a single blue-painted band. The other two vessels with round medallions almost certainly had similar rims and bases. Vertical handles, not recovered at Belleisle, are attached below the rim and to the upper half of the body (Noel Hume 1967:351, Figs. 3-5).

The Belleisle examples are difficult to date. However, vessels whose shape is similar are dated by Noel Hume (1967:351, figs. 3-5; 1970a:279, Fig. 91) to the period circa 1700 to circa 1720. In Pemaquid (Maine) a Rhenish jug was produced in the late seventeenth or early eighteenth century (Camp 1975:32-33, Fig. 24, No. 10). A similar type of vessel, perhaps predates 1720 in the Tunica Treasure (Brain 1979:77-79). According to Gusset's (1980a:184) classification, the Belleisle specimens would fall into the "Grenzhausen I" variety, dated to the period 1685 to the early eighteenth century, following Noel Hume (1967:351, Fig. 3, right). Furthermore, Gusset (1980a:184, Fig. 16a) discusses a pear-shaped vessel with "applied medallions bearing rosettes, on an irregular blue ground", that is inspired by the "Grenzhausen I" tradition, and is a unique piece in the Fortress of Louisbourg collection. In Maine, vessels with

rosette-like medallions are dated to seventeenth-century occupations, but, the motifs are clearer renditions of the Belleisle rosettes, and therefore, slightly earlier (Baker 1985:30; 32, fig. 8; Faulkner and Faulkner n.d.:40, fig. 23). All the evidence suggest an early date for the Belleisle mugs or jugs, sometime between circa 1685 to 1720.

Another jug or mug from House 1 is represented by a single body sherd. It has a beige body with impressed floral decorations in cobalt blue and manganese purple (Appendix 1, No. 57). Exposure to fire has bubbled the glaze. This vessel is not complete enough to permit chronological identification.

Another mug or jug from House 1 is represented by a single body sherd with a layered beige and grey body (Appendix 1, No. 58). Its interior surface has a grey slip and a salt-glaze. Its exterior surface is grey and covered with a transparent salt-glaze, and features an applied floral motif resembling the petals and pistil of flower (Plate 11f.). The appliqué is highlighted in cobalt blue, and the periphery is partially highlighted in manganese purple, except where incised lines, probably representing leaves and the flower's stem, are incised. This decoration type corresponds well to Gusset's (1980a:170) late group Grenzhäuser II variety, dated between 1725 and 1775. Noel Hume (1970a:280-281) describes identical designs, suggesting dates from 1675 to 1750. However, the vessel illustrating this type of design is dated circa 1702 to 1714 (Noel Hume 1970a:279, Fig. 91). The Belleisle example may have been made as

early as circa 1700 to 1755, in accord with Gusset's (1980a:168) opening date of circa 1700 for "Grenzhausen II".

As mentioned above, three straight-sided-body mugs or tankards, were found in House 2. One is represented by a rim and upper body sherd, and a lower body fragment (Appendix 2, No. 33), (Plate 11d-e). It has a wedge-shaped rim and a single cordon, below the rim. Underneath the cordon is a blue-painted line and a series of appliqué diamonds, alternating in colour from blue to green (Munsell 1969:between 2.G 4/4 and 3/4 = green; blue = Munsell 1969:between 7.5BP 2.5/4 to 2.5/6). The body is grey and is covered with a salt-glaze. the green pigment indicates that the vessel was subjected to a second low temperature firing, as only cobalt blue and manganese purple can withstand the first high-temperature firing (Gusset 1980a:149). Impressed diamond designs are present on a mug from Pemaquid, but the vessel is not dated (Camp 1975:32-33, fig. 24, No. 6). Applied diamonds attributed to the "Grenzhausen I" early group are illustrated by Gusset (1980a:199, fig. 28c). A "Grenzhausen I" vessel, that is stylistically more advanced than the beige-bodied medallion decorated jugs or mugs, this specimen is dated to the period circa 1700 to 1725.

The second tankard from House 2 has a grey body and is salt-glazed (Appendix 2, No. 34), (Plate 11g.). Its moulded horizontal ribs are poorly produced. The remainder of the design is incised and highlighted in blue and purple. The cobalt oxide has run on some areas that were meant to be grey, giving them a bluish tinge. A

straight-sided mug in the Tunica Treasure has a very similar design: a bird and leaf-like motif highlighted in blue and purple (Brain 1979:80, C35). The Tunica Treasure is dated to the period 1731 to 1764 (Brain 1979:1). The decorative motifs of the Belleisle specimen and the Tunica Treasure example correspond well to Gusset's (1980:152-155) "late Group inspired by Grenzhausen II" and dated 1725 to 1775. Therefore, the Belleisle mug could have been obtained as early as 1725 and no later than 1755.

The last tankard in the House 2 assemblage and the chamberpot or storage jar from the same structure were produced in a similar manner (Appendix 2, Nos. 35 and 36). Both exhibit grey, salt-glazed bodies with simple decorations of blue lines. The chamber pot or storage jar had an impressed flower highlighted in blue (Plate 11h,i). Noel Hume (1967:352-353) describes the potting of this ware type:

Westerwald chamber pots, like their tavern-mug cousins, were made in production-line quantities by streamlined methods. The evidence of this is often seen on the bodies of both types, where the use of jigs and templates to create the basic proportions and cordoning resulted in a "chattering" or uneven jiggling of the tools against the walls. This produced a multiplicity of small slanting ridges which are generally most visible in undecorated areas immediately adjacent to the handles...

While the "uneven jiggle" is not evident on the Belleisle specimens, they otherwise display the type of decoration encountered on such objets. These vessels were in vogue through most of the eighteenth century (Gusset 1980a:188; Noel Hume 1967:353; 1970a:280-281, fig.

92), suggesting that the Belleisle specimens date to the period circa 1700 to 1755. The tankard is represented by a basal sherd with a slightly constricted base, and a handle fragment, oval in cross-section unlike chamber pot handles which were wide and reeded or ribbed (Noel Hume 1967:353). The precise function of the other unidentified vessel cannot be determined. Both storage jars and chamber pots had similar "barrel-shaped" bodies and flat rims. While both body and rim are represented by the House 2 specimen, the type of handle(s) and the vessel's height cannot be determined. Storage jars have horizontal handles, while chamber pots display vertical ribbed-handles (Noel Hume 1967:352, fig. 7; 353, fig. 8; 1970:280, fig. 92; 284 fig. 93 left). Storage jars are taller than chamber pots.

The last two Rhenish vessels in the collection remain unidentified. A single body sherd from House 2 with a beige body and a transparent salt-glaze represents one unidentified vessel (Appendix 2, No. 37), while the unidentified vessel from House 1 (Appendix 1, No. 59) is represented by a lower body sherd with a beige fabric, and a rolled lower terminal as in Figure 10. Noel Hume (1967:353) explains how rolled terminals were shaped:

The...handle was usually anchored at its lower end by the lateral stroke of a pencil like tool; the remaining tail was then flattened betwixt finger and thumb and rolled back on itself to conceal the tool mark.

On the Belleisle specimen, "the tool mark" resembles an incision.

This type of handle finish, was found on mugs and chamber pots until 1690 and only on chamber pots after that date (Noel Hume 1967:353). The evidence is insufficient to identify the vessel type from which the handle terminal came.

Discussion. It is difficult to say how the Rhenish stonewares arrived at Belleisle. The Acadians could have brought the earliest pieces of Rhenish stoneware to Belleisle from France, if indeed they came directly from France. These wares could have been obtained from Louisbourg, where they would have been acquired from France or the New England colonies. Alternatively, Rhenish stonewares could have reached Acadia via England, and New England, thence to Acadia.

English Brown Stoneware (hardness: 6.0+ 7.0-), (Plate 12).

There are six English Brown Stoneware vessels in the collection, three from each house. Before the 1670s, Rhenish stonewares were widely imported by the British Isles (Noel Hume 1970a:111). However, wares that either resembled stonewares or, were 'archaic' types of English stoneware were made in England in the early seventeenth century.

The first patent for the manufacture of 'stone pott[es] and stone jugg[es] and stone bottles was granted in September 1614 to Thomas Browne, a 'Tyler' and Bricklayer, Tobie Stewart a Pewterer and Nicholas Brughley...There seems no reason to suppose that Browne did not make something approaching stoneware, as his patent continued to operate until after 1621 (Edwards 1974:15-16).

This pottery type was probably a high-fired earthenware (Edwards 1974:16), which is porous and must be glazed, unlike true stonewares. Other patents were granted, but none was successful. However, four kilns are known to have produced stonewares before 1670: one in Woolwich a second in Southampton, and a third in Chelsea (Oswald, Hildyard and Hughes 1982:22). The fourth, constructed by German immigrants at Woolwich Ferry, was at its height of activity during the second half of the seventeenth century probably around 1660 or 1670 (Edwards 1978:37; Pryor and Blockley 1978:84; Oswald, Hildyard and Hughes 1982:22-23). However, this pottery was short-lived probably because of unforeseen difficulties:

Any experimental manufacture would be expensive--any kiln firing not resulting in saleable goods was a loss, which one would not expect a local potter to be able to sustain. The financial backing of a wealthy businessman would be more likely. (Edwards 1978:38).

The products from this kiln were, sold locally in nearby London and included: Bellarmine, bottles and mugs (Pryor and Blockley 1978:84). The mugs were produced in three varieties, one, the "Type B" almost duplicates contemporaneous Rhenish shapes (Pryor and Blockley 1978:54 and 56; 55, fig. II, No. 40).

In 1671 or 1672, John Dwight of Fulham perfected a type of stoneware. He received a fourteen year patent on April 23, 1672 and the English stoneware industry began to flourish (Edwards 1974:15, 56; Oswald, Hildyard and Hughes 1982:24). By 1673 Dwight boasted that he "could

make as good and as much Cologne ware [stoneware] as would supply England" (Oswald, Hildyard and Hughes 1982:24). He attempted to protect his patent through legal proceedings (Hughes 1961:32-33; Noel Hume 1970a:114; Oswald, Hildyard and Hughes 1982:26-27). Such prominent figures as James Morley of Nottingham, the Elers brothers of London (later in Burslem), Aaron, Thomas and Richard Wedgwood of Burslem, among others, were accused of patent infringement, during the 1680s and 1690s.

In his defence, David Elers claimed to have learned to make stoneware in Cologne. In 1690 he and his brother had begun to produce brown mugs and red teapots (Hughes 1961:33; Oswald, Hildyard and Hughes 1982:72; Rackham 1951:15). A red, unglazed, stoneware mug attributed to the Elers suggests a Rhenish influence in their work (Rackham 1951:n.p., Plate 30A).

The wares made by the Wedgwoods may have been only earthenwares copies of stonewares (Oswald, Hildyard and Hughes 1982:27). Two other potters were producing crude stonewares in the English Midlands after 1685 (Oswald, Hildyard and Hughes 1982:190). One made a crude kind of white stoneware, while the other made a coarse salt-glazed stoneware, with a grey fabric, like those of Fulham and Lambeth (Rackham 1951:19). Therefore, a number of English potters produced brown stonewares of varying quality during last two decades of the seventeenth century.

In addition to the obvious marketing advantages of location in a major port, London delftware and stoneware potters had easy access to raw materials such as, clays used to prepare tin-glazed refined earthenwares and stonewares (Edwards 1974:19). For example, Dwight made his stoneware from Dorsetshire white or pipe clay, and sand from the Isle of Wight (Weatherill and Edwards 1972:165). Between 1675 and 1695, a merchant dealing in clay, Edmund Warner, was sending between 30 and 35 tons of clay every month to London from Suffolk (Edwards 1974:19).

The Belleisle Stonewares. There are five English Brown Stoneware mugs or tankards from Belleisle, three from House 1 and two from House 2. The most complete Brown Stoneware vessel is a pint tankard from House 1 (Appendix 1, No. 60), (Plate 12 a,b). Its light-grey paste contains sand and black specks (Munsell n.d.:5YR 7/1). The interior surface exhibits potting rings and is covered with a light-brown glaze (Munsell n.d.:between 10YR 6/3 and 5/3), showing brown specks and black spots. The former result from body inclusions visible through the glaze. Similar black spots are on the exterior surface. The upper half of the exterior varies from light to dark brown (Munsell n.d.:10YR 6/6 to 3/4). The lower half covered with a salt glaze is grey. A single groove below the rim and two cordons on the lower side, to the base, are on the exterior side of the tankards. The base ranges in thickness from 1.5 to 3.0 mm. Thin bases also occur on two brown stoneware tankards from a colonial well in Williamsburg, Virginia (A. Noel Hume 1973:7, figure 5, Nos. 5 and 6). Thus, thin

bases on mugs of this type seem common.

An impressed excise mark is visible to the left of the edge of the handle's upper terminal. This is the most common position for excise marks on tankards (Oswald, Hildyard and Hughes 1982:278). 'An Act for the Ascertainning of the Measures for Retailing Ale and Beer' received Royal Assent on April 11, 1700 (Bimson 1970:165).

...its object was to enforce the use of the Standard Ale Quart in retailing ale and beer. This had become necessary because inkeepers were finding it profitable to deceive the public and defraud the Excise by selling ale in 'uncertain Measures much less than the said Standard'."

The mugs had to be sized and marked while the clay was wet, but they would shrink when drying and upon firing. As Bimson (1970:166) points out:

It does not appear that the act was very successful in standardizing the capacity of beer mugs; six mid 18th century brown-stone mugs marked 'WR and crown' were found to contain the equivalent of 1,000, 1,800, 1,120, 1,180, and 1,220 ml. to the quart, whereas the Standard Ale Quart held 1,155 ml.

Two kinds of mark were used. Both included a crown, but there are a few exceptions; one mark bore the letters 'WR' for William III, and was used from 1700 to 1876. However, a second mark, used illegally from circa 1702 to 1714, bore 'AR' for Queen Anne (Bimson 1970:166; Oswald, Hildyard and Hughes 1982:278). The mark on the Belleisle tankard is not complete enough for identification.

An exact replica of the Belleisle tankard is dated to the early eighteenth century and is said to be a Fulham (London) product (Oswald, Hildyard and Hughes 1982:41, plate 10). Similar mugs, however, have been dated 1709 to 1758 (Oswald, Hildyard and Hughes 1982:276; 277 fig. II, Nos. 5-8). Also, Oswald (1951:183) dates similar mugs to the period 1694 to 1750. Also, two similar tankards were retrieved from a well abandoned about 1725, in Williamsburg, Virginia (A. Noel Hume 1973:1, 6-7). Such tankards were produced in London, Bristol and elsewhere in England through most of the eighteenth century (I. Noel Hume 1970a:112, fig. 32). The Belleisle tankard with its excise mark could have been made around 1700 and before 1755.

A second tankard from House 2 (Appendix 2, No.38) has a light grey paste similar in composition and colour to the House 1 specimen. It also exhibits a dark-brown salt-glazed exterior finish. An unidentified incised motif is highlighted in manganese purple and cobalt blue. the interior is light grey, since it is covered only with a transparent salt glaze (Munsell n.d.:5YR 7/1). John Dwight attempted to copy the blue and purple finish of Westerwald wares but difficulties firing the volatile cobalt and manganese evidently led to their abandonment after only a few experiments (Oswald, Hildyard and Hughes 1982:15-16, 30). The Belleisle vessel could be one of Dwight's experimental pieces or an object potted in Nottingham, where similar experiments were undertaken (Oswald, Hildyard and Hughes 1982:15-16). Its similarity to the House 1 specimen suggest that it is a late seventeenth or early eighteenth century product.

Three Brown Stoneware tankards, two from House 1 and the third from House 2 have similar decorations. (Appendix 1, Nos. 61 and 62; Appendix 2, No. 39), (Plate 12c). All three exhibit horizontal ribbing on their exterior surface. This decoration type occurs on both straight and bulbous-bodied mugs, but the shape of the Belleisle vessels cannot be determined. However, horizontal ribbing also occurs on Brown Stoneware jugs or pitchers (Noel Hume 1962:211, fig. 29, Nos. 1 and 2), but the size and curvature of each Belleisle sherd, as well as the size of the ribs, permit me to state with certitude that they represent mugs or tankards.

Two sherds, one from each house, have ribs 2.0 to 3.0 mm wide (Appendix 1, No. 61; Appendix 2, No. 39). Their interior and exterior surfaces have a lead glaze with a light brown "oily sheen" (Munsell n.d.:10YR 5/6). Both are thin and bear potting rings on their interiors. Furthermore, both specimens have a sandy, medium grey body (Munsell n.d.:10YR 5/1). Their fabric is "sandwiched": the core is lighter in colour than the outer areas. This results from firing in an oxidizing atmosphere, or from overfiring (G. Gusset, April 25, 1984: personal communication).

Both vessels are obviously from the same factory, but were not necessarily produced at the same time, or even obtained simultaneously by the occupants of Houses 1 and 2. Morley's factory in Nottingham, made a smooth brown stoneware with a glossy surface over a light-brown body (Noel Hume 1970a:114). However,

As a rule all of these shiny-surfaced brown stoneware are attributed to Nottingham, but it is now known that similar products were made at Burslem and probably at other locations in Staffordshire and Derbyshire as well as Swinton in Yorkshire...It is generally possible to tell the difference when the examples are in fragments, for the Nottingham pieces all have a thin white line separating the glaze from the body (Noel Hume 1970a:114).

The thin white lines must be due to the nature of the clay, but, do not occur on all Nottingham pieces (Oswald, Hildyard and Hughes 1982:106). Both Belleisle specimens have thin white lines between the glaze and body on both surfaces. The light core and the glaze with an "oily sheen" on the Belleisle specimens are features common to eighteenth century Nottingham products (Oswald, Hildyard and Hughes 1982:106). About 1700 the Nottingham stoneware industry was fully developed (Honey 1933:17, Oswald, Hildyard and Hughes 1982:103-105). Therefore they are attributed to the period 1700 to 1755, and are Nottingham products.

A third and last mug, from House 1, has exterior ribbing and a pinkish-grey body containing sand grains (Munsell n.d.:7.5YR 7/2), (Appendix 1, No. 62). Both its interior and exterior are glazed with the same lustrous metallic glaze, containing iron, that is light to dark-brown in colour (Munsell n.d.:5YR 6/4 to 3/4). The ribs are irregular and thinner than those on the ribbed mugs discussed above. A lustrous metallic glaze is standard on Nottingham pieces after about 1730 (Oswald, Hildyard and Hughes 1982:108), indicating that the

mug or jug, represents this ware type (Appendix 1, No. 63), (Munsell n.d.:10YR 7/1 body, 10YR 8/1 slip). It was wheel-thrown. A white slip covers its interior and lower exterior surface.

The slip on "archaic" white salt-glazed stoneware has a tendency to crack and peel off, sometimes even during firing so the glaze forms a deposit directly on the body (Gusset 1980b:17). The exterior finish of the Belleisle specimen from House 1 shows this process (Plate 13a, b). Also, it displays a series of parallel zigzagging lines, impressed into the vessel before glazing and firing (Plate 13a). The thick, smooth and transparent lead glaze on the exterior contrasts with the interior surface which exhibits the "orange peel" effect, discussed in my analysis of English Brown Stoneware. However, the "pitted" effect on white salt-glazed wares is not nearly as pronounced as that of Brown Stoneware.

This early type of white salt-glazed stoneware was the "cheapest" of the three early varieties of the same ware:

The dipped ware has long been supposed to have been no more than an evolutionary step on the way to true white salt glaze. Although it probably was the first to be marketed, it did not die out when solid white ware was perfected; on the contrary, this cheaper variant continued in use until the 1700's (Noel Hume 1970b:249).

The second white salt-glazed vessel from Belleisle is probably a mug (Appendix 2, No. 41). This House 2 specimen is represented by a single sherd with a beige paste with black specks (Munsell n.d.:10YR

7/2). The white glaze, on both interior and exterior surfaces, is thin and uniform (Munsell n.d.:2.5Y 8/2). The vessel was moulded or poured. It corresponds well to Gusset's (1980b:17) "minor bodies number 2", a type of early white salt-glaze that could be an early Staffordshire product.

Because of the popularity of White Salt-Glazed, from about 1720 to 1770, it is impossible to state with exactitude when the white salt-glazed vessels from Belleisle were produced. As early as 1724, it was exported to Boston: "...William Randall 'in the middle of Cross-Street', Boston, was advertizing 'white stone Tea-Cups and Saucers'" (Noel Hume 1970b:248). After 1730, France was importing white salt glaze (Lane 1970:17). Importations into the European continent seem to have continued, especially after 1750 (Lynch 1969:3).

Its [white salt-glazed] occurrence in the Louisbourg excavations, therefore, does not necessarily indicate English occupation, since the ware could have been brought from France after importation from England, or obtained by the French at Louisbourg through illegal trade with New England (Lynch 1969:3).

Discussion. The white salt-glazed stoneware at Belleisle could have been obtained as early as the 1720s and no later than 1755. They may have been purchased at Louisbourg, or from New England merchants. The fact that the only white stonewares present in the Belleisle collection are the "cheaper" ones, might indicate that the more costly stonewares were not available in Belleisle, or were simply too expensive. Unfortunately, prices for different wares are not

available. True white stonewares were unearthed at Louisbourg and in New England, where they occur in large quantities (Gusset 1980b; Lynch 1969; Noel Hume 1970b; 1970c).

### American Stoneware

In the American Colonies, potters made varieties of stonewares as early as 1725 (Watkins 1968:85; Noel Hume 1970a:100-101). Potters found natural stoneware clays in New York, New Jersey, Pennsylvania, the Virginias and Carolinas, and New England potters imported their stoneware clays by boat from these sources (Greer 1981:27; Watkins 1950:35-38).

Evident in both surviving vessels and archaeological remains of early North American potteries are strong influences from the British, German, and French traditions. (Greer 1981:13).

Mug or tankard (Plate 14). The Belleisle specimen from House 2 combines both Rhenish and English features (Appendix 2, No. 40). Like Rhenish mugs, the rim is wedge-shaped in cross-section, and single cordons are present below the rim and along the base. While the vessel is incomplete, it appears to be short and stout, "as in early eighteenth century Rhenish tankards" (G. Gusset, April 25, 1984: personal communication). The paste closey resembles Nottingham (English) fabrics, being "sandwiched" and medium grey (Munsell 1969:10YR 5/1). However this paste is sandy like nineteenth-century American stonewares. Both the interior and exterior surfaces of

sherds have "oily sheen" glazes like Nottigham wares, the interior being transparent and the exterior, clear with brown blotches. An appliqué motif consisting of a series of raised beads is on the exterior, below the upper cordon.

The evidence suggests that the Belleisle mug or tankard is an American stoneware (G. Gusset, April 25, 1984:personal communication), made after 1725 and before 1755.

#### LATE EIGHTEENTH CENTURY AND LATER CERAMICS, (Plate 15).

Four vessels in the collection, two from each house, are not attributable to Acadian occupations at Belleisle. These objects were retrieved either on the surface, in the sod or upper levels of excavated units.

One sherd from an unidentified creamware vessel was unearthed in House 2 (Appendix 2, No. 42). As its name implies, creamware is a cream-coloured refined earthenware with a transparent lead glaze (Savage and Newman 1974:88). It is an amelioration of earlier pre-1750 refined earthenwares, first produced by British potters and improved upon by Josiah Wedgwood around 1760 (Hughes 1961:107; Noel Hume 1973:220; Savage and Newman 1974:88). Developed about circa 1720 to 1740, creamware began to compete with White Salt-Glazed Stoneware (Noel Hume 1970c:408). However, while this type of stoneware was not produced after about 1820 (Noel Hume 1970c:413), varieties of

creamware are still available today. The sherd has a light-yellow body, and was probably made between 1770 and 1830. Creamwares were almost totally replaced by the finer pearlware by about 1810 (Noel Hume 1973:236).

One pearlware cup was recovered in House 1 (Appendix 1, No. 64; Plate 15a). Pearlware was an improvement on creamware introduced by Josiah Wedgwood in 1779 (Savage and Newman 1974:216). It has a bluish appearance, produced by including flint and white clay in the body, and adding cobalt oxide to the glaze (Hughes 1961:126; Noel Hume 1973:232; Savage and Newman 1974:216-217). Pearlware enjoyed great popularity from about 1780 to circa 1835, when much whiter wares began to replace it. However, the Belleisle specimen is a 1780 to circa 1800 product, as its body is the yellowish-white characteristic of early pearlwares (Sussman 1977:105). The Belleisle cup has transfer-printed motifs on both its interior and exterior surfaces:

The process of decorating ceramic ware by inking an engraved copper plate...with an ink prepared from one of the metallic oxides, and then transferring the design to paper which, while the pigment was still wet, was pressed on the ware, leaving the desired imprint. (Savage and Newman 1974:296).

The interior is decorated in blue with flowers on the centre and with a transfer-printed beaded border on its upper interior side, just below the rim. Its exterior side displays the same border and below, there is a pastoral scene (Plate 15a).

The second vessel from House 1 has a body like the creamware described above, but it has a blue glaze on the interior, and a green glaze on the exterior (Appendix 1, No. 65). It is probably a late eighteenth or nineteenth century product.

The last vessel in the collection is an ironstone cup (Appendix 2, No. 43) (Plate 15b.). Intermediate between an earthenware and porcelain, ironstone is a vitrified earthenware introduced during the early nineteenth century (Collard 1984:125; Savage and Newman 1974:158, 188). Ironstones made before 1850 were relatively expensive and meant to compete with porcelains (Collard 1984:125). The Belleisle specimen is attributed to the second period of production and is tentatively dated circa 1840 to about 1870. Around 1850, the introduction of an all-white ironstone quickly replaced earlier decorations and finish, and remained in vogue until the beginning of the twentieth century (Collard 1984:130-135).

## CHAPTER FOUR

## GLASS ANALYSIS

His way of looking at things produces a kind of description that can be called an "analytic" description. That is another name of the classic platform from which one discussed things in terms of their underlying form (Pirsig 1975:63).

## INTRODUCTION

The aims of the Belleisle glass analysis duplicates the goals outlined in the preceding ceramics discussions. Unlike pottery fragments, however, glass finds are more difficult to assign to particular countries and regions of origins. Difficulties in identification will become clear as the reader progresses through this chapter, although many vessels have been attributed to their country of origin, sometimes to particular regions and even specific factories. A chronology was also produced using artifact histories, documentary evidence, and discussions of similar finds from other North American sites.

The Belleisle analysis indicates that the glass finds representing the Acadian occupation there, were solely from Western Europe. As in the ceramics analysis, however, the development of the glass industries in present-day Canada and United States will be discussed, in order to dismiss the possible occurrence of North American products in a pre-1755 archaeological context in the Annapolis Valley. This historical sketch will follow the outlines on terminology and analytical methods,

below. Also, there follows a detailed discussion of glass compositions after the historical sketch.

### Glass Terminology

The descriptive terms utilized in this study are currently used by most historical archaeologists in North America, as well as by authors of studies of various glass industries. Some terms have been taken from Haynes' (1959:193-300) classificatory scheme of tableglass objects, and from other nomenclatures developed by material culture analysts, employed by Parks Canada (Jones, Sullivan, et al. 1985) and the Ministère des Affaires culturelles, in the province of Québec (Lapointe 1982). The terminology employed herein, however, is not exhaustive. Only the terms pertinent to the analysis have been included. Finally, terms are not represented in the illustrations are defined in the text.

Figure 20 illustrates terms utilized in the description of stemmed glasses. Bottle terminology is illustrated in Figure 21. Other figures have been included in the analytical section to clarify specific terms utilized in describing certain glass vessels.

### Analytical Methods

While the present study aims to be a functional analysis, a physical method of isolating lead glass and crystal was also utilized. A

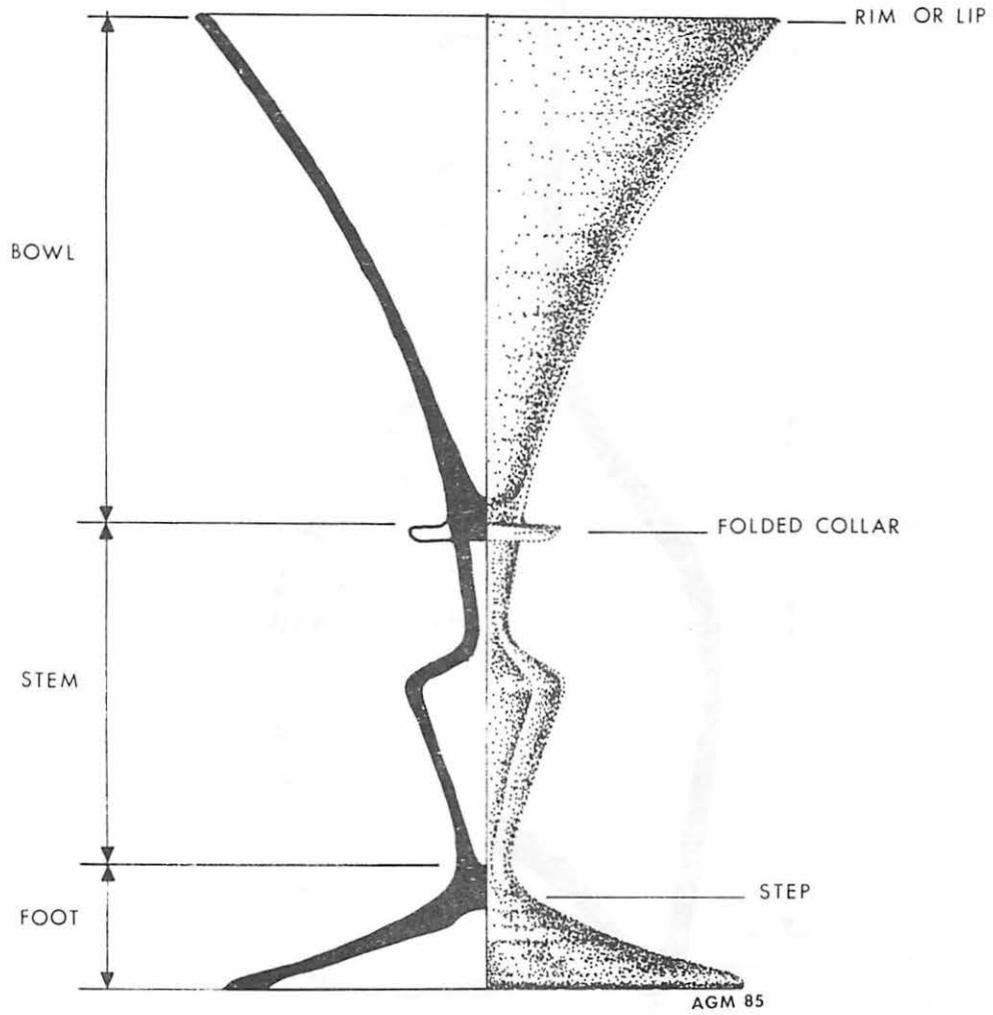


FIGURE 20. Stemmed-Glass Terminology

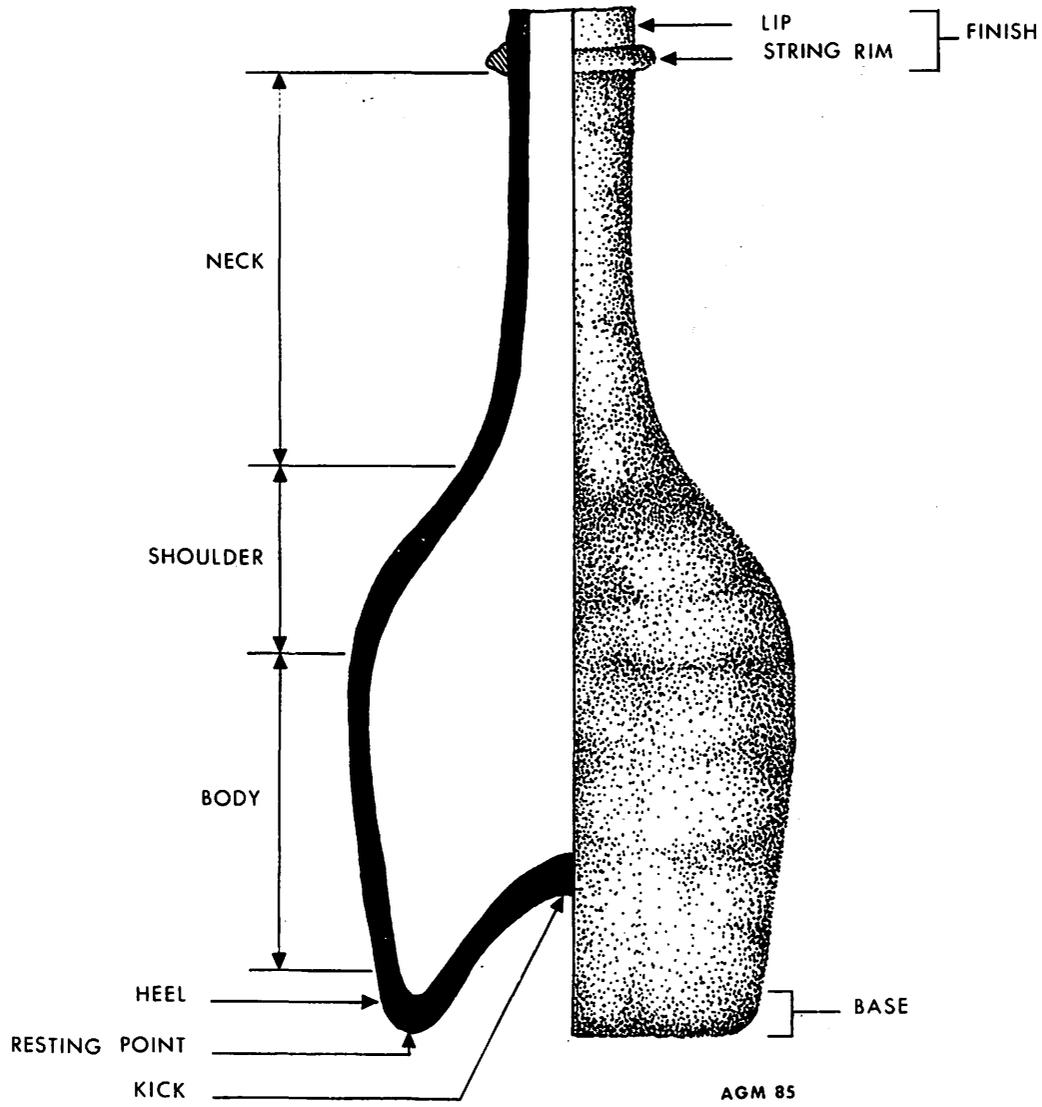


FIGURE 21. Bottle Terminology.

short-wave ultraviolet light was used to determine the presence of English and other lead crystals in the collection. The method is simple. In a dark room, the light is shone on sherds suspected to be of lead crystal. Lead glass exposed to this light gives off an "ice-blue" glow (Smith 1981:207). According to Smith (1981:207), the "ice-blue" of full lead glass is typical potash glass containing approximately 30 to 35 percent lead oxide. (These terms are discussed in the next section).

Mohs' sclerometric scale was used during the glass analysis. All varieties proved to fall at or near the value 6.0 on Mohs's scale. Therefore, this method is of no consequence to the classification of the Belleisle glass objects.

The Munsell Book of Color (1969) was used to provide as precise a colour description as possible. However, certain hues could not be associated with any particular classification. In such cases, a number preceded by "in the region of" and followed by a value and chroma (eg. 5 GY), were included in the text. Colourless glass could not be classified, and is simply referred to as "clear".

#### The Glass Industry in Eastern North America

The glass industry in Canada was a nineteenth century development, while that of the United States had earlier beginnings but was also late in coming of age. The earliest glass factory in Canada was the

Mallorytown Glass Work in southeastern Ontario. Oral history suggests that it was operating around 1825, but its existence is documented for only two years, 1839 and 1840 (Stevens 1961:3,6,12; 1979:4-6).

The existence of glassworks in New France has been suggested by Spence and Spence (1966:13-15). Their argument is based on the purported necessity of glass objects in eighteenth-century households, and upon contemporaneous requests for the establishment of such manufactories by French administrators. However, these authors have based their argument on suppositions and conjecture, and material evidence is lacking for furnaces and dated products (Holmes and Jones 1978:140-141). A 1744 census of crafts and trade taken in the town of Quebec, however, listed one glassmaker (Hanrahan 1978:69, note 5). Hanrahan's source (Reid 1950:453) does not include the glassmaker's name. Furthermore, Reid (1950:453) does not specify that a glasswork was in operation or whether the nameless glassmaker practiced his trade.

In 1847, the Ottawa Glass Works, in present-day Como, Quebec, was the first to produce glass in Quebec (Stevens 1961:101). This is supported by material evidence unearthed in 1971 by an archaeological team from the Royal Ontario Museum at the furnace site, where window glass was the most common product manufactured (Holmes 1972:164-165). Documentary evidence indicates that the land was purchased in 1845 and buildings, including a glass furnace and a wood-drying kiln, were erected in 1846 (Gaumond 1980:381; Holmes 1972:164). In 1851, the

glasswork was producing large quantities of window glass, but when the site was sold around 1885, not a single building remained (Gaumond 1980:381).

In the Maritimes, no glass factory was in operation until about the last quarter of the nineteenth century. At the Roma Settlement in Prince Edward Island (1732-1745), one of the projected enterprises was a glasswork (Jones 1973:56). Nothing seems to have come of this scheme, however, as material evidence does not indicate the presence of a glasswork at Roma, and glass finds from this site are of French and English origins (Alyluia 1981:8; Jones 1973:56-57).

In New Brunswick there were two glassworks. The New Brunswick Crystal Glass Company of Saint John was established in 1874, and operated until 1878 (Stevens 1979:65-67). The Humphrey Glass Works of Moncton produced glassware from 1915 to 1920 (Stevens 1979:67). It was originally located in Trenton, Nova Scotia, from 1890 to 1914, but was relocated in New Brunswick mainly because of the availability of inexpensive natural gas to fire its furnace (MacLaren 1974:22; Stevens 1979:67).

Other glassworks in Nova Scotia included The Nova Scotia Glass Company and The Lamont Glass Company, both located in Trenton (MacLaren 1974:14-19). The former operated from 1881 to 1892, and the latter from 1890 to 1899 (MacLaren 1974:14-19; Trask 1978:164-165). These factories were adjacent to one another, and in late August of

1899, a fire in the abandoned Nova Scotia Glass Company destroyed both glassworks (MacLaren 1974:17; Trask 1978:165). They were never rebuilt.

The American glass industry remained in a state of infancy from colonial times until the early years of the nineteenth century. As indicated by Douglas and Frank (1972:36):

... the early settlers set up glassworks but eventually they were abandoned ... there were adequate supplies of raw material but a great shortage of skilled workers, and little inducement for English craftsmen to settle in America because the conditions at home were much more advantageous.

In 1608, the London Company sent eight Dutch and Polish glassmakers to teach the Jamestown residents to make glass (McKearin and McKearin 1948:75; Scoville 1972:4). How much success this enterprise enjoyed is not known, and apparently glass production had ceased by 1617 (McKearin and McKearin 1948:75-76). In 1621, a second group of glassmakers was sent to the same settlement, where they produced trade beads perhaps until 1625 (McKearin and McKearin 1948:76). Regarding this industry, Scoville (1972:4) writes:

... its leader [master blower?] was cautioned to limit the quantity to the needs of trade lest the value of the beads be "vilified" through too great abundance. Furthermore, he was not to allow the natives under any circumstances to witness the process of manufacture.

However, excavations at the Jamestown glasshouse did not reveal the types of vessels or objects made at the factory (Noei Hume 1961:95).

During the seventeenth century there were other short-lived glassworks on the American East coast. From 1641 to 1643, glassmakers performed their trade in Salem, Massachusetts (McKearin and McKearin 1948:77). Two glasshouses existed from 1650 until 1674 in New Amsterdam, New York (McKearin and McKearin 1948:77). In Pennsylvania, "it is said that as early as 1683 glassmaking was carried on in what is now Philadelphia" (McKearin and McKearin 1948:77). However, this factory enjoyed little success.

The first successful American glasshouse began operations in 1739, when Caspar Wistar set up a glass factory in Salem County, New Jersey (Noel Hume 1970a:60; Scoville 1972:5). His glasswork, the first to commence production during the 1700's, initiated a revival in American glassmaking (McKearin and McKearin 1948:79). Wistar's advertisements indicate a flourishing business during the late 1760's (Munsey 1970:22). How much success his business enjoyed prior to the 1760's is not known, and authenticated specimens, except for a seal handle, have not been reported (McKearin and McKearin 1948:80; plate 28-10; Munsey 170:22).

Attempts to establish glassworks in New York are documented as early as 1752. Two factories may have operated intermittently, one until 1767 and the other until about 1785 (McKearin and McKearin 1948:97-98).

In eighteenth century Virginia the establishment of glassworks was promoted:

It would seem, however, that after an initial desire to establish industries in Virginia that could be beneficial to investors at home, the official policy changed to one of disapproval of any colonial venture that might endanger the mother country's export markets (Noel Hume 1961:94).

It appears that the American glass industry did not begin to flourish until the American Revolution or shortly after, during the last quarter of the eighteenth century (Douglas and Frank 1972:36). The industry further expanded in the 1820s, but through most of the nineteenth century, an influx of cheaper British products into North America, and of comparable quality to American glassware, made the business of glassmaking a very competitive enterprise (Douglas and Frank 1972:36; Roenke 1978:39).

In the foregoing discussion, it has become evident that the nineteenth century Canadian glass industry would not affect the contents of eighteenth century glass collections, with the possible exceptions of the Quebec region glassmaker, if indeed he practiced his trade in the eighteenth century. The present author doubts that the American industry could have had any effect on eighteenth century French sites in northeastern North America. The earliest factories were short-lived and probably catered to geographically immediate markets. Furthermore, the absence of eighteenth century glassworks until 1739, would have been of little or no consequence to the supply of glassware in American settlements, and upon the influx of European glass in eastern North America.

**GLASS**

There are many types of glass in the Belleisle collection, but most types consist essentially of the same basic ingredients. Glass is made from the fusion of silica with a fluxing oxide, sodium or potassium oxide, as well as a stabilizing oxide such as lime, in the form of calcium carbonate or oxide (Douglas and Frank 1972:52; Morey 1936:554; McNally 1982:10). Silica alone will melt at a temperature slightly above 1700° c, a process too expensive to achieve in the absence of high-temperature furnaces (Douglas and Frank 1972:52; Morey 1936:554). The addition of a "flux" drastically reduces the melting point of silica to about 800° c, but a glass with a low melting composition would be water soluble, and the addition of a stabilizing oxide increases its durability (Douglas and Frank 1972:52; McNally 1979:9; 1982:10). At about 500° c, glass is as solid as the objects we are familiar with in our modern-day households (Douglas and Frank 1972:1).

Upon exposure to atmospheric and ground water, the surface of glass objects begins to hydrate and this hydration increases over time (Lanford 1977:975). Lanford (1977:975-976) has suggested that glass objects might be dated using the thickness of their hydrated layer, but it has been the present author's experience that various types of glass unearthed within the same stratum will show differing degrees of hydration. This is quite evident in the Belleisle collection, as well as in other collections examined. Furthermore, according to Jones,

Sullivan et al. (1985:15):

The presence of patination [hydration] (or its absence) is no guarantee of age. Some glass is more prone to decomposition and some environments tend to accelerate the process. In slightly different burial locations different parts of the same bottle may be affected quite differently.

Glass also contains oxides that have various effects on its malleability at certain temperatures, its final appearance, colour, and its resistance to weathering. As indicated by Morey (1936:549):

The glassmaker is never working with pure soda-lime glasses...but always with glasses containing significant amounts of other constituents, which are introduced either as impurities in the ingredients, or of the containers [clay pots] in which they are melted or which are introduced deliberately. The effect of each of these impurities is to lower the melting point.

Such impurities include alumina, magnesia and potash, as well as boric, iron and lead oxides (Morey 1936:549:553). Whether introduced as part of a recipe or fortuitously, various glasses will not contain all of the oxides and impurities enumerated above.

The final appearance of certain varieties of glass is dependent upon the incorporation into a "batch" of certain ingredients whose effect cancels or neutralizes the potential effects of other inclusions that cannot be removed from the glass' constituents. Such is the purpose of "decolourisers", added to a batch to render the glass colourless. For example, potassium oxide (potash) renders a glass less opaque than

sodium oxide (soda), as it reduces the effectiveness of naturally occurring iron (green) and copper (red) oxides (McNally 1982:10-11). The most commonly used decolourising agent is manganese dioxide (Jones, Sullivan et al. 1985:14, McNally 1982:18). It neutralizes the effect of iron and other impurities in glass. However, the effect of manganese is not permanent: over a period of time, exposure to natural light results in oxidization, producing a pink to dark purple hue (Douglas and Frank 1972:7).

Finally, "cullet" or broken waste glass is sometimes included into a glass batch to act as a flux (McNally 1982:10). Like certain oxides, it enhances the working properties of glass by lowering its melting temperature.

### Verre Fougère

Two Verre Fougère objects in the collection are a bottle from House 1 and a stemmed-drinking glass from House 2. The composition of this glass type is described by Harris (1979:87) as follows:

A mixture of sand, calcium and an alkali flux, potash or soda, to which no decolourizer has been added, results in a greenish and sometimes yellow or brownish glass due to iron impurities in the sand.

Lapointe (1982:7; 39-40) and McNally (1982:12,22) concur with Harris, regarding the possible variety of colours for this glass type. However, both Belleisle specimens exhibit the same bluish-green hue (Munsell 1969:2.5 BG 9/0 to 8/0).

Verre Fougère was produced in small factories, petite verreries, verreries communes or verreries en bois, using wood-fired furnaces (Diderot and D'Alembert 1969:968-970, plates I-IV; Harris 1979:87; Scoville 1968:6). These factories evidently were located in wooded areas of France and the Low Countries, where a supply of fuel was readily available. Braken or fern ashes were used as a potash flux in glass mixtures -- hence the name Verre Fougère (Harris 1979:89; Pinard 1983:401-402; Scoville 1968:49). Ashes from domestic hearths and brushwood also were used as a source of flux (Scoville 1968:49). Petites verreries with access to coastal resources used "salicorn", being ashes from burned seaweed, chiefly varec and barilla (Barrelet 1953:85; Scoville 1968:49). Finally, cullet was also used by verreries communes, as indicated by Scoville (1968:50):

Cullet or scrap glass was mainly a by-product of glasshouses. Producers sometimes supplemented their own supplies with broken windowpanes and bottles collected from the streets and shops of large cities. Glassmakers in Provence, for example, tapped Marseille and Lyons.

The small factories employed no more than twenty people including part-time workers, men, women and children: glassmakers, makers of pottery crucibles into which glass was melted, furnace repairmen, basket weavers and packers (Diderot and D'Albembert 1969:966-983; Scoville 1968:72). Furthermore, certain glassblowers specialized in bottle-making while others made tableware or drinking glasses, and other items used in eighteenth-century households (Harris 1979:87). As a rule, certain factories specialized in the production of

particular objects, drinking glasses, bottle and window-glass, but other factories made a combination of window and bottle glass (Harris 1979:87; Scoville 1941:153, and note 3). Furthermore, Diderot and d'Alembert (1969:957, plate XXII) illustrate furnaces containing flacons, bottles and stemmed-drinking glasses, and factory workers carrying baskets containing a combination of drinking glasses and bottles.

Blue-Green Flacon. The bottle or flacon from House 1 is represented in the collection by a single basal sherd showing a portion of the heel, the resting point and the kick (Appendix 1, No. 66). This fragment could not be measured as it is too small, and its shape has been modified by the heat from a fire.

Complete examples from the Tunica Treasure, Place Royale and the Fortress of Louisbourg indicate that such vessels varied greatly in size. They had either narrow cylindrical, and sometimes slightly outflaring necks and lips, or wide necks and mouths, often conical in cross-section and similar in shape to a funnel. Furthermore, some bottles display square bodies in cross-section, while others exhibit cylindrical bodies (Brain 1979:93; Harris 1979:123-149, figs. 2-29; Lapointe 1982:99-117, plate 20-29).

French flacons in the Louisbourg and Place Royale collections were multi-purpose containers, as revealed by period documents, namely after-death inventories. Harris(1979:91) describes their functions

as follows:

Flacon was the term used for containers filled with "huile," [citron confits," "fruits à l'eau de vie," "enchois," "liqueur," "sirop de capillaire," "d'argea," "capres," "sirop" and infrequently, wine. Filled or empty flacons were often found in boxes or baskets: "canevettes," "panier," "canes" and "caisses". There were "petits flacons," "flacons de pinte" (approximately 32 oz. or 909 ml) and "flacons de cinq chopines" (approximately 80 oz. or 2273 ml).

Furthermore, Harris (1979:91) suggests that flacons differ from bouteilles (bottles) in the following manner:

In the same documents bouteilles were almost exclusively referred to as containers for wine and spirits (although in one instance a bouteille held tobacco) and were seldom found in canevettes [small chests or cases]. The distinction between flacon and bouteille has led to the belief that flacon generally referred to blue-green glass multi-purpose containers and bouteille commonly referred to the dark green or black glass flowerpot-shaped bottles now popularly known as French "wine" bottles. Bouteille could also have been used to refer to English black glass "wine" bottles.

At Place Royale flacons contained such products as foods, medicines and toiletries. Lapointe (1982:198, fig. 5) lists "Eau-de-vie" from various regions, "liqueur", spiced wines, vinegar, oils, anchovies, capers, lemons, pickles, fruits in liqueur, pickled oysters, mustard, olives, peppers, "sirop de capillaire", and scented waters. Flacons at Place Royale were stored in cabinets, cases, boxes divided into compartments, and wicker baskets (Lapointe 1982:31-32).

Flacons came with a variety of closures. Lapointe (1982:32-33) writes that certain containers had pewter or lead lids, some had rims

reinforced with the same materials, and during the eighteenth century bottles were often stoppered with corks (Harris 1979:98). Wide-mouth jars were often covered with paper or fabric lids secured to the neck of containers with a string, and sometimes dipped into wax to further protect their contents from spillage and perhaps decay (Lapointe 1982:33; McKearing 1971:122). Fifteenth century and later paintings indicate that narrow-necked bottles were often temporarily stoppered with a spill of paper (Harris 1979:95; McKearin 1971:121, figs. 2-4).

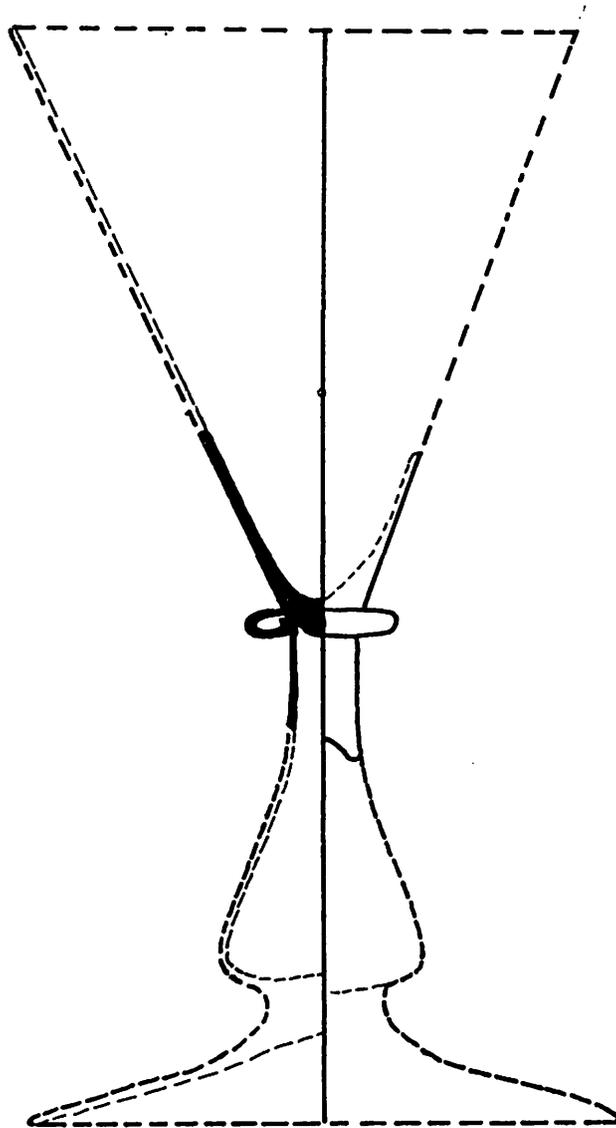
The dating of blue-green bottles is not an easy task. In eastern Canada, these container types appear ubiquitous to eighteenth century French sites. They have been reported by Place Royale (Lapointe 1982), at Louisbourg (Harris 1979; Smith 1981:139-148), and at the Roma site in Prince Edward Island (Alyluia 1981:13-21). In the United States, this bottle type was identified in the Tunica Treasure in Louisiana (Brain 1979:92-93), at Fort Michilimackinac (Brown 1971:144-147, figs. 1-2; pp. 184-196, plates 1-3) and two other sites, Sawagoni Town in Alabama and Fort Charlotte in Minnesota (Brain 1979:93). Finally, Noel Hume (1970a:62,69) has reported such bottles as mid-eighteenth century finds along the littoral of northeastern America. His statement, while partially correct for certain American sites, is quite erroneous when he writes about these finds as 1740s' artifacts at Louisbourg (Noel Hume 1970a:69). Furthermore, it is not surprising that this type of container is dated to this period in the same region of the United States, for it was around this time that the French began to lose their foothold in the New World and commenced to

cooperate with American rebels, against the British Crown. The Belleisle specimen can be safely attributed to the period 1700 to 1755, or perhaps earlier.

Stemmed-drinking glass. The drinking glass from House 2 (Appendix 2, No. 44), represents one of two common varieties of French stemware found on historical sites in eastern Canada (Plate 16a). This glass has a hollow-blown stem and a collar, to which a conical bowl has been attached. The collar is part of the stem and was shaped by folding out and under the uppermost segment of the hollow stem. The bowl rests on the collar at a slight but noticeable angle (Figure 22 a). The glassmaker might have adjusted this defect by reshaping the bowl, but artifact evidence for this is lacking.

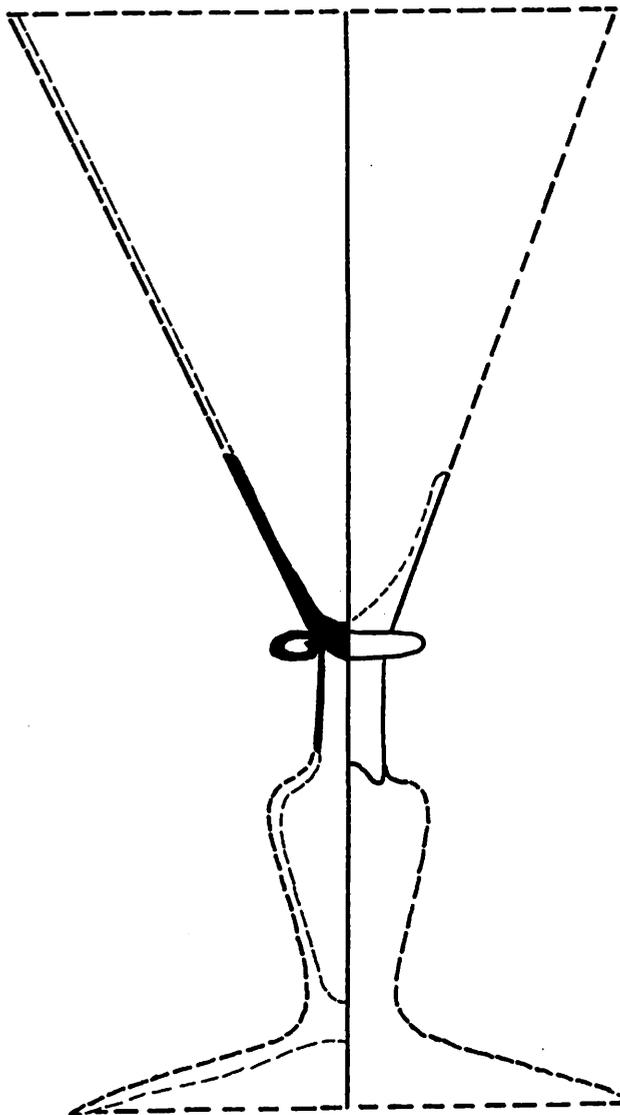
More complete specimens from other sites indicate that such vessels were made from three sections: the bowl, stem and foot (Lapointe 1982:128-129, plate 35). However, other verre fougère glasses were sometimes shaped into two sections: the stem and foot together, and the bowl (McNally 1982:28, fig. 8).

The Belleisle specimen probably had a baluster stem when it was intact. This is suggested by the remaining stem segment which flares out slightly (Figure 22). It is also possible, but less likely, that the remainder of the stem was shaped into an inverted baluster (Figure 23).



ML '85

Figure 22. Verre Fougère Glass With Baluster Stem (Actual Size).



ML '85

Figure 23

Verre Fougère Glass With Inverted Baluster Stem. This reconstruction is less likely than the baluster glass in Figure 22. (Actual Size).

The Belleisle verre fougère glass is an example typical of French stemmed glasses made between circa 1680 and 1750 (Barrelet 1953:87, 110; 1957:105; 109-119, plates 13-15). Generally speaking, this type of drinking glass is common on French colonial sites of the first half of the eighteenth century (McNally 1979:27; 1982:22). Verre fougère drinking glasses have been reported in a 1690 to 1713 archaeological context at Castle Hill, Newfoundland (McNally 1982:22), at Place Royale in the Perthuis House in a 1682 to 1789 context (Lapointe 1982:1, 39, variety 1.1.1.1; 128-129, plate 35), and at the Charest House in a deposit attributed to the period 1660 to 1730 (Lafrenière and Gagnon 1971:20; 71, plate 43, upper right: baluster glass). At Louisbourg verre fougère stemware are found in pre-1758 French occupational contexts (McNally 1979; 1982; Smith 1981). Drinking glasses from France, possibly in verre commun, were imported at Louisbourg; in 1737 in unknown quantities, 114 dozen in 1753 and 164 dozen in 1754 (Moore 1975:74).

Documentary evidence for Place Royale indicates that the first reference to verre fougère was in 1693, and to verre commun de fougère in 1703 (Lapointe 1982:44). Perhaps this indicates the popular usage of this term, and not necessarily its initial usage in New France? Glasses were available in two sizes, small and large, and both types were shipped in cases containing as many as four hundred glasses, in barrels of 1500, and in unspecified quantities in boucaut/boucaux (Lapointe 1982:44) -- barrels for the shipment of dried goods (Littré 1874:379).

McNally (1982:22) reports that a 1731 price list shows the cost of drinking glasses of this type to be about half the price of similar vessels of colourless or crystal glass. Furthermore, a period document held at the Archives nationales du Québec à Montreal, dated November 17, 1757 (Genêt, Décarie-Audet and Vermettre 1974:257; p. 270, note 3), indicates that a crystal glass was 15 sols; similar vessels in verre fougère were four sols each. It is evident that verre commun could have been preferred by colonists over crystal because of its relatively low price.

It is therefore suggested that the Belleisle verre fougère could have been obtained around 1680 and no later than 1755, based on the above discussion and upon the knowledge that certain ceramic styles, discussed in the previous chapter, can be dated as early as 1680.

Discussion. It is difficult to state with exactitude the actual provenience of the verre commun in the Belleisle collection. While I have already mentioned that it was produced in the Low Countries and France, its source is most likely French, as France was one of the largest producers of this type of glass. Harris (1979:88) writes that the petites verreries enjoyed a wide national market and catered to all social classes, even if petites verreries were small businesses. It must be emphasized that many small shops were not operating throughout the year, as Scoville (1968:79) indicates:

There was also considerable unemployment of a seasonal nature, especially among workers at the smaller shops in Guyenne, Languedoc, Lorraine, and Provence... The furnaces in the little shops making common glassware and green bottles did not remain lighted all twelve months in the year; some worked only two and one-half, four or six months. Lorraine glassmakers, consequently, went from one shop to another...and many others engaged in farming or in peddling glassware about the countryside when the furnace fires were dead.

Temporary closure is attributable mostly to government restrictions regarding the quantity of wood glassmakers were permitted to use as fuel (Scoville 1986:13, 21, 125). In some instances the shortages of fuel had driven many shops to nearly inaccessible locations, from which glassware shipments were evidently more costly (Pinard 1983:403; Scoville 1968:98).

Means of transport included pack animals and wherever possible, orders were shipped by boat on a navigable waterways to major centres. Goblets, drinking cups and other glass were shipped from Alsace, Franche-Comté and Lorraine in well-built wooden cases or willow baskets (Scoville 1968:98).

Finally, verre fougère was probably shipped to the New World from La Rochelle. It could have been sent to the town of Quebec and then to Louisbourg, or directly to the latter town, whence it would have found its way to Acadia, or perhaps have been purchased at Louisbourg by visiting Acadians from the Bay of Fundy.

### Liquor Bottles

Generally, the late seventeenth and eighteenth century liquor bottles in the northeast occur in two basic colours: "olive" green and very dark green of "black" glass. Dark bottles are made in coal-fired furnaces -- an English invention, also used in France; green bottles are from shops using wood-fired furnaces: France, the Low Countries and Spain (Alyluia 1981:22, 61-62; Harris 1981:128-130; Lapointe 1982: 18-19; 80-83, plates 11 and 12). Colour alone is not sufficient to attribute a particular glass object to its country of origin (Jones 1975:5; Jones, Sullivan et. al. 1985:12-13; E. A. Smith, January 17, 1985: personal communication).

Formulating a typology and seriation of such objects require information about the bottles' shape and finish (Jones 1975:2-6). The Belleisle glass fragments are too small to allow a comprehensive analysis. The present vessel count is based only on colour differences between sherds, and is obviously not illustrative of the actual number of liquor bottles discarded at Belleisle.

There appears to be one "olive green" bottle from House 1. It is represented by neck fragments and other unidentified sherds (Appendix 1, No. 67). Another was recovered from House 2 (Appendix 2, No. 45). The artifact evidence for this bottle consists of a neck sherd, two base fragments, and two unidentified sherds. House 2 also yielded five sherds from a black glass bottle (Appendix 2, No. 46), most of

which appear to be from the base of this container. Finally, one kick fragment, reddish-green in colour, represents a third liquor bottle from House 2 (Appendix 2, No. 47). Specimens from both houses could have been discarded late during the seventeenth century and before 1755 based on their proximity to other artifacts in the same strata at Belleisle.

The black glass bottle could be either English or French. Coal as a fuel for glass furnaces was used in the seventeenth century. However, it was not until the late seventeenth and early eighteenth centuries that glass furnaces were developed specifically for the use of coal in England. These were shaped like large cones or inverted funnels (Douglas and Frank 1972:106, fig. 29). Douglas and Frank (1972:29-31) discuss their design and operation:

The furnace inside the cone was direct-fired from a fireplace in the middle below ground level and air was supplied to the fire via an underground tunnel. The flames rose into the furnace and passed over the pots [those containing a batch]; combustion products escaped through flues in the side walls and so up through the cone to the outside air. The cone itself performed the function of a tall chimney in increasing the draught.

Bottles produced in such furnaces were of superior quality over the "olive" green bottles produced in wood-fired furnaces:

The burning of coal in place of wood produced higher furnace temperatures, thus speeding the melting process and allowing more sand and less potash and soda to be used in the batch; dark bottles of superior strength were the result (Alyluia 1981:23).

Scoville (1968:11) concurs with Alyluia. Also, black glass permitted better preservation of a bottle's contents and its superior strength made such containers sought after items by brandy merchants in France (Scoville 1986:42). French needs for such products must have been met initially through English imports. During the eighteenth century, however, French glassmakers began to convert their wood-fired furnaces to coal-firing, or "à la façon d'Angleterre" (Scoville 1968:12). Scoville (1968:12) reports that by 1710 there was one coal-fired furnace in France, four in 1720, 14 in 1740, and about 40 or 46 before 1789. These furnaces did not duplicate the architectural style of their English counterparts. They were wood-fired furnaces burning coal, usually square or rectangular at their base. Actual copies of English furnaces were not constructed in France until about 1784 or after (Scoville 1968:41), when French glassmakers were to learn from English glassmakers about this type of structure. However, before 1784, French factories had already incorporated certain features of the English design, including a steeply slanting roof with a large opening from which smoke and sulphurous fumes could escape (Alyluia 1982:23). Such factories became known as grosses verreries (Scoville 1968:8).

Grosses verreries were usually located in major ports, where a supply of English coal, preferred over the inferior French variety, could be shipped directly to the factories (Alyluia 1982:22). Furthermore, glassworks located in major ports could ship their products more rapidly to wine and liquor merchants. For example,

Bordeaux imported 6,480 dozen bottles from Rouen, from 1698 to 1699, and 2,332 dozen from 1714 to 1715; from Dieppe, 750 dozen, from 1698 to 1699, and 2,332 dozen from 1714 to 1715; from 1698 to 1699, small quantities were imported from Le Havre and ports in Brittany (Huetz de Lemps 1975:448). However, there were glass furnaces in the immediate vicinity of Bordeaux, as coal was imported in 1728 to cater to their needs, and in 1784 seven factories producing bottles could not meet the local demand; bottles had to be imported from Boulogne and Dunkirk (Huetz de Lemps 1975:433; Scoville 1968:111).

The English industry is not nearly as well documented as the French. It seems, however, that most black glass bottles were produced in London and Bristol (Alyluia 1981:61; Noel Hume 1961:93, note 19, p. 94). By 1696, England possessed some forty-two bottle houses, producing between them nearly three million bottles annually (Noel Hume 1961:93). Spain imported bottles from Bristol glasshouses for shipment to its colonies (McNulty 1972:152). McNulty (1972:152) reports bottles of English origin in Germany and the Netherlands. However, it must be noted that Spain, Germany and the Netherlands also had their own bottle manufactories.

Generally, liquor bottles were used to carry, store and serve a variety of alcoholic beverages and mineral water (Alyluia 1981:61; Barrelet 1953:101, 103; Harris 1981:128; Lapointe 1982:22-23). The Belleisle bottles' contents cannot be determined definitely.

The Belleisle specimens yielded no evidence for the type of closure. However, we know the range of stopper types used. Champagne bottles were perhaps stoppered with wool dipped in wax during the late 1600s, and during the seventeenth century and after corks were used (McKearin 1971:120, 123). The cork screw became common during the eighteenth century, when corks became cylindrical rather than wedge-shaped, and were driven deeper into a bottle's neck (McKearin 1971:125; 126, fig. 8). Documentary evidence indicates that a small case of corks was in the possession of a Quebec city official in 1744 and in 1769 Jean-Baptiste Amiot, a merchant in the same town, stored 200 gross of bottle corks (Lapointe 1982:23). At Louisbourg in 1737, 6,500 corks were shipped from New England, and from France, 21,000 in 1752, 10,600 in 1753, and an unspecified quantity in 1754 (Moore 1975:71). Moore (1975:71) reports that empty French bottles were imported at Louisbourg: 2,400 in 1752 and an unrecorded quantity in 1754.

Discussion. The liquor bottles from Belleisle are either English or French. If they are English products, they could have been shipped from London or Bristol to New England. From Anglo-American ports, they could have been sent to Louisbourg or directly to Acadia. French bottles were probably shipped from La Rochelle to Quebec City and later to Louisbourg, or directly to the latter administrative centre. Empty or filled, bottles would have been purchased by Acadians at Louisbourg, or from merchants travelling to Acadia.

### Lead Glass

Also referred to as "flint glass", "crystal" or "lead-crystal", this colourless glass was perfected in London, England by George Ravenscroft around the mid-1670's (Charleston 1960:2; Douglas and Frank 1972:15; Noel Hume 1970a:186). Prior to his experiments, however, Venetian glassmakers had been producing a type of glass containing lead and used in the fabrication of gem stone counterfeits; finished products were referred to as "cristallo" (Douglas and Frank 1972:14). Ravenscroft had lived in Venice, where he might have become familiar with Italian glassmaking processes (Charleston 1984:110). In 1612, Antonio Neri published L'Arte Vetraria (The Art of Glass) which contained a discussion of "cristallo" (Charleston 1960:2). After its translation into English in 1662, Ravenscroft made use of this publication and also hired Italian glassmakers to help him carry out a number of experiments. He utilized the purest of materials and batches were molten in covered crucibles and in coal-fired furnaces, where higher temperatures could be attained (Charleston 1960:2; Douglas and Frank 1972:15). He obtained a patent for his crystal in 1674 (Douglas and Frank 1972:15).

During the same year, the Worshipful Company of Glass Sellers of London provided Ravenscroft with a glasshouse at Henley-on-Thames in which to pursue his experiments, and in 1676 the same company began to market his products (Douglas and Frank 1972:15-16).

By 1685 the production of the new glass was well established and members of the Glass Sellers Company were doing a thriving trade selling a wide range of fine quality glasses. The new lead glass was, and is still, known as flint glass, because flints were at first used in its manufacture, though fine sand was later substituted for the flints...it [flint glass] is still used today to describe white-flint bottles (Douglas and Frank 1971:16).

The British glass industry achieved a leading position in lead crystal and remained ahead of foreign competitors between approximately 1685 to 1785 (Douglas and Frank 1972:16). But all the crystal found on late seventeenth and eighteenth century North American sites is not necessarily of English origin. Because the recipes and manufacturing processes were not easily duplicated, continental factories lagged behind in the production of flint glass. The process, however, was copied eventually by various glassmaking centres:

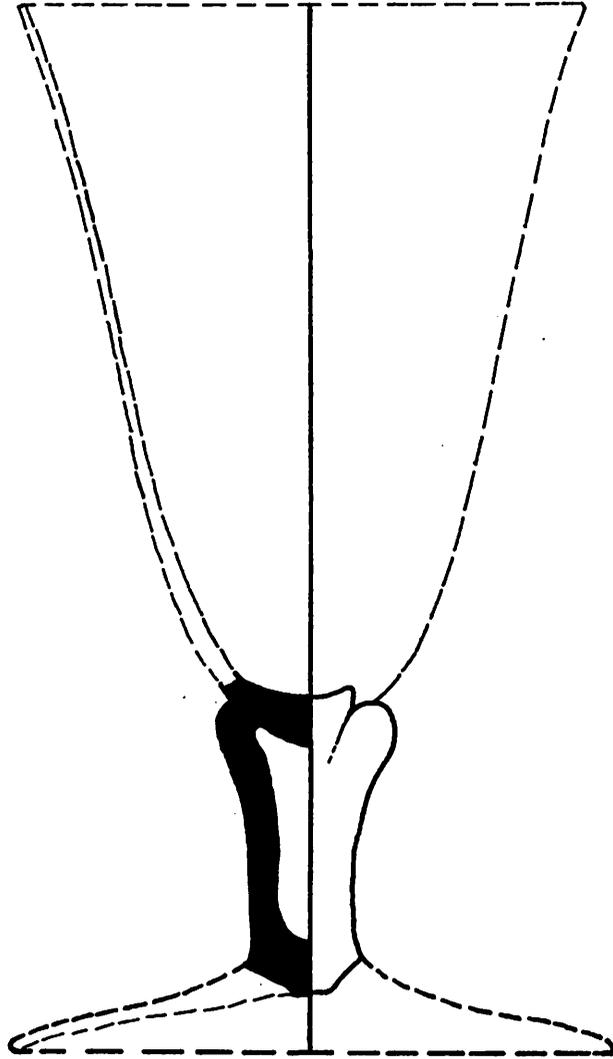
Lauenstein, in Brunswick-Luneburg (before 1744);  
 Namur (154): Nostetangen, in Norway (1756): Liège,  
 Nizet glasshouse (1757): [sic] 's-Hertogenbosh (1771):  
 Chaumont-sur-Loire (1772): Saint-Louis (?1781):  
 Saint-Cloud (1784): Petit-Quevilly, in Normandy (1784)  
 (charleston 1960:3).

It must be emphasized, however, that factories in continental Europe produced crystals akin to cristallo, before the art of making lead glass "à la façon d'Angleterre" was achieved.

English lead glass was essentially a mixture of potash, lead and silica, while continental crystal consisted of potash, lime and silica (McNally 1982:11). Because of its lead content, English crystal was heavier; it was also softer and solidified at about 200° c. lower than

other glasses (Honey 1946:20; McNally 1979:10; 1982:11). Finally, because of their specific weight and thickness, lead-crystal objects appeared to have been more resistant to breakage than their continental soda-lime counterparts (Honey 1946:20; Smith 1981:207).

The Belleisle Specimens. There are two crystal vessels from House 1: a stemmed-glass and an unidentified object. The former (Appendix 1, No. 68) is represented by a complete (quatrefoil" stem (Figure 24; Plate 16b), it is an inverted baluster, pinched into four segments and seemingly "typical of Ravenscroft's drinking glass production" (Noel Hume 1970a: 186). Its interior is hollow and consists of an air bubble, sometimes referred to as a "tear drop". According to Haynes (1959:211), semi-hollow or truly hollow stems are "very early in date". Charleston (1984:127-128) attributes quatrefoil glasses in this style to be the period 1685 to 1695. Such examples appear to be quite rare in Canada (E. A. Smith, Personal Communication, April 1984). In Quebec City, they are classified chronologically to the end of the seventeenth century (Lapointe 1982:43, variety 1.1.5.1; 151, plate 46). In one of two Acadian houses excavated at Grand Pré in Nova Scotia, a single quatrefoil specimen probably dates to the period 1685 to 1705 (Hansen 1984:19). At Tutter's Neck in Virginia a quatrefoil glass dates to the period 1680 to 1700 (Noel Hume 1968a:63, fig. 17, no. 17; p. 64). Dates of 1685 to 1700 or 1705 have been suggested for similar glasses on other Anglo-American sites (Noel Hume 1969b:15, fig. 3; 1970a:190-191, fig. 64, no. VI). Quatrefoil glasses have not been reported elsewhere to my knowledge. Therefore, this rare type of



ML '85

Figure 24.

English lead Glass With Inverted Baluster Stem,  
Quatrefoil Styled, circa 1685 to 1705. (Actual Size).

English crystal drinking glass can be safely dated to the period 1685 to 1705, and perhaps earlier.

The unidentified vessel from House 1 is represented by a lower handle and lower terminal fragment, with a convex anterior surface and a slightly concave posterior surface (Appendix 1, No. 69). It is lead crystal but could not be attributed to any particular European region of production. Crystal vessels with handles include mugs, tankards and pitchers; the Belleisle specimen could represent any of these vessel types. If Charleston's (1960:3) chronology for the advent of crystal production in various European centres is accurate, the present object could have been produced in England after 1676, in Lauenstein, in Brunswick-Luneburg (after 1744), or in Namur in 1754, before the Acadian expulsion of 1755.

Discussion. The English drinking glass from Belleisle was probably shipped directly from London to New England and from there to Louisbourg, or directly to Acadia. It could also have been purchased by Acadians at Louisbourg. The unidentified vessel may have followed the same trade route, or perhaps was initially shipped to France, probably La Rochelle or Rochefort, and thence to the towns of Quebec or Louisbourg, and eventually found its way to Acadia.

Toiletries (Plate 17).

The term "toiletries" is used herein to describe a variety of glass

containers utilized for storing, marketing and dispensing products such as scented waters and perfumes. Well into the twentieth century, these were meant to mask body odors, as bathing was not a habit among any social classes (Braudel 1981:328-330; Munsey 1970:154-155). Toiletries were usually marketed in ornate containers, a characteristic still prevalent today (Alyluia 1979:34; Munsey 1970:154-160; Scoville 1968:112).

Two vessels from House 2 have been included in this category. Their classification is based upon the present author's verbal descriptions of representative sherds to E. Ann Smith (January 17, 1985), material culture analyst at Parks Canada, Ottawa. It would have been preferable to obtain confirmation by visiting Miss Smith; however, it is felt that the verbal descriptions were more than adequate for a categorization of the Belleisle toiletries.

The first vessel is represented by seven light-green body sherds, in the region of 5 GY (Munsell 1969). The fragments exhibit moulded and vertical ribbing, each undulation being about 1.0 cm wide (Appendix 2, No. 48). Furthermore, the vessel may have had chamfered corners. From

the available artifact evidence, this object may have been a bottle or flacon and its appearance suggests that it was produced in petites verreries, perhaps in France or the Low Countries. It was unearthed with late seventeenth or eighteenth century ceramics, and it therefore attributed to the period circa 1680 to 1755.

The artifact evidence for the second vessel consists of a body sherd and a lower body with a heel fragment (Appendix 2, No. 49). Both sherds have a slight greenish-yellow tint and represent a jar, flacon or a bottle. The vessel's vertical ribbing is more pronounced than that of the first vessel described above; however, the width of each rib is unmeasurable. This vessel could be continental soda-crystal and is ascribed to the period circa 1680 to 1755. The present author has been unable to locate similar vessels in the literature. A variety of toiletries have already been listed in the section on verre fougère.

Finally, such objects were probably shipped from La Rochelle to the town of Quebec thence to Louisbourg, or directly to the latter port. Acadians could have obtained such products during visits to Louisbourg or from merchants travelling into the Bay of Fundy.

#### Window Glass

Classified under this rubric are eleven window glass fragments from House 1 and two from House 2. They are yellowish-green in colour

(Munsell 1969:7.5 GY 7/6), and average 2.0 mm in thickness. A single sherd from House 1, larger than any other in the present collection, exhibits a slightly curved surface, air bubbles, and ranges in thickness from 2.0 to 2.5 mm. The size and shape of the window panes could not be estimated.

During the late seventeenth century and throughout the 1700's, three types of window glass were produced: "crown" and "Norman", "broad" or "cylinder" and "cast" or "plate" glass. (Barrelet 1953:81-82, 97; Douglas and Frank 1972; Noel Hume 1970a:233-234). The last process was utilized by grosses verreries, where molten glass was cast onto an iron or copper table. After the glass had cooled, the resulting plate of glass was hand-polished using a variety of abrasive substances. Often, this superior quality glass was used where large window panes were required, such as coach windows, as well as in the fabrication of mirrors (Douglas and Frank 1972:143-146). Plate glass was very expensive and beyond the financial means of most people in France and elsewhere (Barrelet 1953:83-84; Scoville 1968:114-115).

Scoville (1968:115) indicates that individuals of moderate means could afford only the smallest mirrors. Perhaps, this is reflected by the Fort Michilimackinac finds, where small mirrors were retrieved from excavations. One complete mirror measured 4.7 by 5.7 cm while other fragments also indicated that mirrors were small and no larger than 7.0 or 8.0 cm on a side (Brown 1971:129). It is impossible, however, to state that this glass is French, since English glassmakers

used the cast plate process as early as 1691 (Douglas and Frank 1972:146). However, this industry did not really develop until the second half of the eighteenth century, when "the demand for large plates arose in England" (Douglas and Frank 1972:146). Manifests from ships leaving Rouen, France, in 1742 and 1743 include mirrors destined for New France (Dardel 1963:153). In New France, after-death inventories taken during the French Regime at the Forge du Saint-Maurice (1729-1760), near Trois-Rivières (Quebec), reveal the presence of mirrors in the homes of certain workers (Vermette 1982:20, 61). A copper-framed mirror approximately 38.0 by 51.0 cm was valued at 12.00 French pounds; smaller mirrors 7.5 or 10.5 cm wide and 18.0 cm high were estimated at 0.75 French pounds, or 15 sols (Vermette 1982:61). (Twenty-four French pounds make an English pound [Vermette 1982:8]). The mirrors reported in the inventories were probably French products. Mirrors meant to be sold at the company store were inventoried in 1741, but their cost remains unknown (Vermette 1982:20; p.270, Appendix D). It is plausible that they were available throughout the French Regime.

"Broad" or "cylinder" glass was made from a blown glass cylinder. The ends of the cylinder were cut off and the resulting tube was cut longitudinally, reheated and spread open into a sheet, about 1.0 by 1.5 m, or larger (Davies 1973:78; Noel Hume 1970a:233-234; Roenke 1978:6).

"Crown" or "Norman" glass was produced from a pear-shaped glass

bubble whose distal end had been cut off and spread cut or "flared" into a flat disc. This was achieved through constant reheating, the use of simple tools and centrifugal force, caused by the rotation of the iron or "pontil" rod affixed to the centre of the original glass bubble (Diderot and D'Alembert 1969:979:980, plates XI-XVI; Douglas and Frank 1972:138-139; Noel Hume 1970a:234). The glass disc was then removed from the pontil and was reheated to flatten it further. The disc's centre and perhaps its outer edge, remained thicker than its other parts. The "bull's eye" or centre was not desired by most customers or glaziers, but was used nevertheless, "in windows through which no one needed to look" (Lapointe 1982:51; Noel Hume 1970a:234).

Both cylinder and crown glass display natural defects in the form of air bubbles and striation. These imperfections are caused partially by the action of blowing a glass bubble or cylinder. However, cylinder glass usually displays elongated and straight air bubbles, the result of opening a glass tube into a sheet. The same defects in crown glass are curvilinear in pattern and are caused by the centrifugal force used to increase the size of the disc (Davies 1973:78; Noel Hume 1970a:234-235; Roenke 1978:24). Furthermore, it appears that broad glass was not as clear as crown glass, as the former lacked the fire-polish of the latter (Douglas and Frank 1972:141). The characteristics, however, are equivocal, especially when large glass fragments or complete panes are not available for examination. Based upon the above discussion, the Belleisle window fragments are either crown or cylinder glass.

It has already been mentioned that a single pane, 1.0 x 1.5 m or larger, could be produced using the cylinder glass manufacturing process. A large pane could have been shipped whole, or cut into smaller pieces. Crown glass was shipped in a number of ways. Diderot and D'Alembert (1969:975, plate 1) illustrate complete crown discs packed in straw and packaged into a woven basket with an exterior wooden frame. However, shipments such as these did not guarantee that a glass shipment would arrive intact, as indicated by Scoville (1968:97):

Parisian glaziers constanly complained that about one of every four windowpane disks [sic] from Normandy was broken...The royal price-fixing orders issued during the first quarter of the eighteenth century only required that 16 out of 24 disks [sic] in each case arrive in Paris unbroken if the shipments were made during the winter and spring. During the summer and fall, when roads were in better condition, at least eighteen had to be undamaged.

There is no indication that royal price-fixing orders applied to shipments other than those destined to reach Paris by land transport. Crown discs were also shipped by sea from Le Havre to Bordeaux during the eighteenth century (Huetz de Lemps 1975:450-451). From 1730 to 1767, available figures for Rouen and Le Havre indicate that the window glass trade, perhaps crown or cylinder, was on the increase; glass was shipped in large quantities to Holland, and in small quantities to Germany, Denmark, Sweden, Spain, Portugal, the French Islands, and in small but regular shipments to England (Dardel

1963:209; Scoville (1968:96). Also Rouen shipped window glass to New France in 1742 and 1743; the window panes' origin was Dieppe (Dardel 1963:153).

At Louisbourg, window panes were imported from France in unspecified quantity in 1737, 1743 and 1754, and 9,400 and 10,472 panes were imported in 1752 and 1753 respectively (Moore 1975:60). Louisbourg also received a shipment of 175 window panes from Quebec City in 1754 (Moore 1975:60). However, Moore (1975) does not report the size or shape of the window panes.

In Quebec City, Lapointe (1982:51-52) notes that there is no documentary evidence to suggest that glass was shipped in discs, but "bull's eye" fragments have been recovered from excavations. It is therefore feasible that complete discs were shipped, or simply bull's eyes were included in shipments of window panes. After-death inventories, spanning the period 1701 to 1769, indicate that carreaux de verre came in cases of 50, 200 or 300 panes in the following sizes: 13 x 15, 13 x 18, 15 x 18, 15 x 20.5, 15 x 23 and 18 x 23 cm (Lapointe 1982:53).

A 1748 inventory of the Forges du Saint-Maurice's company store included two hundred 21.0 by 23.0 cm window panes with a total estimated value of 80.00 French pounds (Vermette 1982:273, Appendix D). A single pane would cost eight sols, as the store offered its merchandise at cost including freight charges, and lower in price

than similar goods sold in Trois-Rivières (Vermette 1982:77). This was a constant source of irritation for Trois-Rivières merchants as this settlement was closer to the towns of Quebec and Montreal, from which the foundries and Trois-Rivières received their supplies (Vermette 1982:75-78).

At Williamsburg, Virginia, most window panes were 10.5 X 10.5 or 10.5 x 15 cm and diamond-shaped panes were common (Davies 1973:78-82). In 1729, the Boston Gazette included an advertisement stating that "Sheet glass in Crates and Boxes of 6 x 4 and diamond cut Common Glass" could be purchased (Davies 1973:81-82).

The above discussion indicates that glass panes in eighteenth century sites came in at least three basic shapes: diamonds, squares and rectangles. These were mounted in grooved strips of lead and anchored to iron frames that in turn were affixed to wooden casements (Noel Hume 1970a:233). This type of window is common at Williamsburg and on other Anglo-American sites (Davies 1973:78). However, sash windows became the most common form of windows during the eighteenth century (Davies 1973:78).

There is no evidence for glass panes mounted in lead strips at Belleisle, and thus it is possible that windows were set directly into wooden casements or sash windows. The archaeological evidence from both houses at Belleisle do not permit one to state which side(s) of the buildings had windows. Also, should be noted that at the end

of the eighteenth century, "squares or oiled paper" were commonly used in windows, and glass panes were not widely used in French rural houses (Scoville 1968:108-109). In 1701, squares of oil paper were in use at the Church in Port Royal (Rameau de Saint-Père 1889,II:339). Lapointe (1982:53) writes that the colder climate in New France may have encouraged house owners to purchase glass panes for their windows. Thus, we are left with many possibilities for the existence of windows at Belleisle. It is evident that some windows had glass panes, others may have had oiled papers or simply wooden shutters.

Discussion. Most windows in New France and Acadia appear to have originated from northern France, especially Normandy. The English industry is not well documented as its French counterparts, but it would appear that eighteenth century window glass of the crown variety was produced mostly in London and Newcastle, with the latter centre producing the glass "most in use in England", until the second half of the nineteenth century (Douglas and Frank 1972:143; Noel Hume 1970a: 234). During the early years of the seventeenth century, glassmakers from Lorraine and Normandy had established themselves in England where they, and later their descendants, made window glass (Douglas and Frank 1972:141,143). Thus, the British demand for ordinary window glass was first met by French immigrants; later their descendants and locally trained British glassmakers kept this tradition alive and flourishing throughout the seventeenth and eighteenth centuries. This situation would mean that the English window glass would resemble or duplicate French products and vice versa.

The Belleisle window glass could have been obtained from New England merchants travelling to the Bay of Fundy, or by Acadians travelling to Boston. It could also have been shipped to Quebec City or Louisbourg, and thence to Acadia, either through trade or purchases made by visiting Acadians at Louisbourg.

#### Unidentified Glass Fragments

Thirty-one glass sherds from House 1 and 24 fragments from House 2 remain unidentified. They are either too small or have been rendered unrecognizable from intense heat from a fire. Thus, their function and age remain unknown.

#### Modern Window Glass

Thirteen modern window glass fragments from House 1 were retrieved from the surface and sod levels of various excavation units. This type of glass duplicates the appearance of modern window panes and thus, it must be considered intrusive. Various mechanical window glass processes were devised around 1845 and after, and fully automated window glass machines came into wide use during the first quarter of the twentieth century (Douglas and Frank 1972:149-163; Scoville 1972: 329-331).

## CHAPTER FIVE

## COMPARATIVE ANALYSIS

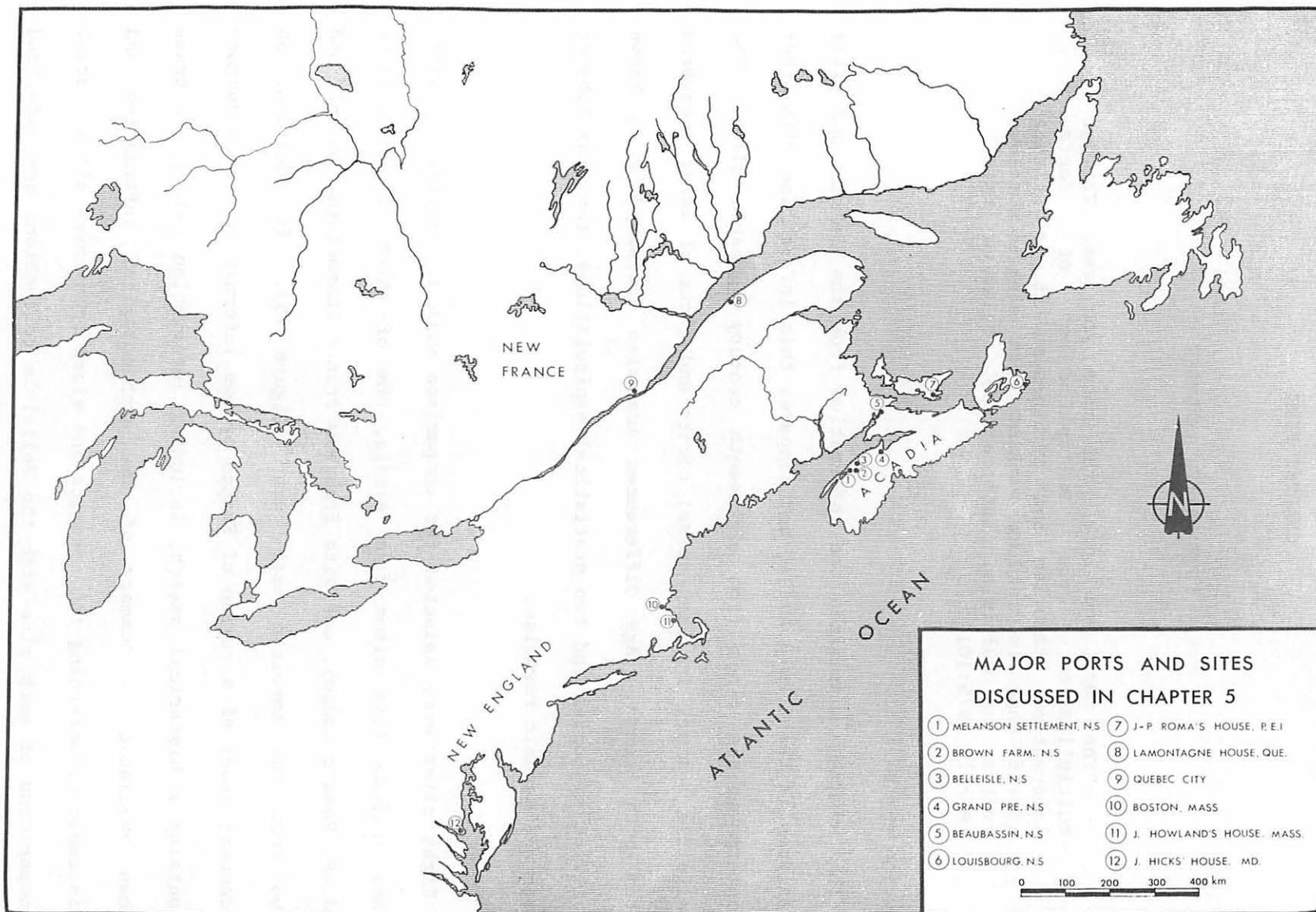
"The more you look, the more you see...Through multiplication upon multiplication of facts, information, theories and hypotheses, it is science itself that is leading mankind from single absolute truths to multiple, intermediate, relative ones." (Pirsig 1975:101).

## INTRODUCTION

This chapter summarizes the information from the ceramic and glass analyses in Chapters 3 and 4, and compares this information with other contemporaneous finds from eighteenth century domestic sites. The Belleisle summary includes vessel counts and lists of wares recovered from both houses. Age differences are also discussed using known artifact histories and two statistical manipulations, the Clay Tobacco Pipe and Ceramic Formulae.

Eight sites were selected for comparison with the Belleisle house. They include five sites from Acadia, one of which is not Acadian (J.-P. Roma's House), one site from New France (Lamontagne House), and two from the American east coast (Figure 25). In addition, an economic study of a region of France proves informative. Each summary contains a historical sketch, including information related to trade when available, a summary of the archaeological information and discussions concerning the ceramics and glass from these sites. Brief comparisons of each site with the Belleisle collections are made, and information on house types is included where available. This type of

Figure 25. Major Ports and Sites Discussed in Chapter 5



study helps one evaluate and place the "affluence" (South 1978:80) of various Acadian households within the overall economy of Acadia, as revealed by the material goods recovered from specific houses.

## THE BELLEISLE COLLECTION

### Ceramics and Glass

The ceramic and glass analyses indicate the presence of a great variety of artifacts in the Belleisle homes produced as early as 1680 and before 1755. Except for a spindlewhorl weight from House 2, the ceramics represent vessels related to food preparation, storage and service. The variety of wares and objects for each house appears in Tables 5 and 6. The coarse earthenware vessels include many objects derived from various regions of Europe and from New England. The latter earthenware objects may have replaced broken European products or supplemented household needs, like European wares available from Louisbourg merchants.

Regarding the variety of objects in both Belleisle houses, cooking vessels are noticeably absent. Pottery cooking vessels were produced contemporaneously with other objects, but it is entirely probable that metal cooking pots were used, or that other vessels such as mixing bowls were utilized to cook foods. Current evidence to support either of these suggestions is lacking at Belleisle, possibly because cooking pots were obvious items to be retained by owners at the time of the 1755 expulsion.

CERAMICS	VESSEL FORMS AND QUANTITY	WARE TYPE	REGION /COUNTRY	Mixing Bowl	Jug	Storage Jar	Bottle	Fitcher / Jug	Planged-Bowl	Alphora	Possat Cup	Tankard	Plate	Jar	Bowl	Cup	Jan Pot	Porringer	Jug / Jug	Unidentified	TOTAL	PERCENT	
				5	6	2	1	1															
COARSE EARTHENWARE	Saintonge (France)			5	6	2	1	1														15	
	Beauvaisis (France)																				1	1	
	Vallauris-Biot (France)						1														1	2	
	Northern-Mediterranean								6													6	
	Iberian Peninsula									2												2	
	Buckley (England)										1											1	
	Staffordshire (England)																				2	2	
	New England				1	2	2	1			1										2	9	
	Source Unknown														1						2	1	
	SUBTOTAL																					39	62.0
REFINED EARTHENWARE	Rouen (?) France											1										1	
	France																1					1	
	Bristol (England)											1										1	
	Lambeth (England)																	1				1	
	England											2		1								3	
	Source Unknown											1		1	2							3	7
SUBTOTAL																					14	22.2	
STONEWARE	Grenshausen I (Rhenish)																	3				3	
	Grenshausen II (Rhenish)																					1	
	Rhenish																				1	2	
	English Brown										1											1	
	Nottingham (England)											2										2	
	White Salt-Glazed (Eng.)																	1				1	
SUBTOTAL																					10	15.8	
OTHER																							
TOTAL				6	6	4	4	2	6	2	1	4	5	1	2	2	1	1	6		10	63	100

TABLE 5. Ceramic Vessel Count, Belleisle House 1, 1680-1755.

CERAMICS	VESSEL FORMS AND QUANTITY	WARE TYPE	REGION / COUNTRY	Mixing Bowl	Colander	Storage Jar	Bottle	Pitcher	Flanged-Bowl	Plate	Jar	Posset Cup	Bowl	Cup	Pharmaceutical Pot	Tunkard	Spindlewhorl Weight	Unidentified	TOTAL	PERCENT		
COARSE EARTHENWARE	Saintonge (France)			3	1	1	1											2	8			
	Beauvaisis (France)				1														1			
	Vallauris-Biot (France)			1			1											1	3			
	Northern-Mediterranean							2											2			
	Buckley (England)								1										1			
	Staffordshire (England)										1	1							1	3		
	New England					2													1	3		
	SUBTOTAL																		21	51.2		
REFINED EARTHENWARE	Nevers (France)																	1	1			
	England							2			1	1	1						5			
	Source Unknown																		5	5		
		SUBTOTAL																		11	26.8	
STONEWARE	Grenshausen I (Rhenish)													1						1		
	Grenshausen II (Rhenish)													1						1		
	Rhenish													1				2	3			
	English Brown													1						1		
	Nottingham (England)													1						1		
	White Salt-Glazed (Eng.)																	1	1			
	New England Stoneware													1						1		
	SUBTOTAL																		9	22.0		
	TOTAL			4	1	4	1	1	2	3	1	1	1	1	1	6			1	13	41	100

TABLE 6. Ceramic Vessel Count, Belleisle House 2, 1680-1755.

The refined earthenwares, except for a pharmaceutical pot from House 2, represent vessels for food storage and service (Tables 5 and 6). This ware's function is due to its inability to withstand direct heat from a fire, and vessel forms limit consumers' choices to objects for storage and consumption. Both English and French products are represented in the Belleisle houses, although most of the identified objects are from England. It is tempting to suggest that perhaps English wares were obtained more easily than other wares. However, the source of many objects remains unknown; they could be from England, France, Holland or Spain.

The most common variety of stoneware is Rhenish. English products constitute the remainder of the collection, except for an Anglo-American tankard from House 2 (Tables 5 and 6). The refined stonewares are English White Salt-Glaze. The identified vessels represent tankards, mugs or jugs. They could have been used to hold liquids, hot or cold. The "Grenzhausen I" bulbous-bodied mugs may have been both service and consumption articles.

Very few glass artifacts were recovered from Belleisle. House 1 yielded one verre fougère flacon, an olive-green liquor bottle and two English crystal objects: a quatrefoil drinking glass and an unidentified vessel. Window glass was recovered from both houses. The glass objects from House 2 include a verre fougère drinking glass, an olive-green "liquor" bottle, and two other liquor bottles: one of black glass and another of reddish glass. Furthermore, two possible

toiletary bottles were recovered from House 2.

Unlike the pottery, the glass objects served many functions. The bottles probably contained alcoholic beverages -- not necessarily consumed during meals. Spirits may have been taken during gatherings or may have served medicinal purposes. If the bottles were shipped empty or after their original contents had been consumed they could have been used to store any liquid. The stemmed glasses could have been used during meals, but it is plausible that they were prized items used only on special occasions. As a rule, such glasses did not constitute a part of a place setting in eighteenth-century France; rather, they were brought in after meals to serve liqueurs, wines and desserts (Barrelet 1957:105-106). The toiletries from House 2 are personal rather than household objects. They probably contained scented waters or perfume. Finally, the window glass fragments are architectural remains.

Occupational chronology. The ceramic and glass artifacts indicate that both Belleisle houses could have been occupied as early as 1680 and inhabited until the historical events of 1755 that terminated the Acadian presence there. Throughout the 1983 excavations, however, Mr. D. J. Christianson and I suspected that House 1 might predate House 2 by about ten years. Certain ceramics, particularly the Rhenish Stonewares from House 1, suggested this difference. Christianson (1984b:64), using the mean bore-size from the English white clay tobacco pipe stems found at Belleisle, determined the mean dates to be

1729.9 for House 1 and 1737.5 for House 2. My calculations, using South's (1977:201-274; 1978) mean ceramic formula and the vessel counts from both Belleisle houses, yielded dates 1726.8 for House 1 and 1726.7 for House 2. (South's straight-line regression formula to obtain median occupation dates is based on the idea that "on eighteenth-century [Anglo-American] sites, there is a high correlation between the dates of [English] ceramic manufacture and the period of site occupation" [South 1977:201], and although the concept and methodology are problematic, the formula is accurate on Anglo-American sites and is used widely [Walker 1972]). The Belleisle dates are very consistent with one another, and are slightly earlier than the English pipe stem dates, but do not indicate age differences between the Belleisle houses.

To help refine these initial dates for the two Belleisle houses, I have modified South's (1978) ceramic formula in the following ways: 1) it is applied to the vessel count rather than the sherd count in the hope of obtaining a more accurate representation of the ceramics at Belleisle; 2) ceramics, other than English products and dated glass objects, were incorporated into both the sherd and vessel counts; 3) terminal production dates were used in yet another version, whereas 4) the closing date of '1755' (Acadian expulsion) was applied in another. As seen in Table 7, mean values vary between vessel and sherd counts, using either dating method. This may reflect problems in sample size (South 1977:219), broad date ranges in certain artifact categories, which are overemphasized in the total sample by an

ARTIFACTS	HOUSE 1		HOUSE 2		HOUSE 1		HOUSE 2		HOUSE 1, Median Date Vessels minus House 2, Median Date Vessels.		HOUSE 1, Median Date Sherds minus House 2, Median Date Sherds.	
	Median Date Vessels	n	Median Date Sherds	n	Median Date Vessels	n	Median Date Sherds	n				
1. COARSE EARTHENWARE	26.5	38	28.4	336	24.7	21	26.7	98	1.8	1.7		
2. COARSE EARTHENWARE	25.9	38	27.6	336	20.8	21	24.9	98	5.1	2.7		
1. REFINED EARTHENWARE	17.3	7	10.9	56	22.5	5	21.4	13	-5.2	-10.5		
2. REFINED EARTHENWARE	33.4	7	17.8	56	30.0	5	27.1	13	3.4	-9.3		
1. STONWARE	21.3	8	17.2	46	28.6	7	28.5	86	-7.3	-11.3		
2. STONWARE	29.1	8	27.5	46	39.6	7	38.8	86	-10.5	-11.3		
1. GLASS	11.3	2	11.3	2	17.5	3	17.5	10	-6.2	-6.2		
2. GLASS	22.5	2	22.5	2	33.3	3	38.0	10	-10.8	-15.5		
1. CERAMICS	24.2	55	24.9	440	24.3	36	26.8	207	-0.1	-1.9		
2. CERAMICS	26.8	55	26.4	440	26.7	36	31.5	207	-0.1	-5.1		
CLAY TOBACCO PIPES	NA	NA	29.9	NA	NA	NA	37.5	NA	NA	-7.6		

TABLE 7. Mean Ceramic Dates. (coded: Dates - 1700). 1) Using dates from Chapters 3 and 4, with 1755 cut off date. 2) Using South's (1978) method of dating. Clay Tobacco Pipe dates after Christianson (1984b:64).

extremely large sherd or vessel count. The overrepresentation of coarse earthenware in both samples may affect the mean dates in this manner. For example, most New England coarse earthenware vessels from House I are represented by fewer than five sherds each, except for a very large storage jar consisting of 155 sherds (Appendix 1, Nos. 27-35). Furthermore, the coarse earthenware dates are broad, when compared to more closely dated ceramic categories, such as the stonewares. It is the closely dated artifacts that reflect age

differences between both Belleisle Houses (Table 7).

The difference between the clay pipe dates is 7.6 years, very similar to the difference of 7.3 years for the stoneware calculations, using the vessel counts (Table 7).

The stoneware figures support the proposition that House 1 is older than House 2. Again, the preferred difference is 7.3 years, based on the vessel rather than the sherd count, where the samples from both houses are almost identical in size (Table 7). The results are inflated using the sherd count and South's (1978) method. If the site closing date of 1755 had not been available, the chronology employed by South (1978) and the vessel count still would reflect an age difference, but the actual number of years would be greater (Table 7), because the date range for each ceramic type is broader without using "1755" as a closing date for all ceramic and glass artifacts in both Belleisle samples.

Discussion. The ceramic and glass finds from Belleisle indicate that the Acadians obtained household goods and other objects from French, English and perhaps other merchants. Wares from various countries could have been purchased from these individuals, but French wares would be obtained solely from French merchants or sources. Good to better quality wares -- some of the French white-bodied coarse earthenware, stoneware and glass -- as well as experimental pieces and perhaps 'seconds', especially English stonewares, found their way to

eighteenth century Acadia.

The Belleisle Acadians were expelled in 1755. Artifact histories coupled with the application of the clay tobacco pipe and ceramic dating formulae, indicate that House 1 was occupied as early as 1680, House 2 perhaps slightly later during the same decade. Both houses include ceramic and glass artifacts available until 1755, thereby suggesting continuous trading activities by the resident Acadians.

#### COMPARATIVE SITES AND STUDIES

##### Ceramics from the Brown Farm, Annapolis Valley, Nova Scotia, pre-1755

Location and History. Mr. Robert Brown's farm is located in the marsh historically known as the "Dugas Village", south of the Annapolis River and west of Annapolis Royal, in Mainland Nova Scotia (D. Christianson, Personal Communication: June 24, 1985), (Figure 25). This area was under cultivation before the Acadian expulsion of 1755.

Archaeology. During the 1983 Belleisle excavation, Mr. David Christianson, project archaeologist, surveyed a number of areas where Acadian artifacts had been found. Mr. Robert Brown's farm was one such area. In an attempt to facilitate the movement of heavy farm machinery on his property, Mr. Brown bulldozed a number of possible Acadian 'mounds'. Occasionally, he retained certain artifacts he had

unearthed with the bulldozer. Mr. Brown kindly allowed us to examine a few ceramic fragments, diagnostic of the eighteenth century.

Ceramics. The sample consists of five vessels, each represented by a single sherd. Three vessels are Rhenish stoneware. One object, probably the oldest, has a grey fabric, salt-glazed interior, and exterior decorations consisting of incised geometric motifs highlighted in cobalt blue. The evidence for a second Rhenish vessel consists of a handle fragment, oval in cross-section, with a salt-glazed surface and cobalt-blue specks. A third Rhenish vessel is represented by a lower body and handle sherd decorated with incised horizontal lines, just below the handle attachment. This vessel is most likely a chamber pot, while the other two described above are tankards. All three objects were produced as early as 1700 and before the end of the eighteenth century, based on discussions of similar vessels by Gusset (1980a:170) and Noel Hume (1967:352-353; 1970a:281-283).

A fourth vessel from Mr. Brown's farm is an American imitation of an English Brown Stoneware tankard. It is represented by a single body sherd with exterior cordonning, (Figure 26). It has a beige to grey fabric exhibiting large sand grains, unlike the true English Brown stonewares, and salt-glazed interior and exterior surfaces, yellowish-beige in colour -- the result of the fabric showing through the glaze. Tankards in this style were produced at the William Rogers' pottery of Yorktown, Virginia. Rogers copied English mugs, bottles

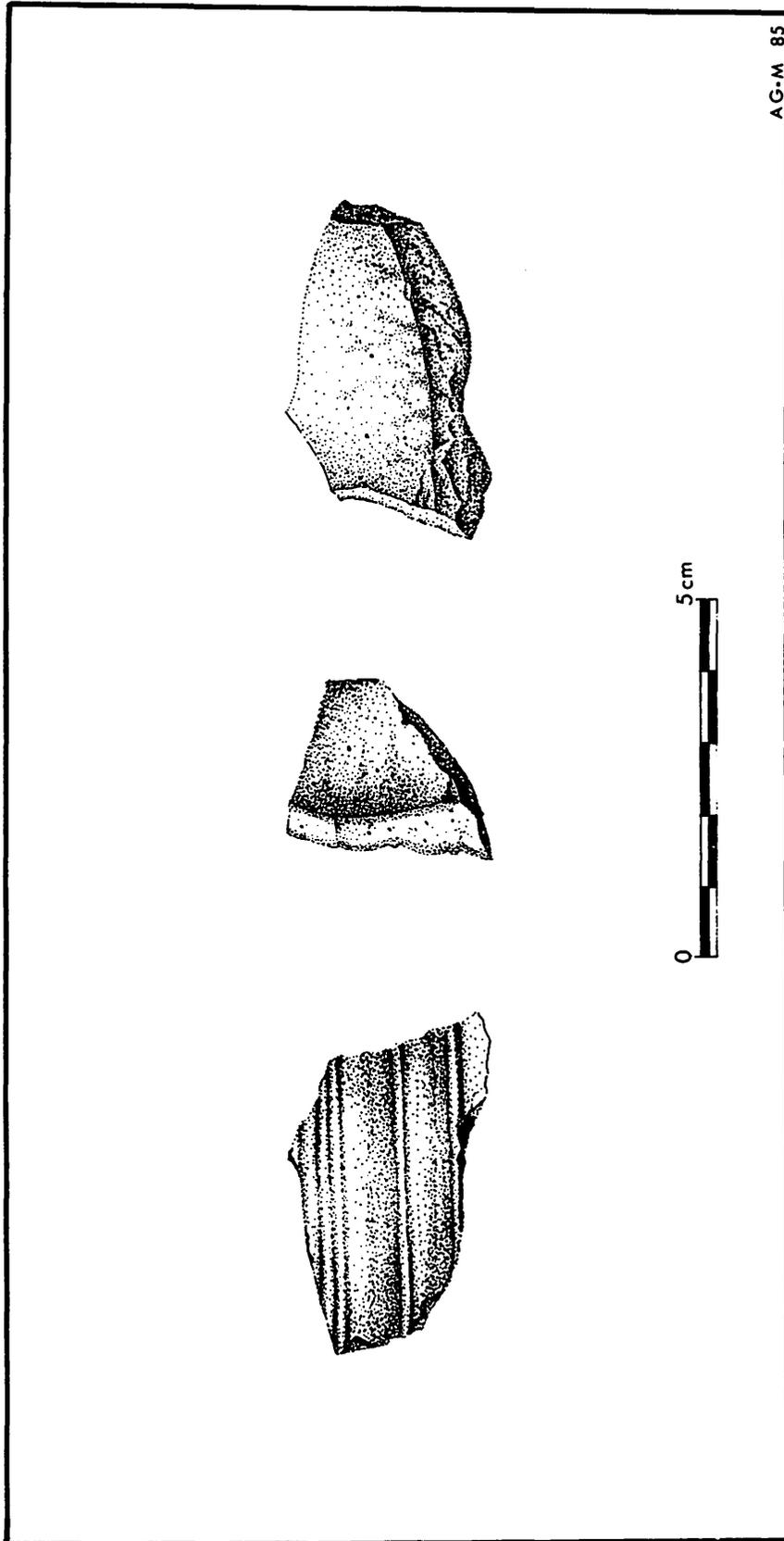


FIGURE 26. Front, Side and Back Views of American Stoneware sherd.

and jars (Noel Hume 1968b:97). The existence of a stoneware kiln in Virginia was of great concern to the British government, who did not wish local industries to interfere with English stoneware exports (Watkins 1968: 64). "Rogers was conducting a business of considerable scale from 1725" to 1739, but was always referred to as the "Poor Potter" by officials to underplay the importance of his operation (Watkins 1968:84-85). After 1739, William Rogers' heirs continued potting well into the 1750's, shipping stonewares "all the way to New England" (Noel Hume 1969a:31,33; Watkins 1968:82,84). Thus, the vessel from Mr. Brown's farm could have been produced as early as 1725 and before 1755 -- the year of the Acadian expulsion.

The last vessel in the Brown farm sample is probably a small tureen in soft-paste porcelain. This porcelain type is essentially ground glass mixed with white clay; it is translucent like the true, or hard-paste porcelain (Godden 1980:xviii; Savage and Newman 1974:32). The specimen from Mr. Brown's farm has a plain interior, but its exterior shows portions of a pedestal foot, rectangular in outline and flared out. Its lower exterior side displays vertical fluting, every three centimeters. The tureen bears blue transfer-printed vertical and horizontal lines enclosed within two broad painted lines. Its lower exterior exhibits blue-painted appliqué fruits, resembling strawberries, leaves and stems. The upper exterior has a transfer-painted scenery consisting of a house, clouds or smoke.

Artificial or soft-paste porcelain was first produced in France in

1675 and in England by the Chelsea factory in 1743 (Savage and Newman 1974:32,268). Transfer printing was not used in France until the nineteenth century, but was utilized in England during the 1700s (Savage and Newman 1974:296), indicating that the tureen is an English product, perhaps from the Chelsea factory, produced after 1743 and before the Acadian expulsion of 1755.

Discussion. The small sample of artifacts retrieved from the Brown farm indicates the use of Rhenish and Anglo-American stonewares like those at Belleisle. But unlike the Belleisle Acadians, the "Dugas Village" residents could afford porcelains from England in the latest fashion. It must be emphasized, however, that the small artifact sample from Brown's farm come from a number of Acadian structures, perhaps seven houses (D. Christianson, Personal Communication: June 24, 1985). It is therefore possible that not all the Acadians at Dugas could afford porcelains, but it is certain that a number of Acadians were more affluent than others.

#### The Melanson Settlement, Port Royal, Nova Scotia, c.1680-1755

Location and History. The Melanson Settlement site is located in the present-day town of Port Royal on the north shore of the Annapolis River, in northwestern Nova Scotia (A. Crépeau, Personal Communication: June 10, 1985), (Figure 25). The site lies about 350 m east of the reconstruction of the "de Monts-Champlain '1605'

Habitation" (D. Christianson, Personal Communication: June 24, 1985).

The name of the settlement is somewhat difficult to trace to a single individual. "Melanson" is derived perhaps from a Scottish name, but it is generally assumed to be a corruption of the English surname "Millanson" (D'Entremont 1973:416,418; Massignon 1962:48, note 8; Perron 1985:9-10). Documentary evidence indicates that the settlement is named after the settler Charles Melanson, a Huguenot who came from France to Port Royal, via England (Perron 1985:9). Charles' father, Pierre Laverdure, married Priscilla Melanson in England, and by 1657, when he and his family arrived in Port Royal, he had changed his surname to 'Melanson'. The family remained in Port Royal, and in 1667, when the administration of Acadia changed from English to French hands, many settlers moved to New England, but Charles Melanson chose to stay. A 1671 French census mentions that he was farming in Port Royal (Cormier 1979:499-500). His wife, Marie Dugast, had 14 children (Arsenault 1965:463; Massignon 1962:48). Many of the Melansons remained in Port Royal, and members of the third and fourth generations were deported in 1755 (Arsenault 1965:464-467).

Archaeology. In 1984, Ms. Andrée Crépeau, archaeologist for Parks Canada, directed excavations at the Melanson Settlement site and currently assumes this role as the excavations are ongoing. Ms. Crépeau kindly provided the information presented below (Personal Communication: June 10 and 12, 1985).

Three houses were constructed on the same emplacement. The first was a "piquet structure" -- a house with walls made of upright posts set into the ground. This house was removed before a second wooden frame or "charpente" structure was erected and later destroyed by fire. A third charpente dwelling was built on the site. Elements of this last house were removed when the site was abandoned. The entire sequence of events occurred between circa 1680 and 1755 (A. Crépeau, Personal Communication: June 10, 1985).

Ceramics. At this time, a ceramics and glass vessel count is not available for the Melanson Settlement site, but a list of types has been produced (A. Crépeau, personal communication June 12, 1985:). The list includes four possible French coarse earthenware types categorized using Barton's (1981) Louisbourg classification. The first coarse earthenware corresponds to Louisbourg type 'L.1' (Barton 1981:10-16): slip-decorated wares with copper-stained glazes from La Chapelle-des-Pots, near Saintes. The second ware is type 'L.2' (Barton 1981:16-20): Saintonge green-glazed white-fabric pottery. The third French ware, type 'L.3' (Barton 1981:21-22), categorizes pottery with buff and salmon-pink fabric, and orange or green glazes, possibly from Southwestern France. The fourth probable French type includes vessels from the northern shore of the Mediterranean, with a red, soft and porous fabric, a white slip, and iron and copper-rich decorations (Barton 1981:36-38, type L.12). The site also yielded Western Mediterranean coarse earthenware, English slipwares, North Devon Wares and Anglo-American pottery.

The refined earthenware from Melanson include Faience and 'Shell-edged Pearlware'. The latter type must be intrusive. It was not invented until 1779 and "was in common use from shortly after 1780 to about 1830" (Sussman 1977:105).

French, English Brown, Rhenish and unidentified wares constitute the coarse stonewares varieties from the Melanson Settlement site. Refined wares include 'slip-dipped' and 'plain-white' English White Salt-Glazed stonewares.

Two porcelain types were recovered from Melanson: 'Oriental Blue and White' and 'Batavian' porcelains. The former type has a white, translucent body with underglazed blue decorations. "The first direct exportation of Chinese porcelain to Europe occurred early in the sixteenth century" (Garner 1970:33). Similar products, however, were shipped from Japan and Korea during the eighteenth century -- hence the name 'Oriental Blue and White' (Garner 1970:58-64). "Blue and White porcelains were of primary importance in the export trade" (Palmer 1976:15), but during the eighteenth century, polychrome porcelain competed with them for a share of the market (Garner 1970; Palmer 1976). 'Batavian' porcelain was such a product. Savage and

Newman (1974:38) describe it as a Chinese porcelain with a lustrous brown ground with white reserves (panels), decorated in underglaze blue, or polychrome pigments.

Generally speaking, Oriental porcelains in the seventeenth to eighteenth century were "fairly expensive tableware and would not have been common in the less affluent homes" (Noel Hume 1970a:257). However, porcelains have been found in "tavern sites and on the property of craftsmen and shopkeepers" in Williamsburg, Virginia (Noel Hume 1969a:40). 'Oriental Blue and White' plates have been unearthed at Louisbourg (Lunn 1973:189, figs. 12 and 13), but it has been my experience that the collection contains a greater variety of vessels exhibiting 'Blue and White', as well as other decorations. At Place Royale in Quebec City, Chinese porcelain was imported in small quantities during the first half of the eighteenth century, and in larger quantities after 1750 (Genêt 1977:126). The Place Royale finds include 'Oriental Blue and White' and polychrome tableware, as well as tea services, from 21 sites; the greater majority of the porcelains, however, came from the latrines of the Estèbe and Boisseau houses (Genêt 1977:121). Guillaume Estèbe and Nicholas Boisseau were both prominent members of the Quebec community, the former being one of the great "bourgeois" of the town, and the latter "greffier en chef du Conseil supérieur de Québec" (Moussette 1982:2-4). It is possible, however, that the porcelain found in the latrines is not necessarily theirs, as the privies were used by various owners of the site (Moussette 1982:2-4).

The foregoing may indicate that the Acadians living at Melanson were affluent, but it is also plausible that the porcelains were heirlooms, or represent objects purchased individually rather than in sets. Certainly, the porcelains were more expensive than other wares.

Glass. Glass artifacts unearthed at the Melanson Settlement include French and English dark green (black?) bottle glass and verre fougère. Table, mirror and window glass also were recovered, but specific styles and manufacturing techniques have yet to be described in detail.

Discussion. The wares recovered at Melanson differ from Belleisle in two ways: first, there exist differences in ware types and second, the presence of certain wares at Melanson appear to reflect higher status/greater wealth than at Belleisle. Belleisle lacked French coarse earthenware types 'L.1' and 'L.3' (Barton 1981:10-16, 21-22), English North Devon wares and French coarse stonewares. However, pottery from Buckley is not present at Melanson. The refined earthenwares from Belleisle include faience, delftware and unidentified tin-glazed earthenwares; the Melanson settlement yielded only faience. Two varieties of porcelain and the more expensive 'plain white' English White Salt-Glazed stoneware which were identified at Melanson are absent at Belleisle. Their presence at Melanson seems to indicate that its occupants were more comfortable financially than the Belleisle Acadians.

Houses 1 and 2, Grand Pré National Historic Park, Nova Scotia, 1680-1755

Location and History. Grand Pré is located south of Minas Basin and northeast of Wolfville, in Nova Scotia (Figure 25). It overlooks a thousand-acre marsh exploited by Acadian farmers from about 1680 to 1755 (Clark 1968:215; Hansen 1984; Korvemaker 1972).

The first Acadians arrived in Grand Pré during the late 1670's. The community grew quickly, from about 20 people in 1636, to 287 in 1714, to an estimated 1350 inhabitants around 1750 (Clark 1968:125, fig. 5.4; 215, table 6.4; 216: table 6.5). Rapid population growth of the Minas Basin settlements has been attributed to the Acadians' desire to reside away from the administrative centre of Port Royal and to the availability of large, unexploited marshlands in the region (Clark 1968:139). The Basin area became Acadia's principal agricultural centre and was sometimes referred to as "The Granary of Acadia" (Dunn 1985:9).

Like other Acadians, the Minas Basin residents traded with Louisbourg and New England merchants. The illegal trade with New England included products such as "cloth, hardware and utensils of British manufacture and sugar, molasses and rum" (Dunn 1985:9). Illegal trade began in the early years of the settlement and continued until the 1755 expulsion (Dunn 1985:9,17). After 1710, 'illegal

trade' would mean French trading activities, as most of Acadia was under English rule.

Archaeology. In 1972 and 1973, the remains of two Acadian houses were excavated in Grand Pré National Historic Park (Hansen 1984:1; Korvemaker 1972:56, fig. 3). It is possible that both structures were of wood construction and had rectangular floor plans; both, however, lacked stone foundations (Korvemaker 1972:24). House I had an interior U-shaped fireplace of dry masonry, while House 2 might have had an interior hearth (Korvemaker 1972:24). Finally, a feature common to both houses was a partial cellar, as in the Belleisle houses, occupying about half of each house's interior (Korvemaker 1972:5,12,24).

The buildings were "virtually void of French artifacts", indicating that they were set afire after their contents had been removed in 1755, by Acadians leaving Grand Pré and through pilferage by British troops (Korvemaker 1972:25-26). Be this as it may, Hansen's (1984) artifact analysis shows that Grand Pré and Belleisle Acadians had access to similar ceramics and glass.

Ceramics. Vessel counts for each of the Grand Pré houses are presented in Tables 8 and 9. French coarse earthenwares include pottery from Saintonge, Beauvaisis, Vallauris-Biot, and one variety of unidentified French coarse earthenware. There are also products from the Mediterranean, England and New England. The identified vessel

CERAMICS	VESSEL FORMS AND QUANTITY	WARE TYPE	REGION /COUNTRY	Cup (?)	Bowl (?)	Mug or Cup	Drug Jar	Jug / Fitcher	Hollowware	Unidentified	TOTAL	PERCENT
COARSE EARTHENWARE	Saintonge (France)			1	1						2	
	Beauvaisis (France)						1				1	
	English Mottled					1					1	
	New England									1	1	
	SUBTOTAL										5	55.6
REFINED EARTHENWARE	Source Unknown					1					1	
	SUBTOTAL										1	11.1
STONEWARE	Rhenish						1	1			2	
	White Salt-Glazed (Eng.)						1				1	
	SUBTOTAL										3	33.3
OTHER												
	TOTAL			1	1	1	1	1	3	1	9	100

TABLE 8: Ceramic Vessel Count, Grand Pré House 1, 1680-1755.  
(After Hansen 1984).

CERAMICS	VESSEL FORMS AND QUANTITY	WARE TYPE													Unidentified	TOTAL	PERCENT	
		Bowl	Bowl / Pan	Mug (?)	Milkpan	Storage Jar	Platware	Hollowware	Chamber Pot	Fitcher	Mug / Tankard	Jug / Fitcher						
	REGION / COUNTRY																	
COARSE EARTHENWARE	Saintonge (France)							1									2	
	Beauvaisis (France)	1	1														2	
	France															1	1	
	Vallauris-Biot (France)							1									1	
	Mediterranean (?)					1											1	
	Staffordshire (England)															1	1	
	English Mottled			1													1	
	New England	2	1	2	1												6	
	SUBTOTAL																16	
REFINED EARTHENWARE	French (?)							1	1								2	
	Source Unknown								1							1	2	
	SUBTOTAL																4	
STONEWARE	Normandie (France)					1											1	
	Rhenish								2	1							3	
	English Brown								1	1							2	
	White Salt-Glazed (Eng.)								1								1	
	True W.S.G. (England)														1		1	
	SUBTOTAL															1	8	
OTHER																		
TOTAL		3	1	2	2	1	1	3	1	2	4	2				6	28	100

TABLE 9. Ceramic Vessel Count, Grand Pré House 2, 1680-1755. (After Hansen 1984).

shapes from Grand Pré essentially duplicate those of Belleisle, with the exception of colanders, pitchers and amphorae; but the objects from both locations were meant to prepare, store and perhaps serve food.

It is possible that faience is present at Grand Pré. Most refined earthenwares, however, were not identified. The coarse stonewares from Grand Pré include English and Rhenish jugs, mugs and tankards. A bowl or pan of Normandie coarse stoneware and an unidentified vessel in "true white" (white bodied) English White Salt-Glazed stoneware were unearthed during the House 2 excavations at Grand Pré. Porcelains are absent from both Grand Pré houses.

Glass. Grand Pré yielded a variety of containers and table glass. One French blue-green flacon was recovered from House 1 (Hansen 1984:17,45), and a blue-green fiolle (phial/vial) was unearthed in House 2 (Hansen 1984:18). The latter structure yielded one light-green medicine bottle of either English or French origin (Hansen 1984:18). One dark green wine bottle, probably English, was unearthed in each of the two houses at Grand Pré. During the excavations of House 2, one case bottle (square-bodied and dark green) was recovered (Hansen 1984:19).

The table glass from Grand Pré includes two objects of probable English origin. The first is a 'quatrefoil' stemmed-glass, dated 1685 to 1705, while the second glass has a plain, straight stem and is

chronologically assigned to the period circa 1730 to 1760 (Hansen 1984:19).

Window glass fragments were recovered from both houses at Grand Pré. Light-green glass was unearthed in House 1 and House 2 yielded light green and blue window glass fragments (Hansen 1984:19-20). Window pane styles and dimensions, as well as casements or frames are not discussed by Hansen (1984).

Discussion. Prima facie, the Grand Pré and Belleisle Acadians seem to have been economic equals, as the ceramics and glass from both locations are very similar. Exceptions include the presence of 'white-bodied' English White Salt-Glazed stoneware only at Grand Pré, and of more ornate and perhaps expensive refined earthenwares only at Belleisle.

Other artifact differences might indicate preferences in certain ceramics, such as the presence of French coarse stoneware at Grand Pré. Otherwise, considering the slight variation in ceramic and glass vessel shape, and the knowledge that the contents of the Grand Pré houses were removed, it is possible that both the Belleisle and Grand Pré Acadians had access to similar ceramics and glass. I would suggest, however, that because of the differences in house construction. The Annapolis Valley Acadians probably had more comfortable homes than the Grand Pré Acadians. The Belleisle houses were more sturdy, with stone footing walls and more complex kitchens.

Beaubassin, Cumberland Basin, Nova Scotia/New Brunswick, c. 1710 - 1755

Location and History. Beaubassin was located at the head of present-day Cumberland Basin, northwest of Amherst in Nova Scotia, and southwest of Sackville in New Brunswick (Figure 25). The Missaguash River delimits the boundaries of these provinces. It was once part of Beaubassin, and Acadian farms were established on both of its banks.

On October 24, 1676, Comte Louis de Buade de Frontenac, Governor General of New France, granted Michel Le Neuf de La Vallière a piece of land ten square leagues in area (151.92 km<sup>2</sup>), constituting the 'Beaubassin' seigneurie (Comeau 1982:409; Eccles 1979:133,135). La Vallière's ownership, however, was contested by Jacques Bourgeois and his relatives, established at Chignecto Basin in 1672, and by Pierre Tibaudeau, a miller at Chépoudy in the 1690s (Shepody, N. B.). In June of 1705, Le Neuf de La Vallière's grant was ratified, excluding the lands already occupied by settlers (Comeau 1982:410; Cormier 1982a:94; 1982b:630).

In September 1685, the intendant of New France, Jacques De Meulles, visited Acadia (Eccles 1982:473). The following excerpts from De Meulles description of Beaubassin provide us with an idea of the natural environment, Acadian settlement and trade in that area:

"... All around Beaubassin there is such a large

quantity [sic] of meadows that one hundred thousand head of cattle could be fed. The grass [hay] there is called "misotte", quite appropriate to fatten all kinds of livestock.

On both sides of the meadows are gentle hills covered with [growths of] hardwood. There, twenty-two dwellings have already been built, on small promontories that the settlers have chosen in order to have access to the meadows and woods.

All the settlers have three or four dwellings where they can reside, reasonable enough for the countryside. The majority [of settlers] already have twelve to fifteen cattle, ten to twelve pigs and an equal number of sheep...

... Most women make "étamines" [wool and flax linens] from which they clothe themselves and their husbands. Most women also make [knit] socks for their families, and refrain from buying them. They all wear Indian shoes which they make themselves. Every year an English bark brings them "nécessités" [essential goods] which they buy with pelts obtained from the Indians. Flax canvas is also made there [Beaubassin], (De Meulles 1973:381-382), (my translation).

De Meulles (1973:382) also mentions that the English ships were from Boston.

For the remainder of the seventeenth century and until 1750, the farming community of Beaubassin appeared to have flourished. Its population grew from 127 people in 1686 to about 1100 in 1755 (Clark 1968:143, Table 5.3; 346, Table 8.1). However, Beaubassin, like most Acadian settlements, was subject to sporadic raids by New England and British troops. In September 1696, it was destroyed by a New England force, but was returned to the Acadians on September 25, 1697 (Arsenault 1965:88). Beaubassin was attacked again on July 28, 1704, but the Acadians repelled the New Englanders (Arsenault 1965:90). Finally, in May of 1750, it was ceded to British troops under the

command of Colonel Charles Lawrence; the Acadians fled to Fort Beauséjour and to Baie Verte, after "they had burned their homes and left nothing to the British invaders" (Arsenault 1965:141). Fort Beauséjour was located on a ridge close to the north side of the Missaguash River, now New Brunswick. The British remained on the south side of the same river, now Nova Scotia, where they erected Fort Lawrence on a ridge parallel to that where Fort Beauséjour stood (Clark 1968:331).

Archaeology. During the summer of 1968, M. Pierre Nadon, archaeologist for Parks Canada, directed the excavations of eight Acadian structures occupied from circa 1710 to 1750, and located in the immediate vicinity of Fort Lawrence (Harris 1971: 12-13). Two years later, Moussette (1970) analysed the pottery from these excavations, and Harris (1971) reported on the glassware from Beaubassin. During the analyses, however, neither author could associate their findings with the excavated structures as a site report had not been produced.

Ceramics. M. Moussette (1970) provides an exhaustive inventory of the Acadian and later ceramics from Beaubassin. The following discussion summarizes his findings.

French coarse earthenware covered with a slip and either a green or "transparent" (probably colourless or yellow tinged) lead glaze, constitute a major portion of the Beaubassin collection (Moussette

1970:200). They appear to be either Saintonge or Beauvaisis wares. English and French slip-decorated coarse earthenwares with red bodies and either "transparent" or brown lead glaze were identified. Moussette suspected that these could have been produced locally, but his ware descriptions suggest Anglo-American wares, an interpretation that is supported by the presence of the same New England wares in English occupational contexts, post-dating the Acadian presence at Beaubassin (Moussette 1970:200-201, 204-205).

Beaubassin's tin-glazed earthenwares are represented by monochrome and polychrome-painted faience and delftware (Moussette 1970:199-200). The latter type includes objects from Lambeth (Moussette 1970:43).

The majority of stonewares from Beaubassin are Rhenish coarse stonewares (Moussette 1970:119). Also present, are unglazed brown-bodied coarse stonewares (Moussette 1970:119). These objects are no doubt French and most likely from Normandy. Such stonewares have been discussed in detail at Place Royale in Quebec City (Décarie-Audet 1979: 25-32), and at Louisbourg and Grand Pré in Nova Scotia (Dunton 1971:23, fig. 14, p. 25; Hansen 1984:16,47; Lunn 1973:86, fig. 9).

Finally, a few vessels of 'Oriental Blue and White' porcelain were unearthed at Beaubassin (Moussette 1970:199). The availability and relative cost of porcelain have been mentioned already in my

discussion of the Melanson Settlement site. Hence, it is certain that Beaubassin Acadians could afford to buy porcelain, or had one or few porcelain objects among their possessions.

Glass. Harris' (1971) discussion of glass vessels from Beaubassin complements Moussette's (1970) ceramic study.

French or English black glass bottles were recovered at the site:

In each case the bottles have short bodies, much broader than they were high, with broad bases and push-up [kicks]. The necks are tapered and finished simply with a cracked-off lip and applied string rim, possibly duntooled on English bottles. (Harris 1971:15).

Other bottles were blown in a shoulder-high dip mould. "The resulting bottles are the common 'flower pot' bottles", with tapered bodies, long necks and 'cracked-off' lips with an applied string rim (Harris 1971:15-16). Harris (1971:16-18) also reports the presence of French blue-green flacons.

Table glass from Beaubassin includes "non-lead", clear drinking glasses: two tumblers and two stemmed drinking glasses (Harris 1971:18-19). The former objects include one tumbler with engraved decorations. The other glasses were not decorated. All of these glass objects appear to be from Continental Europe (Harris 1971:18-19).

Discussion. The ceramics and glass from Beaubassin essentially

duplicate the range of artifacts from Belleisle, with the exception of porcelains which were not identified at Belleisle.

Refined earthenware is similar at both locations, and Rhenish coarse stonewares are the most common stoneware type at Belleisle and Beaubassin. The glass differs from the Belleisle finds in that English lead-glass is absent at Beaubassin during the Acadian occupation.

The pattern of trade at Beaubassin bears a certain resemblance to the Belleisle pattern, although trade routes differed slightly. Moussette (1970: 203) suggests that French wares were obtained from Louisbourg, via Baye Verte, on the east coast of the Chignecto Isthmus. It is also possible that they were brought in from the town of Québec. English and Anglo-American pottery was purchased from New England traders (Moussette 1970:203), but it is also possible that certain ceramics were shipped from New England to Louisbourg, whence to Beaubassin, although their price, no doubt would exceed that of products shipped directly from New England. Rhenish stonewares could be from either Louisbourg or New England, while French stonewares are no doubt from a French source, via the town of Quebec or Louisbourg. The Oriental porcelain could have been supplied by English or French merchants. Finally, the glass bottles were produced in England and France, and could have been obtained from Louisbourg or New England merchants. It is plausible that the tableglass objects, derived from Continental Europe, came directly from France to the towns of Quebec or Louisbourg, thence to Acadia.

Jean-Pierre Roma's House, Trois-Rivières, Ile Saint-Jean, 1732-1745.

Location and History. Trois-Rivières, now Brudenell Point, is located at the junction of the rivers known today as the Brudenell, Montague and Cardigan, in eastern Prince Edward Island (Figure 25), (Blanchette 1981:73; Coleman 1970:92). In June of 1732, Jean-Pierre Roma, director of the Compagnie de l'Est de l'Ile Saint-Jean, landed in Trois-Rivières (Blanchette 1981:73), and with a number of workers began to clear land and erected a few buildings (Coleman 1970:92). By 1734, the settlement had flourished:

In two years, he (Roma) had built nine buildings, prepared land for the construction of a dock, cleared part of the land for agriculture and vegetable gardens, and constructed fishing boats and roads leading to important points in the north and east of the island, such as Havre Saint-Pierre, and in the west, Port La Joye (Blanchette 1981:73).

From about 1732 to 1745, Roma reported that a variety of vegetables, wheat and oats were harvested and imported; fish, especially cod, formed an important part of the settlers' diet, and pigs, sheep, cattle and fowl were kept (Blanchette 1981:73-74; Coleman 1970:95). In times of shortages, supplies were obtained from Québec, Louisbourg and the Southern Islands (Blanchette 1981:74).

Roma hoped that Trois-Rivières eventually would be self-sustaining and that he would be able to conduct a flourishing trade with Québec,

Louisbourg, and the French Caribbean Islands (Coleman 1970:95). His grandiose scheme, however, was beset by a number of difficulties from the very beginning: Roma had continual disagreements with his trading partners and the clergy; there were shipwrecks; plagues of mice and grasshoppers infested the supplies and crops (Coleman 1970:92-95). These difficulties culminated with the destruction of the settlement on June 20, 1745, by the victorious English troops from the first Louisbourg expedition (Coleman 1970:95). Trois-Rivières was not reoccupied during the French Regime.

Archaeology. From 1968 to 1970, archaeological excavations at the Roma site revealed a number of features and structures attributed to the 1732 to 1745 French occupation (Blanchette 1981:76). Roma's residence was supposedly a two-storey dwelling, about 7.5 by 26.2 M, of which 75 to 80 percent was excavated (Blanchette 1981:76-77). The house was occupied by eleven individuals: Jean-Pierre Roma, his family, clerks and workers (Blanchette 1981:75).

Ceramics. Blanchette's (1981) study of foodways in New France includes a ceramic vessel count for Roma's house (Table 10). cursory examination of Table 10, reveals a large variety of vessel forms at Roma, and the coarse earthenwares essentially duplicate the vessel forms at Belleisle: objects for food preparation, serving and storage (Tables 5 and 6). Roma's collection, however, includes one cooking pot and a porringer. The provenience of these wares is not documented, but Blanchette (1981:80) reports "Saintonge type" green-glazed pottery,

CERAMICS	VESSEL FORMS AND QUANTITY	WARE TYPE	REGION /COUNTRY	Mixing Bowls	Dish	Cooking Pot	Cooking Pot Lid	Jar	Bottle	P&td Dish	P&td Dish Lid	Pitcher	Sauce Boat	Sugar Bowl	Sugar Bowl Lid	Other Lid	Mustard Cup	Plate	Porringer	Bowl	Egg Cup	Straight-sided Cup	Globular Cup / Mug	Saucer	Chamber Pot	Pharmaceutical Pot	Ink Well	Unidentified	TOTAL	PERCENT	
				COARSE EARTHENWARE	Unspecified Source			7	4	1	8	1											1				2				
SUBTOTAL																													24	28.9	
REFINED EARTHENWARE	Brown Faience (France)					3	2			1	2																			8	
	Unspecified Source						1				2	2			5	1	3		2	2					1	4	1		24		
	SUBTOTAL																												32	38.6	
STONEWARE	French Coarse Stoneware							1	1		2												1				1		6		
	Chinese Stoneware							1																					1		
	SUBTOTAL																												7	8.4	
OTHER	Chinese Export Porcelain												2	2					1	6		1	8						20		
	SUBTOTAL																												20	24.1	
TOTAL				7	4	2	11	2	1	2	4	2	2	2	5	1	3		2	8	2	1	3	8	1	4	1	1	83	100	

TABLE 10. Ceramic Vessel count, Jean-Pierre Roma's House, P.E.I. (After Blanchette [1981:81, table 3; pp. 101-105, tables 8-12]).

perhaps Barton's (1981:16-20) type "L-2", other earthenwares from Staffordshire, the Mediterranean and Vallauris-Biot, but for the entire site rather than just Roma's house.

The Roma refined earthenwares include the varieties enumerated for Belleisle, but differ in that two sets of French eating plates were identified, as well as an ink well, a chamber pot and cooking vessels (Table 10). These cooking vessels are of "Brown Faience", which was produced solely in France (Blanchette 1981:23-26; Genêt 1980:31; Noel Hume 1960:559-561).; it is a type of refined earthenware having a harder fabric than other faience, a tin-glazed interior and an exterior glaze consisting mostly of lead oxide, (52-0%), manganese (7.0%) and powdered fusible brick (41.0%), (Brongniart 1807:336-337; 1854-II, 25-25). Such an exterior finish allows for the production of cooking vessels; since a lead-glazed faience can withstand direct heat from a fire, unlike other wares with tin-glazes on their exteriors (Blanchette 1981:35; Brongniart 1854, II:21; Genêt 1980:19; Noel Hume 1960:50).

Blanchette (1981:32) suggests that the development of Brown Faience coincided with the advent and evolution of French "Haute Cuisine", where meals were cooked over low heat. In fact, cookbooks written at the end of the seventeenth century and during the 1700s included many recipes which necessitated slow cooking: roasts, bouillons, sauces, meat and fish pies (pâtés), (Blanchette 1981:26-27). The same cookbooks were directed to members of the upper class and the clergy

-- people who could afford to buy meats and a variety of spices. Generally, such supplies were not common in French bourgeois and lower class households (Blanchette 1981:26). In New France, the "habitant" was perhaps in a better situation, having ample supplies of fish, pork and game: hares, partridges, grouse, ducks, geese and pigeons (Séguin 1969:65, 68-71). The Acadians consumed similar meats and fish (Coleman 1968:16-17). These, however, were always eaten with quantities of bread, a characteristic of the "Basse" rather than the "Haute Cuisine" (Blanchette 1981:26; Coleman 1968:14-16; Mandrou 1974: 141; Séguin 1969:71-72).

The Roma tin-glazed earthenwares reflect the upper class status of Jean-Pierre Roma. He could afford to purchase faience in sets and tended to follow contemporary culinary fads, as represented by the presence of Brown Faience at the site.

The stonewares from Roma's house differ totally from the Belleisle wares. Blanchette (1981:83) reports French coarse stonewares from "Beauvais, Normandy or the northwest of France with the exception of a Chinese jar." The identified vessel forms include jars, pitchers, a bottle and a globular cup (Table 10). Some Belleisle stonewares might have been used as pitchers, but the most common vessel forms are tankards and mugs (Tables 5 and 6). The most striking difference between the Roma and Belleisle stonewares is the absence of Rhenish products at the former site. Perhaps, this indicates Jean-Pierre Roma's preferences, or limited access to available wares. The former

is more likely, as Roma was a merchant and could have obtained Rhenish wares had he preferred such products, either from Louisbourg, Québec or even overseas.

The porcelains from Roma are mostly representative of the "K'ang - Hsi" period, 1662-1722, Ch'ing Dynasty (Blanchette 1981:83). These porcelains were exceptional products:

The impact of these non-Imperial wares, particularly those of the second half of the seventeenth century, on Europe was tremendous. For two centuries they were regarded as the summit of achievement of blue and white ... The K'ang Hsi blue and white reached a technical excellence that has never been surpassed (Garner 1970:43).

The objects recovered from the house excavation include vessels related solely to tea service, but teapots were not found. The presence of porcelains at Roma represent a special activity, tea drinking, limited it seems to Roma's family and entourage.

Glass. Eighteenth century glass finds from Roma are discussed by Alyluia (1981), Jones (1973) and McNally (1972). An exhaustive list by structure is provided by Blanchette (1981:85, table 5). Alyluia (1981:80) and Blanchette (1981:85, table 5) both report the same four liquor bottles from Roma's house: two French and two English bottles. The table glass is discussed by McNally (1972:4):

The first-half 18th century table glass recovered at the Roma site consists entirely of small tumblers and tumbler fragments of Continental European origin. All

but four fragments are from small wheel-engraved tumblers which we may loosely call "cheap Bohemian" glass.

Nevertheless, McNally (1971:9) indicates that while these glasses were "cheap", they were of the "latest fashion". Jean-Pierre Roma must have been informed about the latest European fashions and chose to obtain such drinking glasses.

Discussion. The varieties of ceramics and table glass found at the site indicate that Jean-Pierre Roma led the life of an upper class individual. Wealth differences between Roma and the Belleisle Acadians were made clear through a comparison of the pottery and glass from these sites: the presence of porcelains, faience in sets, Brown Faience and Bohemian glass tumblers at Roma indicate such differences. Furthermore, Roma preferred French coarse stonewares over Rhenish wares, and could afford goods from China shipped in stoneware from that country. Being a merchant, Roma must have been very much aware of the availability of certain material goods and followed the latest European fashions.

The Lamontagne House, Rimouski-Est, Québec, Post 1744.

Location and History. Rimouski-est is located on the south shore of the St. Lawrence River, about 300 km downriver from Québec City (Figure 25). Still standing today, the Lamontagne House lies approximately at

the eastern limit of the municipality of Rimouski-est.

Historians have hypothesized that the land where the house was erected was part of a wedding present to Basile Côté and Marie-Agnès Lepage, the daughter of Pierre Lepage, seigneur of Rimouski and Saint-Barnabé (Lapointe 1983:9; Thibault 1978:150). The house was most likely constructed shortly after September 27, 1744, the date when the wedding contract was deposited with the registrar. The same document contains information listing other gifts to the newly-wed couple, including:

... two oxen, one horse, two cows, six sheep or lambs, three pigs ready to be grainfed [,] one plough with furnishings, plus two years of edible goods during which two years, they [Côté and Lepage] will work [the land], one bed and furnishings, three sets of bed sheets [,] half a dozen table cloths, one dozen serviettes, one dozen eating plates, two bowls, one pan, one dozen spoons, one dozen forks, one kettle, one frying pan, one skillet, one ladle, one fire place grate [or grill] and one "poêle à feu" [copper or iron frying pan to cook over an open flame], (Lapointe 1983:9), (my translation).

This information is pertinent for our understanding of material and social life, in that we get an impression of some of the house's furnishings, supplies and livestock.

Like any other family living on a seigneurie, Côté and Lepage were responsible to the "seigneur". They could lead their animals to common pasture, the marsh hay on the beach front being part of the "seigneurial domain"; Also, the beach served as a public thoroughfare,

as an actual road was not built until 1810 (Lapointe 1983:13, 15-16). Boat travel from one farm to another was also common (Lapointe 1983:16). Farmers were permitted to fish, hunt and gather off their own concessions, but had to share their catch or the proceeds from fish and game with the seigneur (Lapointe 1983:13). Farmers cleared their own lands for lumber and firewood, but required the seigneur's consent to cut certain varieties of trees on their land and the seigneurie (Trudel 1971:14). Hardwood, especially oak, was reserved for shipbuilding by the French Crown (Trudel 1971:14).

While the seigneurie of Rimouski and Saint-Barnabé was conceded in 1688, its population was only 72 persons in 1760, the end of the French Regime (Lapointe 1983:18). It is possible that this low population can be attributed to the fact that the seigneurie was one of the youngest in New France, and to the availability of other concessions on sparsely populated seigneurie further up the St. Lawrence Valley, closer to the town of Québec.

Archaeology. The Lamontagne House represents a one-storey-and-one-half structure built on hand-hewn wooden sleepers with colombage pierroté walls -- equidistant upright beams with clay and stone infills -- and a high-pitched roof with dormers (Thibault 1978:150 and plate). The floor plan is rectangular, but actual measurements have not yet been provided (Lapointe 1983; Thibault 1978).

In 1980 and 1981, the house and surrounding land were the subject of

brief archaeological investigations (Lapointe 1983:22). Lapointe (1983:21), with a crew of five then returned to the site for six weeks in 1983. Features north and south of the house yielded a limited number of eighteenth century artifacts, including French coarse earthenware, Staffordshire slipwares, faience, English White Salt-Glazed stonewares, as well as container glass (Lapointe 1983:32, 34). Lapointe's (1983) initial artifact discussion does not include a vessel count, however, the variety of objects from the excavations coupled with Côté and Lepage's belongings listed in their wedding contract, inform us about possible vessel origins, forms and functions at the Lamontagne House from circa 1744 to 1760. The eating plates were most likely faience, bowls and pans either French or English, while the cooking vessels could have been copper or iron objects of unidentified origin.

Discussion. Before comparisons are made, it is important to remember that the wedding present to Côté and Lepage was very substantial. It seems that the newly-weds were extremely well-supplied: a parcel of land, oxen, a horse, cows ..., a plough, two years of edible goods, house furnishings, eating and cooking vessels (Lapointe 1983:9). It would have been very easy to begin a tenant's occupation with these goods and effects in the possession of Côté and Lepage. Acadian farmers might not have been so privileged, probably having to commence their farming activities with the bare essentials -- what they had brought overseas with them, borrowing certain goods and supplies until such time when they could obtain their own. In Acadia, some newly-wed

couples resided with their parents as an extension of the paternal house, and sometimes dyked areas were expanded to provide larger fields for the extended family (Coleman 1968:23-24).

There are, however, similarities between the contents of the Belleisle and the Lamontagne houses. The coarse earthenware varieties are similar, but New England and Mediterranean wares are absent at the latter site. This does not indicate similar preferences between both regions, but rather the availability of the same wares in Acadia and New France. It is probable that New England wares were not available to the Lamontagne House residents, or they have yet to be recovered from the excavations. The Mediterranean wares have been excavated at the "premier hôpital général de Montréal" and Place Royale, in Québec City (Moussette 1982:52).

Finally, the Côté and Lepage wedding contract includes a list of certain metal cooking vessels, evidence of which has not yet been recovered from the excavations.

John Hicks' House, St. Mary's City, Maryland, 1723-1743.

Location and History. Originally from Whitehaven, England, John Hicks was a sea captain who settled in St. Mary's City, Maryland, around 1723 (Carr 1973:82), (Figure 25).

He was then probably in his thirties. He had sailed ships in the Virginia trade and was the owner of a ship for a while ... he probably conducted a tobacco factorage business and store. He was certainly a tobacco planter, and at his death owned nineteen slaves worth nearly three hundred pounds sterling. By 1730 he was a county justice, and two years later, he began a three-year term as sheriff, a lucrative as well as powerful office. From 1738 through 1742 he was a judge of the provincial court. (Carr 1973:82).

Hicks' farm covered about 378 acres (c. 154 hc.) and he also owned 650 acres (c. 263.0 hc.) of timberland as well as 800 acres (c. 324.0 hc) in another county, leased to planters (Carr 1973:82). Hicks' plantation yielded mostly tobacco, corn and grain.

John Hicks led a very comfortable, if not a luxurious, life. The first house he occupied, from 1723 to 1743, was large, being c. 4.90 by 12.3 M, with a brick chimney at each end, and a possible addition to the rear; other houses in the area measured about 4.90 by 7.40 M (Carr 1973:83; Stone, Little and Israel 1973:103). Documentary evidence indicates that Hicks occupied another house in 1749; he had moved in 1742 or 1743, and had his first house dismantled.

Archaeology. In 1969, a sizable collection of artifacts was retrieved "during three months of excavations at the site of the first residence of Captain John Hicks" (Stone, Little and Israel 1973:103). Stone, Little and Israel (1973:103-104) produced a study of 277 identified vessels, out of the 414 ceramic objects recovered. Glass artifacts were not discussed beyond passing mention. Table 11 summarises the ceramics from Hicks' first house.

CERAMICS	WARE TYPE REGION / COUNTRY	VESSEL FORMS AND QUANTITY																				TOTAL	PERCENT						
		Pot	Pan	Cooking Pot	Saucepan	Bottle / Jug	Serving Pan	Platter	Plate	Dish	Bowl	Cup	Mug	Drinking Pot / Jug	Pitcher / Jug	Large Bowl	Small Bowl	Teapot	Tea cup	Saucer	Spoon Tray			Drug Jar	Ointment Pot / Egg Cup	Bleeding Bowl	Chamber Pot		
COARSE EARTHENWARE	England / New England	23	30	1	1	3	6		13	8	38	25	2	1													153		
		SUBTOTAL																										153	55.2
REFINED EARTHENWARE	Delftware						2	14	2	4		2	1	2	14	1	1	2	1	3	2	1					52		
	London (England)							x																					
	Bristol (England)							x							x		2	1									3		
	SUBTOTAL																										55	19.9	
STONEWARE	Coarse Grey (?)				2		1			4	24	3	1		3	3	3	2									46		
	Rhenish				2																						2		
	Westerwald											x																	
	English															x	x	x											
	SUBTOTAL																										48	17.3	
OTHER	Oriental Porcelain														5	9	6	1									21		
	SUBTOTAL																										21	7.6	
	TOTAL	23	30	1	1	7	6	2	15	15	12	2	5	3	2	22	4	15	11	1	1	5	2	1		277	100		

TABLE 11. Ceramic Vessel Count, John Hicks' House, Maryland (After, Stone, Little and Israel 1973). "X" denotes a variety of pottery and vessel shape included in the column count, immediately above. Each indicates that vessels already counted include objects from a number of regions or countries for which no specific counts have been provided.

Ceramics. John Hicks' pottery includes a large variety of vessel shapes and wares, not unlike Jean-Pierre Roma's ceramics from P.E.I. The coarse earthenwares came from Buckley, Staffordshire, North Devon and New England, and were used to prepare, cook, serve and store food (Stone, Little and Israel 1973:105-109). However, "sherds of relatively few cooking vessels were recovered. This is not surprising since Hicks' (sic) probate inventory lists 113 pounds of iron cooking pots and skillets" (Stone, Little and Israel 1973:107). Furthermore, pewter vessels are listed in the inventory (Stone, Little and Israel 1973:107).

The refined earthenwares are English products; certain plates are from London, while other plates, bowls, teacups and saucers are from Bristol (Table 11). Stone, Little and Israel (1973:109) report one dinner service in delftware. The service is quite ornate, unlike the majority of refined earthenwares from Belleisle.

The stonewares include both Rhenish and English vessels. Most drinking vessels are Rhenish, and objects from a number of tea services, including three teapots, are perhaps English White Salt-Glazed stoneware (Stone, Little and Israel 1973:109, 112). There are also two stoneware spoon trays (Table 11).

The porcelains include vessels solely for tea service: bowls, teacups and saucers, and one spoon tray. Tea pots are noticeably absent (Table 11). However, stoneware teapots were recovered.

The porcelains are Oriental, some vessels with monochrome and others with polychrome decorations (Stone, Little and Israel 1973:112, 115).

Discussion. John Hicks was an affluent member of the St. Mary's community, as reflected by the quality and quantity of ceramic ware recovered from the excavation of his first house. Furthermore, iron and pewter vessels complemented the ceramic objects from that site. Like Jean-Pierre Roma from P.E.I., the pottery from Hicks' house included more expensive wares like the porcelains, and an overall greater variety of coarse and refined earthenware vessel shapes.

How did John Hicks obtain these ceramics? It is possible that certain wares were obtained during his own travels, but Hicks probably knew various sea captains and merchants, from whom he could be informed of the latest available wares in the American Colonies and overseas.

The Belleisle ceramics differ from the John Hicks' finds in that the porcelains are absent and the refined earthenware vessel shapes are not as varied. Furthermore, delftwares do not occur in sets at Belleisle. John Hicks' coarse earthenwares comprise a greater variety of vessel forms, including cooking pots and an ointment pot -- absent in the Belleisle collection. Finally, Hicks earthenwares were supplemented with iron cooking vessels and pewter utilitarian objects.

Joseph Howland's House, Rocky Nook, Kingston, Massachusetts, 1675-1725.

Location and History. The very limited locational and historical information provided by Brown (1973) and Deetz (1973), does not allow for a concise summary of the Joseph Howland site. It is known, however, that Howland resided in a farmhouse in Kingston, Plymouth Colony area in southeastern Massachusetts, between the years 1675 and 1725 (Figure 25), (Deetz 1973:15; 21, fig. 1; 22, Table 1).

Archaeology. Howland's house was excavated by Deetz (1973:22, table 1, C-5), sometime before 1973. Information regarding the house style, structural features and the discovery of the artifacts is lacking from Deetz' (1973) study. However, he provides the ceramic styles and frequencies in the form of ratios, as explained below:

Relative frequencies of each pottery type are based on the relative popularity [occurrence at the site] of the type at a given site, with the most popular [most frequently occurring] receiving a score of 12 in each instance, represented by a bar 12 units wide, and others rated on an adjusted scale ranging down to a score of 1, represented by a bar only 1 unit wide, denoting the least popular [least frequently occurring]. (The measurement of 12 units is based on the maximum number of types from one site). (Deetz 1973:20).

Because of Deetz's choice of data manipulation and style of presentation, data from the Belleisle and Grand Pré farmsteads were summarized using ratios and the ware types (coarse and refined

earthenwares, and stonewares) as presented in Deetz's (1973) study (Table 12).

According to Deetz (1973:20), the higher ratios denote the "most popular" wares at Joseph Howland's House. His use of "most popular" suggests "most preferred". While there is no denial that certain wares might be more popular than others, archaeologists must consider that certain ceramics from any site might occur more frequently than others, because of their existence, availability, price, need, usage and breakage, as well as recovery from excavations. Deetz (1973) seems to ignore or fails to recognize this. In her study of documentary evidence for a number of sites in the Plymouth Colony, Brown (1973) indicates that certain wares appear more popular during certain periods than in others. While she mentions that particular pottery types did not exist before a definite date, she fails like Deetz (1973) to use such information and makes inappropriate usage of the word "popular". Both should be using "available" or "present at the site or in the inventory", rather than "most popular".

The ratios themselves are misleading, and perhaps not informative. Those for Grand Pré, House 2, indicate 12:12, 12:6 or 6:6 relationships. We know from Tables 8 and 9, that the numbers being compared are actually 2:2, 2:1 or 1:1. The reader can always obtain an artifact count for the Belleisle or Grand Pré assemblages by consulting Tables 5, 6, 8 and 9, but the only available information from Deetz (1973:21, fig. 1) is the ratio and ware types.

WARES SITES DATES SOURCE	COARSE EARTHENWARE			REFINED EARTHENWARE			STONEWARE			
	BELLEISLE HOUSE 1 (1680-1755)	BELLEISLE HOUSE 2 (1680-1755)	GRAND PRE HOUSE 1 (1680-1725) (HANSEN 1984)	GRAND PRE HOUSE 2 (1680-1725) (HANSEN 1984)	JOSEPH HOWLAND'S HOUSE, KINGSTON, MASS. (1675-1725) (DEETZ 1973)	BELLEISLE HOUSE 1 (1680-1755)	BELLEISLE HOUSE 2 (1680-1755)	GRAND PRE HOUSE 1 (1680-1725) (HANSEN 1984)	GRAND PRE HOUSE 2 (1680-1725) (HANSEN 1984)	JOSEPH HOWLAND'S HOUSE, KINGSTON, MASS. (1675-1725) (DEETZ 1973)
SAINTONGE	12.0	12.0	12.0	7.2	1.0					
BEAUVAISIS	1.0	1.5	6.0	4.8	3.0					
VALLAURIS - BIOT	1.6	4.5		2.4						
FRENCH C.E., SOURCE UNKNOWN				2.4						
NORTHERN MEDITERRANEAN	4.8	3.0		2.4						
IBERIAN PENINSULA / ITALY	1.6									
NORTH DEVONSHIRE SGRAFITTO					1.0					
NORTH DEVONSHIRE GRAVEL - TEMPERED WARE					3.0					
BUCKLEY	1.0	1.5								
STAFFORDSHIRE				2.4						
ENGLISH COMBED SLIPWARE					11.0					
ENGLISH TRAILED SLIPWARE		1.5			1.5					
ENGLISH SLIPWARE		1.5			1.5					
ENGLISH MOTTLED WARE			6.0	2.4						
NEW ENGLAND MOTTLED WARE	1.6	1.5			4.0					
SLIP-DECORATED NEW ENGLAND WARE		1.5		2.4	1.5					
NEW ENGLAND PLAIN COARSE EARTHENWARE	7.2	3.0	6.0	12.0	12.0					
UNSPECIFIED / UNIDENTIFIED SOURCE	1.0									
FAIENCE	1.6	1.5		4.8						
DELFTWARE	3.2	7.5			10.5					
REFINED EARTHENWARE, UNSPECIFIED / UNIDENTIFIED SOURCE	5.6	7.5	6.0	4.8						
FRENCH STONEWARE, NORMANDY				2.4						
ENGLISH BROWN STONEWARE	2.4	4.5		4.8						
ENGLISH WHITE SALT-GLAZED (GREY-BROWN CORE)	1.0	1.5		2.4	1.0					
ENGLISH WHITE SALT-GLAZED (WHITE)			6.0	2.4						
RHENISH-BROWN STONEWARE					4.5					
RHENISH-GREY STONEWARE	4.8	7.5	12.0	7.2	5.0					

TABLE 12. Pottery Ratios for the Belleisle and Grand Pré Houses compared with the Joseph Howland's House.

Deetz's scores are forced. For example, the score of "1.0" for the Joseph Howland's house indicates the least frequently occurring ware at the site is represented by perhaps one or more vessels. The score of "1.0" at Belleisle House 1 -- the only other site for which the score is used -- does represent one vessel in each of the categories where it appears. The actual calculated score for the Belleisle House 1, Beaubassin, Buckley and unidentified coarse earthenwares, as well as a variety of English White Salt-Glazed stoneware, is "0.8" rather than "1.0". Other scores for the least frequently occurring wares are: "1.5" for Belleisle House 2, "6.0" for Grant Pré House 1, and "2.4" for Grand Pré House 2; all these scores represent a single vessel in each of the sites listed, using Deetz's (1973) technique of data manipulation. If the actual figure for the most frequently occurring ware for the Acadian sites were used as scores, one would obtain a high score of "15.0" for Belleisle House 1, "8.0" for House 2, "2.0" and "3.0" respectively for the Grand Pré houses (Tables 5, 6, 8 and 9).

Deetz's (1973) categorization of ceramics into regions and countries of origin is quite specific for the coarse earthenwares and stonewares from the John Howland site. His classification of tin-glazed refined earthenwares into one class "delftware" is, however, general and does not allow detailed comparisons with other sites.

The foregoing shows that a comparative discussion of Howland's ceramics must be based on the ware categories and their ratios, since a ceramic count is not available and one major ceramic type, the

delftware, have not been classified into subcategories.

Discussion. The location of the Joseph Howland site suggests that New England and English coarse earthenwares should constitute the most common wares at the site. This is supported by the ratios in Table 12. The refined earthenwares are English, but the most common stonewares are Rhenish products (Table 12). Deetz (1973:28) reports 15 plates identified at the Joseph Howland site as fine imported wares, probably delftware (Deetz 1973:28). The coarse earthenwares were used mainly for what Deetz (1973:28) refers to as "dairying", including milkpans, colanders, jars and pots. The stonewares are not discussed.

The Belleisle and Grand Pré ceramic collection include similar vessels. However, there are not as many "fine wares" as described by Deetz (1973). Otherwise, the ware types encountered at the five sites suggest a usual predominance of coarse earthenwares followed by delftware and stonewares. Grand Pré House 1 is an exception, because of its small sample size. Generally speaking, however, the Acadian farmers and the New England farmer, Joseph Howland, were equipped with the same basic ceramics: mostly coarse earthenwares, and sometimes more fine wares than stonewares, or an equal number of these two latter types of pottery.

Rural Residents of Meaux, France, c. 1700 and c. 1750.

Location and History. Meaux is located 25 km northeast of Paris, France (Figure 12). During the eighteenth century, it was a town surrounded by farming communities. Micheline Baulant (1975) selected this area to study changes in economic life, from circa 1700 to circa 1750. Her study is based on after-death inventories.

The inventories. After-death inventories are essentially the only remaining written records of French rural residents owning less than 100 hc. of land. Such records include the monetary value of material goods owned by a variety of individuals: ploughmen, farmers, innkeepers, village priests and rural craftsmen (Baulant 1975:505). Baulant (1975:505) selected two groups of 35 inventories each: one for the years 1695 to 1710 and the other for 1749 to 1755. Similar objects, faience tableware for example, were estimated to be of equal value, regardless of the economic status of the individual whose goods were inventoried (Baulant 1975:511). Larger quantities, however, were recorded in affluent households (Baulant 1975:512).

The estimated prices in the inventories appear to be quite accurate as auction records show the sale price of an object to be equal to or higher than its inventoried value (Baulant 1975:508). Prices, however, increased from 1700 to 1750, and the increase varied from one variety

of objects to another. For this reason and because of the lack of information regarding price fluctuations for many objects, Baulant (1975:508) compared the average value of a category of objects to the total value of goods inventoried in similar households, and for both periods: 1695 to 1710 and 1749 to 1755. Baulant's (1975) summaries of household goods are presented below:

Table 13. Value of household goods, Meaux. (Adapted from Baulant [1975:510, 512]).

ECONOMIC STATUS OR OCCUPATION	1695 to 1710 PERCENT	1749 to 1755 PERCENT
Rich People	4.0	2.0
Ploughmen	2.0	2.0
Poor People	7.0	12.0
Wine Growers	4.0	6.0

Table 13 shows that household goods -- oven and fireplace implements, lighting equipment, metal cooking pots, pewter dishes, pottery and glass objects -- only form a small portion of any house contents at the time of inventory. Also, poor peoples' household goods form a greater percentage of the total value of the inventories. Higher percentages, however, do not signify greater quantities. It would have been interesting to know the actual quantities and estimated costs of the objects from one household to the next, but Baulant (1975:510, 512) does not list quantities. However, she mentions an increase over time in the quantity of lighting devices and pottery, from about 1700 to circa 1750. Of these two types of objects, there is a marked increase in the acquisition of

**faience vessels:**

In 1700, one found only a few faience vessels in four households (three ploughmen while the innkeeper did not have any)... For 1750, we have counted 141 plates, 30 hollow dishes, 35 bowls, 24 jars ... etc ... distributed in different quantities in 20 households. This increase continues until the end of the century, when any wine grower had seven or eight plates, one bowl and salad bowls ... (Baulant 1975:514), (my translation).

This indicates that around 1700, 11.5% (4/35) households possessed faience, 57.1% (20/35) about 1750, and that faience was common in every household by 1800. It is tempting to suggest that these figures indicate an amelioration in the overall economy of rural Meaux, but this was not the case. At the end of the seventeenth century, French faience factories catered only to the upper class and nobility (Chapelot 1978:105). During the second and third decades of the 1700s French merchants established many factories and distributed faience to various regions of France and elsewhere (Chapelot 1978:105). Towards the end of the eighteenth century, however, more durable imported wares gradually replaced faience objects and the latter pottery must have been less costly, and therefore more easily obtained (Genêt 1977:18; Lane 1970:17).

Discussion. How do the Acadians compare to the rural population of Meaux? The archaeological evidence indicates that the Acadians at Melanson, Belleisle, Grand Pré and Beaubassin all owned tin-glazed refined earthenwares. Generally speaking, this would suggest that they were more comfortable financially than the Meaux residents at

least those who did not have faience. It must be emphasized that the sample sizes for Meaux and the Acadian examples are very small and thus, until large scale studies are undertaken in both Acadia and France, it is somewhat premature to develop more definitive statements regarding these economies.

#### General Discussion and Summary

The Belleisle ceramic and glass finds have been compared with other collections known from historical documents and from archaeology. Now, general statements can be developed, although this is not an easy exercise as the data vary from site to site, and from author to author. Nevertheless, a comprehensive summary can be attempted.

Ceramics. Upon cursory examination of Table 14, one can generalize that the occupants of each site had coarse and refined earthenwares, as well as stonewares, and that only merchants owned porcelains. However, we know that this ware was recovered from the Brown Farm, the Melanson Settlement site and from Beaubassin. Thus, some Acadians could afford porcelains while others could not. It must be reiterated, however, that porcelain finds in Acadia are few and do not constitute sets as they do in merchants' households.

There are more coarse earthenwares at Belleisle than at Grand Pré.

TABLE 14. Vessel Count Summaries.

SITES LOCATION OCCUPATION DATES	COARSE EARTHENWARE		REFINED EARTHENWARE		STONEWARE		PORCELAIN		TOTALS		
	WARES, QUANTITY AND PERCENT	QTY	%	QTY	%	QTY	%	QTY	%	QTY	%
BELLEISLE HOUSE 1 ANNAPOLIS VALLEY, N.S. (1680-1755)		39	62.0	14	22.2	10	15.8	0	0	63	100.0
BELLEISLE HOUSE 2 ANNAPOLIS VALLEY, N.S. (1680-1755)		21	51.2	11	26.8	9	22.0	0	0	41	100.0
GRAND PRÉ HOUSE 1 MINAS BASIN, N.S. (1680-1755)		5	55.6	1	11.1	3	33.3	0	0	9	100.0
GRAND PRÉ HOUSE 2 MINAS BASIN, N.S. (1680-1755)		16	57.1	4	14.3	8	28.6	0	0	28	100.0
JEAN-PIERRE ROMA'S HOUSE TROIS-RIVIÈRES, P.E.I. (1732-1745)		24	28.9	32	38.6	7	8.4	20	24.1	83	100.0
JOHN HICKS' HOUSE MARYLAND (1723-1743)		153	55.2	55	19.9	48	17.3	21	7.6	277	100.0

However, we know that the contents of the Grand Pré houses were removed before they were abandoned. Coarse earthenware at Belleisle varies because House 1 was subjected to more intensive excavations than House 2. Other factors such as family size and the breakage frequency could also affect the final counts. The quantity of coarse earthenwares at Roma is small (Table 14). We must remember, however, that food preparation and cooking vessels were included in the refined earthenware count, in the form of brown faience cooking pots and "pâté" dishes. John Hicks' coarse earthenwares comprise 153 vessels (Table 11). It is probable that they include objects used for food consumption by his servants and slaves. Furthermore, Hicks was at different times a merchant, county justice, sheriff and judge; undoubtedly, he would receive guests, necessitating the preparation of various of victuals, and therefore probably needing a greater quantity of coarse earthenwares.

The coarse earthenwares varieties from Belleisle include French, Mediterranean, English and Anglo-American products. This is also true of the Melanson Settlement site and Grand Pré. Both Beaubassin in Nova Scotia and the Lamontagne House in Québec did not yield Mediterranean pottery, and New England wares were not recovered from the St. Lawrence River site. The John Hicks and Joseph Howland houses included English and Anglo-American coarse earthenwares.

The refined earthenwares from Belleisle include vessels for food storage and service, with the exception of a pharmaceutical pot from

House 2. The Grand Pré assemblage lack eating plates reflecting the removal of the houses' contents, but a chamber pot, a pharmaceutical pot and pitchers have been identified. The refined earthenwares from Roma include cooking and serving vessels, as well as an ink well, a chamber pot and pharmaceutical pots. The Jean-Pierre Roma's and John Hicks' house also included platters, teacups and a teapot, saucers, pharmaceutical pots and a chamber pot.

Refined earthenwares are represented by English products on Anglo-American sites, by French objects at the Lamontagne House and the Melanson Settlement site, and by both delftware and faience at Belleisle and Beaubassin. The source of some Grand Pré refined earthenwares could be French, but the origins of most vessels remain unknown.

The stonewares from Belleisle are tankards, mugs or jugs. The artifacts from the Brown farm include mugs or tankards and a chamber pot. A bowl (?), mugs or tankards and pitchers were recovered at Grand Pré. Jean-Pierre Roma owned stoneware jars, a bottle, pitchers and a globular cup. The collection from Hicks' house comprises bottles or jugs, a plate, drinking vessels, saucers, bowls and teapots.

In Acadia and the American colonies, Rhenish stonewares occur in quantity, except at Roma's house, where French stonewares and a Chinese jar were recovered. French stonewares are absent from the Anglo-American sites, but have been reported at Melanson, Grand Pré

and Beaubassin. English coarse stonewares were recovered at Belleisle, Melanson, Grand Pré, and in the Anglo-American collections. All refined stonewares are English products. They are present at all locations, except at Roma and are not associated with Acadians sites at Beaubassin. American imitations of English stonewares were unearthed at the Brown Farm and Belleisle House 2.

Glass. At the sites discussed the quantity of glass is much smaller than the ceramic counts for each site. Also, the discussion must be restricted to the sites where glass finds have been reported, thereby excluding the Brown Farm, John Hicks' and Joseph Howland's houses.

Reconstructed and diagnostic fragments indicate that both English and French liquor bottles were used in Acadia. Verre fougère containers were recovered from all sites, except Roma. Tumblers and stemmed-drinking glasses occur on all sites. A verre fougère stemmed glass was recovered at Belleisle; English crystals were unearthed at Belleisle and Grand Pré; continental crystal glasses were reported at Beaubassin and Bohemian glass at Roma. Unidentified drinking glasses have been recovered at Melanson where mirror glass was also found. Scented water or perfume bottles were recovered from Belleisle House 2. Window glass fragments were unearthed at Belleisle, Melanson, Grand Pré and Roma.

The above information indicates that container glass was used at all the sites enumerated, but did not occur in quantity. The table glass objects come from a variety of sources and constitute only a minor portion of each assemblage, except at Roma where a set of six glasses were identified. Mirror glass and scented-water containers are very rare in Acadia. Most sites, however, yielded window-glass.

House Styles. The information regarding the house styles is limited. However, general statements can be made, based on the available information. Data are lacking for the Brown Farm, Beaubassin and the Joseph Howland's site. House dimensions are available for four houses only: Belleisle House 1, Grand Pré House 2, Jean-Pierre Roma's and John Hicks' houses.

Belleisle House 1 had a rectangular floor plan (7.5 X 11.5 M) with wooden walls covered on their interior side with a clay wash (Christianson 1984b:21,24). The walls were erected on a fieldstone and clay base, consisting of about three courses of stones. The interior of the house probably consisted of a single common room, used as a kitchen and living area during the day and a common bedroom at night. The loft would have served as a storage and sleeping area. There was an oven complex at the west end of the house, and an extension to the east of this structure. Belleisle House 2, probably resembled House 1 in many respects, as surficial features prior to

excavations were essentially the same. Both houses appear to have had partial cellars or crawl spaces, occupying the eastern half of the houses' interiors.

The Grand Pré houses were not as well built as the Belleisle homes. They both lacked stone foundations. House 1 had a fireplace and House 2 an interior hearth. The latter house was rectangular, being about 7.5 by 15.0 M (Korvemaker 1972:13). However, both Grand Pré structures also had partial cellars in their eastern half.

The Lamontagne House was a one-storey-and-one-half structure. It appears to be as large if not bigger than the Belleisle and Grand Pré Houses (Thibault 1978:150 and plate). However actual measurements are not available. The equipment listed in Côté and Lepage's wedding contract suggest that the house had a fireplace.

Jean-Pierre Roma's house was a two-storey structure, with a rectangular floor plan (circa 7.5 X 26.2 M). Roma, his family and employees resided in the house. There were also other buildings where equipment was kept and food stored (Blanchette 1981:73-75). The house alone, however, was much larger than the houses at Belleisle.

John Hicks' home had a rectangular floor plan (circa 4.90 X 12.3 M) with a chimney at either end, and an extension to the rear (Stone,

Little and Israel 1973:103). Other houses in the community were about 4.90 by 7.40 M, (Carr 1973:83), smaller than Belleisle House 1. It is suspected that Hicks' house included a large kitchen, probably acting as servants' quarters but this is not proven.

The information presented above indicates that the occupants of Belleisle House 1 and perhaps those from House 2 were living under favourable conditions. Their houses appear well constructed and heated by an oven complex and fireplace. The same houses were of better construction than the Grand Pré structures, and House 1 was larger than those found in one of the Anglo-American community. However, House 1 is much smaller and less complex than Jean-Pierre Roma's and John Hicks' houses, both prominent members of their respective communities.

Summary. How do the Belleisle Acadians compare with other rural residents? We have seen that not all Acadians were equal; some had more than others. Certain Acadians had porcelains while others did not. House styles differed and therefore so did the degree of comfort of the people who resided in them. The Acadians at Belleisle seem to have led a comfortable life. They resided in sturdy homes and had household goods of varying quality. Furthermore, there is no doubt that some of the wares they possessed were experimental pieces and seconds from European and Anglo-American potteryworks. But it seems,

for example, that just about everyone in the samples reviewed possessed such objects. The exceptions are the merchants, who of course, could afford better material goods or in the latest fashions being very comfortable financially and possessing information regarding the availability of goods from European markets. However, the Acadians took advantage of both the French and English trading networks, being exposed to a greater variety of objects than the rural residents of the St. Lawrence Valley and Anglo-American colonies. Acadians prepared their food with French, Mediterranean, English and Neo-English wares, and consumed them with French, English and Rhenish vessels.

Status differences are reflected by the variety and quantity of wares from one site to the next. It seems that no Acadian could afford refined earthenwares and porcelains in sets, but some could obtain more expensive objects than others: the porcelains at Melanson, the Brown Farm and Beaubassin, and the ornate refined earthenware from House 2 at Belleisle are examples of this. Certain vessels, however, seem to have been available to everyone, regardless of standing in any community coarse earthenwares for food preparation and serving, refined earthenware eating plates and stoneware drinking vessels.

The Acadians at Belleisle and Grand Pré were certainly more comfortable financially than the residents of Meaux in France. Everyone had refined earthenwares, while in Meaux around 1700, only a few people had such wares, with a gradual increase registered around 1750 (Baulant 1975:514).

## CHAPTER SIX

## DISCUSSION AND CONCLUSIONS

Man can never be reduced to one personality who fits into an acceptable simplification; though many people have pursued this false hope. No sooner has one approached even the simplest aspect of his life than one finds his customary complexity there too (Braudel 1981:562).

The analysis of ceramic and glass artifacts from Belleisle has shown that, with the exception of some New England pottery, they originate from various, small and large operations in Western Europe. Comparisons with other contemporaneous collections show that the Belleisle Acadians were of equal wealth or more affluent than other farmers in Acadia and elsewhere, including rural France. However, the Acadians' standard of living was low compared to that of French and New England merchants.

Now that we have a better understanding of Acadian material life, we will discuss the general trade from Western Europe to understand how the Belleisle artifacts came to the New World and to gauge the importance of the Acadian market. This discussion summarizes the influences of the potteries of New France and New England on Acadian material life, and describes the ocean voyages undertaken by traders in the eighteenth century, to help determine how the Belleisle ceramics and glass probably arrived in Acadia. General qualities of the ceramics and glass from both Belleisle houses are compared with artifacts from other regions in order to generate statements about

Acadian trade and everyday life.

#### FRENCH TRADE

French trade with New France and Acadia was secondary to France's colonial trade with the Levant, the French West Indies, Martinique and the Carribean (Léon 1970:500-501; Léon and Carrière 1970:195, 199-200). Furthermore, trading activities at La Rochelle, the French port most active in trade with New France, fluctuated with irregular shipments during the 1600s and early 1700s; by the mid-eighteenth century, Bordeaux had absorbed a larger share of the market in New France (Rambert 1959:471; Robert 1960:13). The ports of Rouen, Le Havre and Marseille did not trade directly with New France, although an occasional ship sailed from these ports to Louisbourg and the town of Quebec (Garnault 1891:192; Moore 1975:14, chart 4).

The rarity of cargoes for ships returning to France discouraged many shipowners from engaging in the New France trade. Goods from Rouen, Le Havre and Marseille were shipped to La Rochelle and Bordeaux by coaster, or by land and river transport (Dardel 1963:154-155; Rambert 1959:471; Robert 1960:64).

In La Rochelle, as at other major eighteenth-century European ports, warehouses and storage depots were used widely (Braudel 1982:96), as exemplified by the Hannong faience factory of Strasbourg (France) warehouses at La Rochelle (Chapelot et al. 1972:87). Ships

from Rouen and Marseille called at La Rochelle to unload or to complete their cargoes for overseas voyages; therefore, faience from Nevers could have been shipped via Marseille, and Rouen faience directly from Rouen (Chapelot et al. 1972:87). Moreover, merchants and shipowners supplied the capital to build faience factories in the ports of Bordeaux, La Rochelle, Nantes and Rouen (Chapelot 1978:105-106).

Common earthenwares were supplied from potteries located in the hinterlands of Marseille (Vallauris-Biot), La Rochelle and Rochefort (Saintonge), as well as Dieppe and Rouen (Beauvaisis) (Barton 1977; 1981; Chapelot 1978; Moussette 1982). Wares from these various regions may have been shipped to La Rochelle for storage in warehouses. We know that La Rochelle received quantities of Rhenish stonewares from Holland (Chapelot et al. 1972: 86-87).

Ceramics and glass did not form the bulk of cargoes shipped to New France. Instead, such goods appear to have been transported as general cargo along with many other trade items. Invariably, descriptions of such goods are very general. For example, the eighteenth-century French company 'Dugard' shipped trade goods from Le Havre, La Rochelle and Bordeaux, and listed among a multitude of linen and other fabrics, clothing, raw materials, tools and guns, were basins (perhaps of copper or iron rather than pottery), mirrors, drinking glasses, faience, and "window panes from Dieppe" (Dardel 1963:153).

Alone, common earthenware pots, bricks and tiles were not exotic products. Quantities of tiles and pottery were shipped from Bordeaux to La Rochelle and its environs during slow periods of trading activities, usually in summer, by small boats bringing fish and salt to Bordeaux and seeking return cargoes (Huetz de Lemp 1975:306-308). There is also some evidence to suggest that pottery and glass for resale in New France was not loaded aboard large merchantships. After the Treaty of Utrecht (1713), France lost Newfoundland and more fishing boats came to Cape Breton and the Gaspé Peninsula to organize shore stations, closer to permanent settlements (Rambert 1959:476). This is important when one considers the apparent low cost of common earthenware, and realizes that most of the ships not carrying cargoes for French troops in Canada seemed to be small vessels and fishing boats (Moore 1975:4; Proulx 1984:26, 32; Robert 1960:15).

Another possibility exists concerning the movement of pottery and glass objects overseas. Such goods may have been included under the rubric "pacotilles" in ships' manifests. Pacotilles were private cargoes shipped overseas by sailors, passengers, shipowners and merchants for personal profit through resale, and in certain instances, freight was claimed by captains and sailors free of charges (Dardel 1963:155; Littré 1875:896). Rouen merchants doing business with New France sent pacotilles via La Rochelle (Dardel 1963:155; Robert 1960:64). Moore (1975:v-vi) claims that one third of all the freight brought to the Fortress of Louisbourg in Cape Breton, was in pacotilles.

Earthenwares and glass arriving in the towns of Québec and Louisbourg probably were stored in warehouses to be sold later, or were sold directly from the ship. Certain goods may have been ordered by local merchants, or intended to be sold by a merchant's agent. For example, in 1700, the Québec Seminary bought 50 dozen terrines (mixing bowls), 25 dozen from Monsieur Martel, and another 25 dozen from Sieur Vital (Barbeau 1941:13). These individuals are not listed as potters in period documents (Desjardins 1980; Langlois 1978), but a merchant named Raymond Martel resided in the town of Québec in 1700 (Bryden 1982:458). Martel may be one of the two men named in the transaction. The wares sold to the Québec Seminary may have been English, French, Italian and Québec products, as indicated by current archaeological evidence (Barton 1981; Chapelot 1978; Moussette 1982). Tin-glazed refined earthenwares found at Québec, however, are predominantly French. The analysis of 29 collections from Place Royale shows that during the first half of the eighteenth century, French products dominated the collections followed by a very few Spanish and Dutch refined earthenwares (Genêt 1980:80).

French products also dominated the Louisbourg collections, although faience vessels were very plain, being from factories of lesser importance, imitating and simplifying the styles from major French factories (Dunton 1971; 15-16). Furthermore, "seconds" were sent to Louisbourg (Dunton 1971:21).

It is difficult to gauge the impact of the Québec potteries on the

importation of common earthenwares from Europe. However, the local wares were meeting various demands, and catering to a geographically immediate market. Québec coarse earthenwares have been recovered as far west as Fort Michilimackinac in Michigan, and east at the 'Penouille 3' site, across the bay from Gaspé in Quebec (Blanchette 1975:90; Miller and Stone 1970:52, 57; Moussette 1982:28-32, 41-42). Significantly, Québec wares have not been found in pre-1760 archaeological contexts in Acadia or elsewhere in the Maritimes. It is known, however, that in 1752 an unspecified quantity of bricks was sent from Québec to Louisbourg (Moore 1975:60). The bricks could have been French rather Québec products, but in the eighteenth century, bricks were made in New France and "brought to Quebec for export" (Reid 1953:29).

#### ENGLISH TRADE

Until the end of the French Regime (1760) New France was relatively unimportant to the English market according to Schumpeter (1960:17, table V; 18, table VI). However, New England traded actively with Acadia in the seventeenth and eighteenth centuries (Chapters 2 and 3) and English wares did reach Acadia (Tables 5 and 6). England's concern, however, was to control the colonial economies (Mathias 1983:78; Noel Hume 1961:94), by discouraging the development of local industries in New England.

The most active British sea port in the eighteenth century was London, which secured at least 50 percent of the British exports, re-exports and imports from circa 1700 to 1780 (Mathias 1983:84-85; Schumpeter 1960:9). Also, in the early 1700s, goods were shipped to Anglo-American ports from Bristol, Liverpool and Whitehaven, but these combined volumes traded did not surpass London's (Davis 1962:299; Mathias 1983:84). Ceramics and glass from these ports, except Whitehaven, or their hinterlands occur in the Belleisle Acadian artifact collections.

In London, potters were established on or nearby the shores of the Thames River where clay was delivered to their yards (Edwards 1974:25). This location permitted the shipment of pottery by boat, and during the seventeenth and eighteenth centuries, many of the London potteries' owners and managers simply hired potters to run their works or leased the factories to potters (Edwards 1974:22). London's "Glass Sellers' Company" for instance, imported wares from the continent, attempted to control the supply of pots from certain London shops, and purchased other ceramics from independent London potters (Edwards 1974:22-24). The London pottery business was, thus, very complex indeed.

The situation was simpler in other potting centres. In Staffordshire and Buckley, small factories owned by potters, catered mostly to the local demand until about 1690 when they expanded their operations after roads and canals had been constructed (Davey 1975a;

1976; Weatherill 1971:145-146; 1983). Accordingly, wares from these potteries were exported predominantly from Liverpool, Bristol and London, at times supplemented with wares made in the latter two cities, before coming overseas (P.J. Davey, February 6, 1986: personal communication; Noel Hume 1970a:133-135; Weatherill 1983).

The artifact evidence discussed in chapter 5 shows that English ceramics and glass were common finds at both eighteenth-century French and English sites in eastern North America. It is probable that like continental glass and pottery shipped directly from France, the English exports constituted part of ships' cargoes along with many other goods destined for the northeast. Pottery even constituted ships' ballast: "Bristol bricks and tiles, it is said were the chief ballast of West Indies ships" (Walker 1977:646-647).

British eighteenth-century trade with new England appears relatively unimportant compared to the total trading activities of the mother country. "The northern colonies (U.S.) traded with England in quite small volume and to an increasing extent in ships owned in the ports of New England" (Davis 1962:267).

In New England the most active potteries were located in or near major ports. In Charlestown (1709-1775), across the harbour from Boston, eight shops were operating simultaneously in 1750 (Watkins 1950:24). The Bailey pottery (1723-1799) supplied the New England coast from Newbury Port (Watkins 1950:48-61). The ceramic finds at

Belleisle attributed to New England resemble extant specimens from Newbrury Port and Charlestown.

#### TRADE AND TRIANGULAR CIRCUITS

The possible and probable distribution routes for the Belleisle ceramics have been outlined above. Now, it is necessary to consider the modes of trans-Atlantic transport for such items. The activities of French fishing boats conveying trade goods to the east coast on their annual journeys to shore stations in Cape Breton and Gaspé have been mentioned already. This activity constituted one method of shipping European wares to the New World, especially after the 1713 Treaty of Utrecht, when more shore stations were established in the Maritimes.

Two other forms of traffic have been identified: "trade circuits" and "triangular circuits" (Braudel 1982:140-141). A trade circuit (Braudel 1982:140) consisted of a return trip by a merchant, for example, from La Rochelle to Québec, possibly represented by an agent. This circuit involved four successive deals, where the merchant initially bought trade goods at La Rochelle to sell in Québec, thereby creating a new demand for the goods. Once sold at Québec, in exchange for timber for example, a demand would be created for more timber with the promise to bring more La Rochelle trade goods (Braudel 1982:140). The entire operation was considered a success only if the timber sold for a profit, above all costs and expenses

incurred by the merchant during a particular trade circuit (Braudel 1982:140-141).

Additionally, I would suggest that trips from Québec or New England to Acadia, or Louisbourg constituted trade circuits. In the same vein, trade circuits probably existed between Acadia and Québec, Louisbourg or New England.

The triangular circuit "was the classic pattern in the Atlantic in the seventeenth and eighteenth centuries" (Braudel 1982:141). For example:

Captain de la Roche Couvert was asked by the owners of the vessel Saint Louis to make a round about voyage in 1743: to sail to Acadia (Canada) and pick up a cargo of cod; to sell it in Guadeloupe and here to take on sugar, which he was to bring back to Le Havre (Braudel 1982:141).

This agreement was made at Le Havre on March 26, 1743 (Braudel 1982:616, note 7). A list of ships arriving at Louisbourg in 1743 includes one ship named the Saint Louis (Moore 1975:29, chart 6). It had sailed from France on May 21, and had arrived in Louisbourg on August 24, 1743 (Moore 1975:29). It is plausible that Braudel (1982) and Moore (1975) wrote of this same vessel, which at Louisbourg took on a cargo of cod for Guadeloupe.

It is conceivable that ships on a triangular circuit, unloaded pottery and glass at Louisbourg, either directly from France or

returning to France from the French West Indies, but apparently not in Acadia. Equally plausible is the possibility that English merchantmen delivered ceramics and glass to New England while on a triangular circuit.

#### BELLEISLE TRADE AND EVERYDAY LIFE

Most pottery (excluding New England wares) and glass recovered from Belleisle originated from France and England (Table 15). Both countries were functioning within national and international trading networks.

More than 75 percent of the French coarse earthenwares at both Belleisle houses were produced in the hinterland of La Rochelle and Rochefort (Saintonge). Smaller quantities originated from Vallauris-Biot (16.7%), in the interior, northwest of Marseille, and from Beauvaisis (6.7%) the hinterland of Rouen and Dieppe, in the northwest of France. Northern Mediterranean and Iberian wares (Table 15) must have been brought by French ships to the New World from Marseille, either in a triangular circuit or via La Rochelle. The Saintonge (La Rochelle or Rochefort) connection must have been strong considering the very frequency of this pottery among the French wares at Belleisle (Table 15).

HOUSES, NUMBER OF VESSELS/ ADJUSTED %						
	HOUSE 1		HOUSE 2		HOUSES 1 and 2	
	n	%	n	%	n	%
1. FRANCE	20	31.75	13	31.71		
2. NORTHERN MEDITERRANEAN	6	9.52	2	4.88		
3. IBERIAN	2	3.17	--	----		
1,2 and 3 COMBINED					43	41.4
4. RHINE VALLEY	6	9.52	5	12.19	11	10.5
5. ENGLAND	12	19.05	12	29.27		
6. NEW ENGLAND	9	14.29	4	9.76		
5 and 6 COMBINED					37	35.6
SOURCE UNKNOWN	8	12.70	5	12.19	13	12.5
TOTALS	63	100.0	41	100.0	104	100.0

TABLE 15. Belleisle Ceramics by Origins.

In Acadia, English and Anglo-American pottery probably was purchased from New England merchants, perhaps from Boston and Newbury Port, or from traders with connections in these ports. Also, Acadians travelling to American ports could have purchased English and Neo-English wares, as they could have bought French, Northern Mediterranean and Iberian wares from Louisbourg in Cape Breton, around 1719 and after.

The occurrence of wares at both Belleisle houses combined shows that taken together French, Northern Mediterranean and Iberian wares (41.4%) exceed by a small margin English and New England pottery totals (35.6%). This indicates both strong French and English/Neo-English influences at Belleisle.

Refined earthenware totals for both houses show that vessels of identifiable origins are dominated by English products (40.0%), followed by faience (12.0%). Nearly half of the tin-glazed refined earthenware vessels (48.0%) have unknown origins. These totals indicate that English products were predominant at Belleisle, a very different situation than the findings at Place Royale and Louisbourg, where faience dominated the collections (Dunton 1971:15-17; Genêt 1980:80). Belleisle delftwares are derived from Lambeth (London), and two vessels are from Bristol. The faience originated from Nevers, or a factory imitating the Nevers style, and another object was traced to a Rouen pottery. Such diverse origins all can be linked, however, to factories that were located either in ports exporting directly to the

New World (London, Bristol and La Rochelle [Nevers]), or a port such as Rouen, which regularly sent goods to La Rochelle for the trans-Atlantic trade.

Rhenish stonewares could have been shipped from both England and France, as these countries imported many stonewares from the Rhine Valley, via Holland, on a regular basis (Chapter 3). Rhenish mugs/jugs and tankards comprise more than half (57.9%) of the total stoneware vessels from both Belleisle houses. English stonewares come second (36.8%), including pots from London and Nottingham. One tankard from House 1 qualifies as an article of inferior quality, although not unique, as seen in a contemporaneous collection from Virginia (A. Noel Hume 1973). Lastly, the single New England stoneware tankard recovered from House 2 (5.3%) has a general appearance suggesting that it was an experimental piece. Another experimental vessel has been recovered at the Brown Farm, not far from Belleisle in Nova Scotia (Chapter 5). French stonewares have not yet been recovered at Belleisle, but they were identified in quantity at the Melanson settlement, Grand Pré, and Beaubassin (A. Crépeau, Personal Communication: June 24, 1985; Hansen 1984; Moussette 1970).

Both Belleisle houses yielded very few sherds of window glass. A single stemmed-glass was retrieved from each house, that from House 2 represents a verre fougère glass, probably from France, the other from House 1 is an English crystal glass, from London or its environs. In Acadia, toiletries from the European continent are unique to Belleisle

House 2. Glass bottles, rare in both houses, are limited to a flacon and a liquor bottle from House 1, and three liquor bottles from House 2. It is equally plausible that their origins are French or English.

#### CONCLUSIONS

The following conclusions must begin with a word of caution. During the 1983 field season at Belleisle, House 1 was fully excavated, but House 2 was not. Therefore, to generate conclusions about the entire village -- consisting of about 30 families in 1746 or 1747 (Coleman 1969:74) -- or worse, all of Acadia, based on the two Belleisle collections would be premature and misleading. Furthermore, we have seen that comparisons between collections from different locations in Acadia and elsewhere exhibit not only similarities, but also subtle differences. This supplements observations made of the architectural and documentary evidence (Chapter 5).

The ceramic and glass analyses indicate that around 1680, Belleisle House 1 was constructed, followed about a decade later by House 2. This construction occurred at the beginning of the Belleisle settlement when Acadia was administered directly by France (1670-1710). The Acadians utilized diked marshes following methods conceived by saltworkers from southwestern France. From 1670 to 1710, overseas trade that developed was founded on necessity. the Acadians obtained finished goods in exchange for grain, foodstuffs and furs. Merchants from New France and New England sailed to Acadia, the

latter traders disregarding official French policies forbidding trade. Also, some Acadian merchants were involved in the trade, some even in partnership with New Englanders, while others held permits from both French and English officials.

From 1710 until the 1755 deportation, Acadia was administered by England through its representatives. The Acadian population continued to grow and prosper, although the flow of French immigrants had ceased. Trade continued with New England and an illegal trade with the Fortress of Louisbourg began around 1719. Direct trade with New France seems to have been limited to the settlements in the Chignecto Isthmus, at Baie Verte and Beaubassin (Chapter 2).

The Belleisle population fluctuated from about 1707 to 1710, probably due to regional emigration and population shifts caused by the fear of military engagements in nearby Annapolis Royal. General growth, however, was registred during the English administration, from 14 families in 1714 to about 30 in 1746 or 1747. The Belleisle Acadians resided in sturdy houses, of better construction than the houses at Grand Pré and ordinary dwellings in New England. However, merchants' houses in Prince Edward Island and in Maryland were luxurious in comparison.

From 1680 to 1755, the Belleisle Acadians were using ceramics and glass imported from Europe. Some pottery, however, was obtained from New England, particularly from the Boston and Newbury Port areas. It

would seem that much of the trade was controlled by many small and large companies, with goods from France and the Mediterranean coming from the port of La Rochelle. The English wares originated mostly from London.

At Belleisle, ceramic vessel totals indicate a strong influence on Acadian material life by wares produced in Saintonge, the hinterland of La Rochelle and Rochefort. Combined ceramic totals from both Belleisle houses shown that French, Northern Mediterranean and Iberian wares (41.4%) exceed by a small margin English and Neo-English wares (35.6%). However, the figures indicate strong influences, both French and English/New England, on Belleisle material life. The latter influence can be correlated to the era after 1710 when the British took control of Acadia, and potteries were established in Charlestown beginning in 1709, and Newbury Port in 1723.

Acadians from both Belleisle houses prepared and stored food in French, Northern Mediterranean, Iberian, English and Anglo-American containers. They served victuals out of French Northern Mediterranean, Low Countries, English and New England pottery. Their refined earthenwares, however, were mostly English, and differed from the French wares most commonly used in the towns of Québec and Louisbourg. They also differed from New England where delftware was used solely. Thus, the Belleisle Acadians appear to have had an interesting variety of vessels, both functional and decorative, that bespeak of a relatively comfortable standard of living for the 1680 to 1755 period.

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## APPENDIX 1: CERAMIC AND GLASS VESSEL COUNT FROM BELLEISLE HOUSE !

<u>VESSEL TYPE</u>	<u>ORIGIN</u>	<u>DATE RANGE</u>	<u>PROVENANCE (# SHERDS)</u>
COARSE EARTHENWARES			
1. Mixing bowl	Saintonge/France	c. 1690-1755	C, F1:7(1)
2. Mixing bowl	Saintonge/France	c. 1690-1755	B2-208(1), B3(24), B3-301(1), B3-1678(1); H1-1697(1); 11-341(1), 11-342(1), 11-439(13), 11-446(3), 11-454(1), 11-786(1), 11-829(1), 11-831(1); 11-1460(1), 11-1461(1), 11-2019(1).
3. Mixing bowl	Saintonge/France	c. 1690-1755	11-346(1).
4. Mixing bowl	Saintonge/France	c. 1690-1755	Preston 1972 - 63(1).
5. Mixing bowl	Saintonge/France	c. 1690-1755	G - 1790(1).
6. Mug	Saintonge/France	c. 1690-1755	C, F1:7-2478(1), 3368-3370(4); C3-3575(1); C4-1989-1991(3).
7. Mug	Saintonge/France	c. 1690-1755	11-2175(1).
8. Mug	Saintonge/France	c. 1690-1755	Preston 1972-111(6)
9. Mug	Saintonge/France	c. 1690-1755	D3-1994(1); D4-1024, 1170-1172(4); H1-291(1).
10. Mug	Saintonge/France	c. 1690-1755	Preston 1972-49, 84(2); B3-202, 253(2); C1-408(1); C4-883(1); C,F1:7-2497, 2521-2522(3); G1-2276; 11-439, 800, 830, 832(4); 11-2019, 2173(2).
11. Mug	Saintonge/France	c. 1690-1755	1B3-569(1).
12. Storage Jar	Saintonge/France	c. 1690-1755	G1-2280(1).

## APPENDIX I: CERAMIC AND GLASS VESSEL COUNT FROM BELLEISLE HOUSE I

<u>VESSEL TYPE</u>	<u>ORIGIN</u>	<u>DATE RANGE</u>	<u>PROVENANCE (# SGPDS)</u>
COARSE EARTHENWARES			
13. Bottle	Saintonge/France	c. 1690-1755	B3-448(1); H1-1698(4); I1-341(3), 1067(1).
14. Pitcher/Jug	Saintonge/France	c. 1690-1755	G1-312(1); H1-1695(1); I1-342-343, 785, 790, 829, 2592(7); L2-1088-1089, 1104(3); Unprovenanced - 1640 (1).
15. Storage jar	Saintonge/France	c. 1690-1755	Surface Find, 1984, House I
16. Unidentified	Beauvaisis/France	c. 1700-1755	E2-5825(1), G1-452(1).
17. Unidentified	Vallauris-Biot/France	c. 1700-1755	Preston 1972-54(1).
18. Bottle	Vallauris-Biot/France	c. 1700-1755	I33-520(1).
19. Flanged-bowl	Northern Mediterranean	c. 1700-1755	Preston 1972-122(1); G1-230(4), 312(5), 1030(1); I1-783(1), 793(1).
20. Flanged-bowl	Northern Mediterranean	c. 1700-1755	C5-2486(1), 2526(1).
21. Flanged-bowl	Northern Mediterranean	c. 1700-1755	H1-306, 310, 1417, 1693, 1969, 2834(6); I1-341, 462(2).
22. Flanged-bowl	Northern Mediterranean	c. 1700-1755	M1-2177(1).
23. Flanged-bowl	Northern Mediterranean	c. 1700-1755	G1-1784.
24. Flanged-bowl	Northern Mediterranean	c. 1700-1755	C, F1:7, 4-3359.
25. Amphora	Iberian Peninsula/Italy(?)	c. 1700-1755	Preston 1972-112(1); A1-3340(1); A2-2109(3); Unprovenanced - 3335(1).
26. Amphora	Iberian Peninsula/Italy(?)	c. 1700-1755	C5-2856(2).
27. Mixing bowl	New England/Charlestown	c. 1709-1755	N1-2305(1).
28. Posset cup	New England/Charlestown	c. 1709-1755	B2-255(1); B3-1240(1); G1-1506(1); I1-789(2).

## APPENDIX I: CERAMIC AND GLASS VESSEL COUNT FROM BELLEISLE HOUSE I

<u>VESSEL TYPE</u>	<u>ORIGIN</u>	<u>DATE RANGE</u>	<u>PROVENANCE (# SHERDS)</u>
COARSE EARTHENWARES			
29. Pitcher	New England/Charlestown	1709-1755	Preston 1972 - 38(1); NI-2306(1).
30. Bottle	New England/Charlestown or Newburytown		G-1256(1); HI-1541(1).
31. Bottle	New England/Charlestown or Newburytown		C, FI:7,4 - 3358(1).
32. Storage Jar	New England/Charlestown	1709-1755	Preston 1972 - 20(1), 30(1), 152(1); HI-309(1).
33. Storage Jar(?)	New England/Charlestown	1709-1755	AI-3419(1).
34. Storage Jar	New England/Charlestown	1709-1755	Preston 1972-93(1), 137(3); AI-922(1), 1383(11), 1951(30), 1999(13), 2332(14), 2407-2410(4), 2409-2437(27), 3336-3339(4), 3418(23), 3419(13); A2-2110(1); B3-1952(1); G1-1785-1788(4), 1792-1794(3), 2276(1), 2278(1), HI-1739(1).
35. Unidentified	New England/Charlestown	1709-1755	MI-2176(1); PI-2524(1).
36. Tankard	Buckley/England	1690-1750	Preston 1972-29(1); HI-300(1).
37. Unidentified	Staffordshire(?)/England	1700-1755	B3-204(1); HI-308(1).

## APPENDIX I: CERAMIC AND GLASS VESSEL COUNT FROM BELLEISLE HOUSE I

<u>VESSEL TYPE</u>	<u>ORIGIN</u>	<u>DATE RANGE</u>	<u>PROVENANCE (# SHERDS)</u>
38. Unidentified	Staffordshire(?)/England	1700-1755	D2-120(1).
39. Jar	Source unknown	---	G1-1783(1); H1-297(1).
TIN-GLAZED REFINED EARTHENWARES			
40. Plate	England	1680-1740	B3-254(1); G1-210-211(2); I1-827(1).
41. Plate	England	1680-1740	C, F1:7-2489; I1-826(1).
42. Plate	Bristol, England	1710-1730	G1-217, 218(2).
43. Plate	Rouen, France	c. 1680-1755	Q2-3076(1).
44. Plate	Source unknown	---	D4-923(1); I1-437(1); Q4-280(1). 923+280 crossmend.
45. Bowl	Source unknown	---	Preston 1972-55, 134(2); B3-1278(1); D3-701(1); H1-289, 293-294, 298-299, 303, 305, 307, 1685(9); I1-791-792(2); Q3-2730, 3016(2).
46. Bowl	England	c. 1680-1755	Preston 1972-121(1); C, F1:7-2494(1), 2498(2), 2499(1); H1-295(1); I1-435(2), 2499(1).
47. Cup	Source unknown	---	H1-1684(1).
48. Cup or Small Bowl	England(?)	---	Preston 1972-151(1).
49. Cup/Jam Pot	France	1700-1755	G1-1143(1).
50. Porringer	Lambeth, England	1680-1737	H1-714(38).
51. Unidentified	Source unknown	---	Back-filled trench, Preston 1972-206(2).
52. Unidentified	Source unknown	---	G1-1873(1), 3726(1).
53. Unidentified	Source unknown	---	I(?) -797(1).

## APPENDIX I: CERAMIC AND GLASS VESSEL COUNT FROM BELLEISLE HOUSE I

<u>VESSEL TYPE</u>	<u>ORIGIN</u>	<u>DATE RANGE</u>	<u>PROVENANCE (# SHERDS)</u>
STONEWARES			
54. Mug/Jug	Rhenish Grenzhausen I	c. 1685-1720	Preston 1972-1, 64, 101, 105, 106, 110, 120, 123, 153(9); B3-205, 207, 256(3); G1-212, 2277(2); H(?) 3360-3361(2); N2-2481(1).
55. Mug/Jug	Rhenish Grenzhausen I	1685-1720	C4-925(1); C6-1091(1); C4-2729(1).
56. Mug/Jug	Rhenish Grenzhausen I	1685-1720	I1-784(1); N2-2480(1).
57. Mug/Jug	Rhenish	---	N2-2774(1).
58. Mug/Jug	Rhenish Grenzhausen I	1700-1755	D (wall clean up), (1).
59. Unidentified	Rhenish	---	N1-2525(1).
60. Tankard	England	1700-1755	Preston 1972-144(1); H1-288(16); N1-2038(1); Unprovenanced - 1691(1).
61. Tankard	Nottingham, England	1700-1755	G1-2275(1).
62. Tankard	Nottingham, England	c. 1730-1755	G1-1796, 3736(2).
63. Mug/Jug (Grey-Core)	England	c. 1720-1755	G1-214(1); H1-290(1).
LATE EIGHTEENTH CENTURY AND LATER CERAMICS (NOT ACADIAN)			
64. Pearlware Cup	England	c. 1790-1810	Preston 1972-92(18); A1-2171(10); B1-367(3), 1584(1); C2-788(1); I1-478(1); M1-2264(1); P1-2523(6); - Unprovenanced - (27).

## APPENDIX I: CERAMIC AND GLASS VESSEL COUNT FROM BELLEISLE HOUSE I

<u>VESSEL TYPE</u>	<u>ORIGIN</u>	<u>DATE RANGE</u>	<u>PROVENANCE (# SHERDS)</u>
STONEWARES			
65. Unidentified	England(?)	Late 18th C.	D1-317(1).
White Refined		or early 19th C.	
Earthenware			
GLASS			
66. Flacon	France(?)	1700-1755	I1-506(1).
67. Bottle	Source unknown	---	Freston 1972-4, I14(2); A1-2447, 2544(2); H1-757, 1723-1724, 1726, 3362(5); I1-1414-1415(2).
68. Drinking Glass	London, England	1685-1705	I1-375(1).
69. Crystal unidentified	Source unknown	---	H1-1671(1).
__ Window-Glass	Western Europe	---	Preston 1972-761(1); A2-5408(1); C2-2197(1); D2-2:F4-201(1); H1-1673, 1675, 1688(3); I1-379, 498, 515, 794(4).

## APPENDIX 2: CERAMIC AND GLASS VESSEL COUNT FROM BELLEISLE HOUSE 2

<u>VESSEL TYPE</u>	<u>ORIGIN</u>	<u>DATE RANGE</u>	<u>PROVENANCE (# SHERDS)</u>
COARSE EARTHENWARES			
1. Mixing bowl	Saintonge/France	c. 1690-1755	AA2-2211(1); BB2-4835(1).
2. Mixing bowl	Saintonge/France	c. 1690-1755	CC1-3918, 3962-3963(3); DD1-3855(1); DD2-3865, 3965, 3968(3).
3. Mixing bowl	Saintonge/France	c. 1690-1755	BB2-4817(1); CC1-3818, 3822(2); DD1-3813, 3854, 3916(3).
4. Colander	Saintonge/France	c. 1690-1755	SB1-3807(1); DD1-3819(1).
5. Storage Jar	Saintonge/France	c. 1690-1755	AA2-3085(1); BB2-3807, 3975, 3979, 3982(4); DD1-3809(1).
6. Bottle	Saintonge/France	c. 1690-1755	BB2-3987, 3997(2).
7. Unidentified	Saintonge/France	c. 1690-1755	DD2-3972(1).
8. Unidentified	Saintonge/France	c. 1690-1755	DD1-3808, 3810(2).
9. Storage Jar	Bauvaisis/France	c. 1700-1755	BB3-3849(1); DD1-4594(1). crossmended
10. Pitcher	Vallauris-Biot/France	c. 1700-1755	AA1-3961(1); AA2-2205, 2229(2); AA3-2606(1); BB(?) -4844(1); EB1-3937(1); BB8-3827-3829, 3836, 3838, 3847, 3992, 4831, 4833(9); CC1-3804, 3876, 3921, 3943 3951(5); DD1-3811(1).
11. Mixing bowl	Vallauris-Biot/France	c. 1700-1755	CC1-3820, 3824, 3825, 3884, 3890-3893(8).
12. Spindlewhorl Weight	Vallauris-Biot/France	c. 1700-1755	BB2-4316(1).
13. Flanged bowl	Northern Mediterranean	c. 1700-1755	BB2-3974, 3980, 3981, 3998(4).
14. Flanged bowl	Northern Mediterranean	c. 1700-1755	DD2-3863(1).

## APPENDIX 2: CERAMIC AND GLASS VESSEL COUNT FROM BELLEISLE HOUSE 2

<u>VESSEL TYPE</u>	<u>ORIGIN</u>	<u>DATE RANGE</u>	<u>PROVENANCE (# SHERDS)</u>
<b>COARSE EARTHENWARES</b>			
15. Storage Jar	New England/Charlestown	1709-1755	AA1-2242(6); AA2-2204(1); BB2-3830(1); DD1-3852-3853(2).
16. Storage Jar	New England/Charlestown or Newburytown	1709-1755	BB2-3832; 3835, 4816, 4834(4).
17. Unidentified	New England/Charlestown	1709-1755	BB1-3928, 3929, 3938(2); BB2-3839, 3845, 3934, 4871(4).
18. Plate	Buckley/England	1690-1755	DD1-3812(1).
19. Unidentified	Staffordshire/England	1680-1720	AA2-2202(1).
20. Jar	Staffordshire/England	c. 1700-1755	DD2-3862(1).
21. Posset cup	Staffordshire/England	c. 1700-1755	BB2-3841, 3984, 4851(3); CC1-3894(1); DD1-3857, 3860, 3896, 3902-3903, 3915(6).
<b>TIN-GLAZED REFINED EARTHENWARES</b>			
22. Plate (delftware)	England	----	BB2-3806, 3977, 3995(3).
23. Plate (delftware)	England, Bristol	1730-1755	BB2-3978, 3991(2).
24. Bowl or chamber pot	Source unknown	---	AA2-2240, 2253(2); AA2-2213, 3222(2); BB1-3931, 3936, 3939(3); BB2-3840, 3842, 3844, 3846, 3933, 3943, 3970, 3981, 3985-3986, 3988, 3989-3990, 3993-3994, 4840, 4842, 4846, 4854, 4865, 4873, 5808(22); BB3-3856, 4861(2); CC1-3823, 3872-3874, 3877-3879, 3881, 3885-3888, 3911,

## APPENDIX 2: CERAMIC AND GLASS VESSEL COUNT FROM BELLEISLE HOUSE 2

<u>VESSEL TYPE</u>	<u>ORIGIN</u>	<u>DATE RANGE</u>	<u>PROVENANCE (# SHERDS)</u>
TIN-GLAZED REFINED EARTHENWARE			
			941-3942, 3944-3948, 3950-3961, 4518(33); DD1-3858-3859, 3861, 3864, 3897, 3899, 3900, 3913-3914, 4580(10).
25. Bowl or chamber pot	Source unknown	----	BB2-3973, 4810, 4819, 4822, 4829, 4831, 4838, 4859, 4918(9).
26. Bowl (delftware)	England	c. 1680-1755	BB2-3833-3834(2); GD1-3814(1).
27. Cup (delftware)	England	c. 1680-1755	BB1-3864(1); CC1-3889; DD2-3969(1).
28. Pharmaceutical pot (delftware)	England	c. 1680-1755	BB1-3930, 3935(2); BB2-4811(1).
29. Unidentified (Nevers style)	France	c. 1680-1755	AA2-2265(2).
30. Unidentified	Source unknown	----	DD1-3912
31. Unidentified	Source unknown	---	BB2-4849, 4857, 5579(3); BB3-4442(1).
32. Unidentified	Source unknown	----	CC1-3940, 3949(2).
STONEWARE			
33. Tankard	Rhenish Grenzhausen I	1700-1725	AA2-3012(1); BB2-3837(1).
34. Tankard	Rhenish Grenzhausen II (late)	1725-1755	DD1-3904-3905, 3907-3909(5).
35. Tankard	Rhenish	1700-1755	AA2-3411(1); BB2-3826, 4823(?); DD1-3906, 3910(2).

## APPENDIX 2: CERAMIC AND GLASS VESSEL COUNT FROM BELLEISLE HOUSE 2

<u>VESSEL TYPE</u>	<u>ORIGIN</u>	<u>DATE RANGE</u>	<u>PROVENANCE (# SHERDS)</u>
<b>STONEWARE</b>			
36. Chamber pot or Storage Jar	Rhenish	1700-1755	AA2-2208, 3411(31), 5741(33); BB2-4823(1); DD1-3906(1).
37. Unidentified	Rhenish	---	AA3-2607(1).
38. Tankard	English	c. 1680-1755	AA(?) - 2221(1).
39. Tankard	Nottingham, England	c. 1700-1755	BB2-4820(1).
40. Tankard	New England	c. 1725-1755	BB2-3831, 3996, 4815, 4831(4); CC1-3866, 3869-3870(3).
41. Unidentified	Staffordshire, England(?)	c. 1720-1755	CC1-3821(i).
<b>LATE EIGHTEENTH CENTURY AND LATER CERAMICS</b>			
42. Unidentified Creamware	England	1770-1830	DD1-3917(1).
43. Cup Ironstone	England	c. 1840-1870	CC1-3871(1).
<b>GLASS</b>			
44. Drinking Glass (verre fougère)	Western Europe	c. 1680-1755	AA1-2193(1).
45. Olive green bottle	Source unknown	---	AA2-2203(1); BB1-5757(1); BB2-5510(1); DD2-3927, 3999(2).
46. Black Glass bottle	Source unknown	---	AA2-5815(1); BB2-3922, 5511(2); CC1-3221, 3875(2); DD2-3926(1).
47. Bottle	Source unknown	---	DD2-5171(1).
48. Unidentified (toilettry)	Source unknown	c. 1680-1755	CC1-3920(1); CC2-3803(5); DD1-3919(1).

## APPENDIX 2: CERAMIC AND GLASS VESSEL COUNT FROM BELLEISLE HOUSE 2

<u>VESSEL TYPE</u>	<u>ORIGIN</u>	<u>DATE RANGE</u>	<u>PROVENANCE (# SHERDS)</u>
STONEWARE 49. Unidentified  (toiletory)	Source unknown	c. 1680-1755	BS2-5812(1); DD2-4001(1).
Window Glass	Western Europe	----	DD1-3815(1); Unprovenanced (1).

<u>COARSE EARTHENWARE</u>	<u>DATE RANGE</u>	<u>MEDIAN</u>	<u>NUMBER OF VESSELS/SHERDS</u>	<u>MEDIAN MULTIPLIED BY NUMBER OF VESSELS/SHERDS</u>	<u>PRODUCTION DATE RANGE</u>	<u>MEDIAN</u>	<u>MEDIAN MULTIPLIED BY NUMBER OF VESSELS/SHERDS</u>
SAINTONGE	c. 1690-1755	1722.5	15/120	25837.5/206820.0	1600-c.1800	1700.0	25500.0/204000.0
BEAUVAISIS	c. 1700-1755	1727.5	1/2	1727.5/3455.0	1600-c.1800	1700.0	1700.0/3400.0
VALAURIS-BIOT	c. 1700-1755	1727.5	2/2	3455.0/3455.0	1700-1760	1730.0	3460.0/3460.0
NORTHERN MEDITERRANEAN	c. 1700-2755	1727.5	6/26	10365.0/44915.0	1700-1800	1750.0	10500.0/45500.0
IBERIAN PENINSULA/ITALY	c. 1700-1755	1727.5	2/8	3455.0/13820.0	1700-1800	1750.0	3500.0/14000.0
ENGLISH C. E.							
BUCKLEY	1690-1750	1722.5	1/2	1722.5/3445.0	1690-1800	1745.0	1745.0/3490.0
STAFFORDSHIRE	1700-1755	1727.5	2/3	3455.0/5182.5	1700-1800	1750.0	3500.0/5250.0
NEW ENGLAND	c. 1700-1755	1732.0	9/173	15588.0/29963.6.0	1709-1755	1742.0	15678.0/301366.0
C.E. TOTAL (SHERDS)				(580728.5)			(580466.0)
<u>REFINED EARTHENWARE</u>							
FAIENCE							
Rouen	1680-1755	1717.5	1/1	1717.5/1717.5	1680-1800	1740.0	1740.0/1740.0
Other	1700-1755	1727.5	1/1	1727.5/1727.5	1710-1800	1755.0	1755.0/1755.0
DELFTWARE							
Lambeth	1680-1737	1708.5	1/38	1708.5/64923.0	1680-1737	1708.5	1708.5/64923.0
Bristol	1710-1730	1720.0	1/2	1720.0/3440.0	1710-1730	1720.0	1712.0/3440.0
Other	1680-1740	1710.0	2/6	3420.0/10260.0	1680-1800	1740.0	3480.0/10440.0
Other	1680-1755	1717.5	1/8	1727.5/13740.0	1680-1800	1740.0	1740.0/13920.0
R.E. TOTAL (SHERDS)				(95808.0)			(96218.0)
<u>STONEWARE</u>							
RHENISH							
Grenzhausen I	c. 1685-1720	1720.5	3/21	5107.5/35752.5	c. 1685-1720	1720.5	5107.5/35752.5
Grenzhausen II	1700-1755	1727.5	1/1	1727.5/1727.5	1700-1755	1737.5	1737.5/1737.5
ENGLISH							
Nottingham	1700-1755	1727.5	1/1	1727.5/1727.5	1700-1800	1750.0	1750.0/1750.0
Nottingham	1730-1755	1742.5	1/2	1742.5/3485.0	1700-1800	1750.0	1750.0/3500.0
Other	1700-1755	1727.5	1/19	1727.5/32822.5	1700-1800	1750.0	1750.0/33250.0
Other	1720-1755	1737.5	1/2	1737.5/3475.0	1720-1755	1737.5	1737.5/3475.0
STONE. TOTAL				(78990.0)			(79465.0)
Flacon	1700-1755	1727.5	1/1	1727.5/1727.5	1700-1800	1750.0	1750.0/1750.0
Drinking Glass	1685-1705	1695.0	1/1	1695.0/1695.0	1685-1705	1695.0	1695.0/1695.0
GLASS TOTAL (SHERDS)				(3422.5)			(3445.0)
		TOTAL	55/440	94819.0/758949.0			94964.0/759574.0
Mean Ceramic and Glass Date: $\frac{94829.0}{55} = 1724.2$ / $\frac{758949.0}{440} = 1724.9$ $\frac{94974.0}{55} = 1726.8$ / $\frac{759594.0}{440} = 1726.4$							
			(VESSEL)	(SHERD)			(SHERD)

APPENDIX 3. BELLEISLE HOUSE 1: CERAMIC FORMULA, RAW DATA AND CALCULATIONS

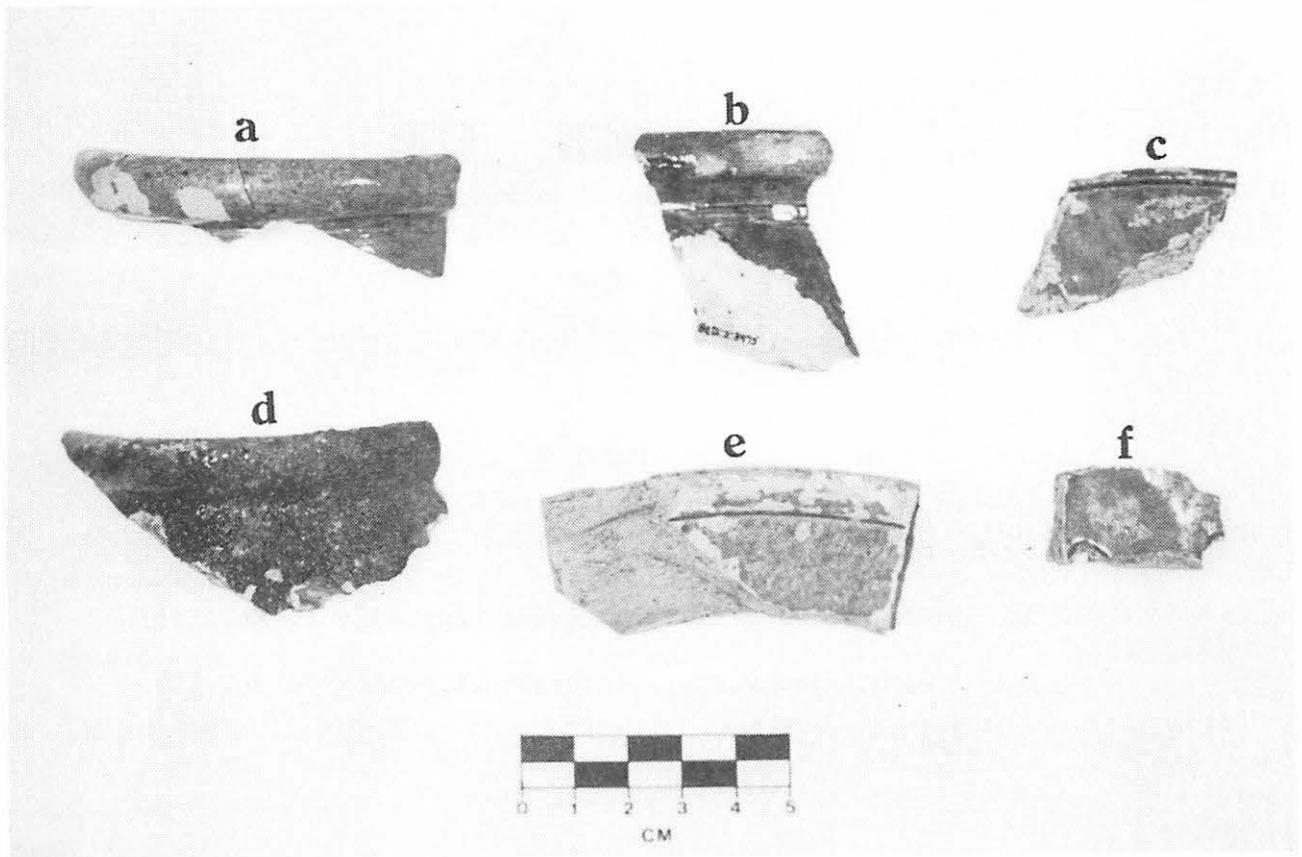
<u>COARSE EARTHENWARE</u>	<u>DATE RANGE</u>	<u>MEDIAN</u>	<u>NUMBER OF VESSELS/SHERDS</u>	<u>MEDIAN MULTIPLIED BY NUMBER OF VESSELS/SHERDS</u>	<u>PRODUCTION DATE RANGE</u>	<u>MEDIAN</u>	<u>MEDIAN MULTIPLIED BY NUMBER OF VESSELS/SHERDS</u>
SAINTONGE	c. 1690-1755	1722.5	8/28	13780.0/48230.0	1600-c. 1800	1700.0	13600.0/47600.0
BEAUVAISIS	c. 1700-1755	1727.5	1/2	1727.5/3455.0	1600-c. 1800	1700.0	1700.0/3400.0
VALLAURIS-BIOT	c. 1700-1755	1727.5	3/30	5182.5/51825.0	1700-1760	1730.0	5190.0/51900.0
NORTHERN MEDITERRANEAN	c. 1700-1755	1727.5	2/5	3455.0/8637.5	1700-1800	1750.0	3500.0/8750.0
BUCKLEY	1690-1755	1722.5	1/1	1722.5/1722.5	1690-1800	1745.0	1745.0/1745.0
STAFFORDSHIRE	1680-1720	1700.0	1/1	1700.0/1700.0	1680-1720	1700.0	1700.0/1700.0
STAFFORDSHIRE	c. 1700-1755	1727.5	2/11	3455.0/19002.5	1700-1775	1737.5	3475.0/19112.5
NEW ENGLAND	c. 1709-1755	1732.0	3/20	5196.0/34640.0	1709-1775	1742.0	5226.0/34840.0
C.E. TOTAL (SHERDS)				(169212.5)			(169047.5)
<u>REFINED EARTHENWARE</u>							
FAIENCE	c. 1680-1755	1717.5	1/2	1717.5/3435.0	1710-1800	1755.0	1755.0/3510.0
DELFTWARE	c. 1680-1755	1717.5	3/9	5152.5/15457.5	1680-1755	1717.5	5152.5/15457.5
Other	1730-1755	1742.5	1/2	1742.5/3485.0	1730-1755	1742.5	1742.5/3485.0
R.E. TOTAL (SHERDS)				(22377.5)			(22452.5)
<u>STONEWARE</u>							
RHENISH							
Grenzhausen I	1700-1725	1712.5	1/2	1712.5/3425.0	1700-1725	1712.5	1712.5/3425.0
Grenzhausen II	1700-1755	1727.5	2/71	3455.0/122652.5	1700-1775	1737.5	3475.0/123362.5
(late)	1725-1755	1737.5	1/5	1737.5/8687.5	1700-1755	1737.5	1737.5/8687.5
ENGLISH							
Nottingham	c. 1700-1755	1727.5	1/1	1727.5/1727.5	1700-1800	1750.0	1750.0/1750.0
Other	c. 1680-1755	1717.5	1/1	1717.5/1717.5	1680-1800	1740.0	1740.0/1740.0
NEW ENGLAND	c. 1725-1755	1740.0	1/6	1740.0/10440.0	1725-1800	1762.5	1762.5/10575.0
STONE. TOTALS (SHERDS)				(14865.0)			(149540.0)
<u>GLASS</u>							
Drinking Glass	1680-1755	1717.5	1/1	1717.5/1717.5	c. 1690-1750	1720.0	1720.0/1720.0
Toiletry	1680-1755	1717.5	2/9	34350.0/15457.5	c. 1680-1800	1740.0	3480.0/15660.0
GLASS TOTALS (SHERDS)				(17175.0)			(17380.0)
		TOTAL	36/207	62073.5/357415.0			62163.5/358420.0
Mean Ceramic and Glass Dates: $\frac{62073.5}{36} = 1724.3$ / $\frac{357415.0}{207} = 1726.8$ $\frac{62163.5}{36} = 1726.7$ / $\frac{358420.0}{207} = 1731.5$							
			(VESSEL)	(SHERD)		(VESSEL)	(SHERD)

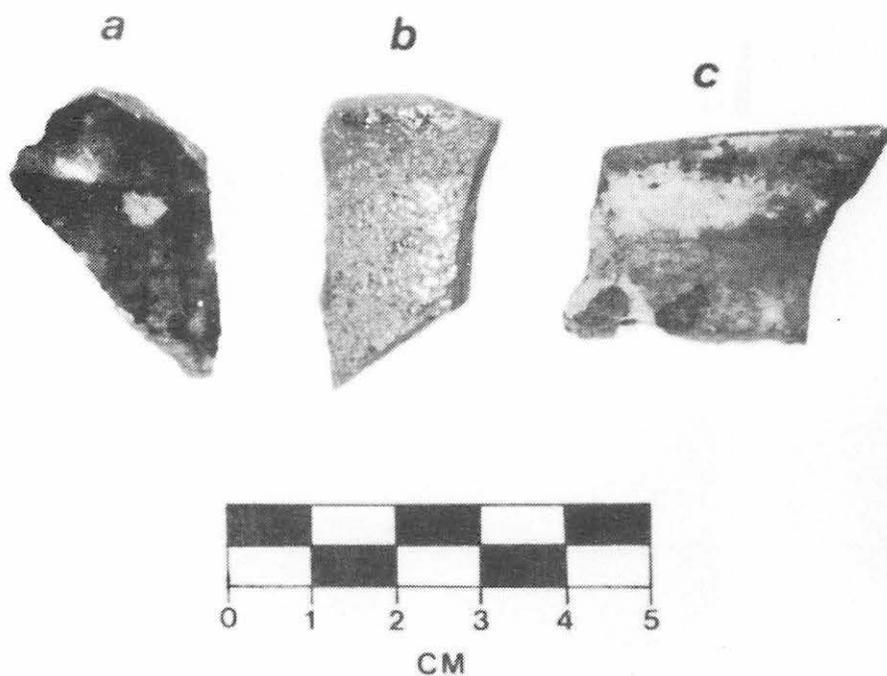
APPENDIX 4. BELLEISLE HOUSE 2: CERAMIC FORMULA, RAW DATA AND CALCULATIONS

## PLATE 1

## Saintonge White-Bodied Wares

- a. Jar or mug (Appendix 1, No. 9).
- b. Jar (Appendix 1, No. 10).
- c. Colander's rim (Appendix 2, No. 4).
- d. Jar or mug (Appendix 2, No. 5).
- e. Mixing bowl (Appendix 2, No. 1).
- f. Colander's base (Appendix 2, No. 4).





## PLATE 2

## Saintonge Red-Bodied Wares

- a. Unidentified vessel, exterior (Appendix 1, No. 14).
- b. Unidentified vessel, interior (Appendix 1, No. 14).
- c. Jar (?) (Appendix 1, No. 15).

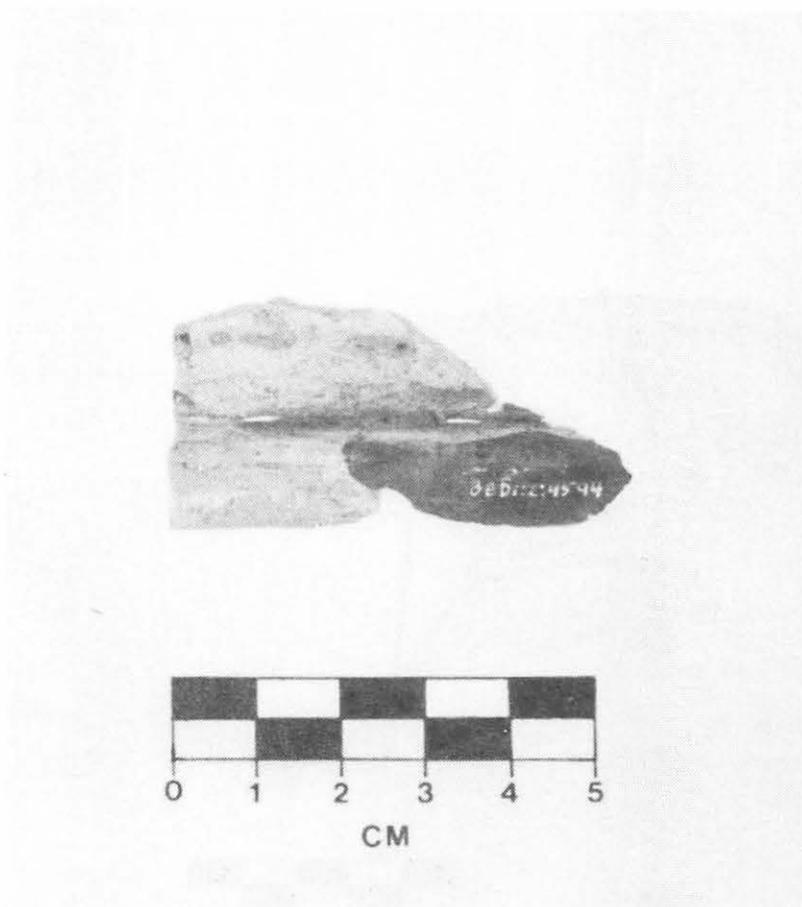
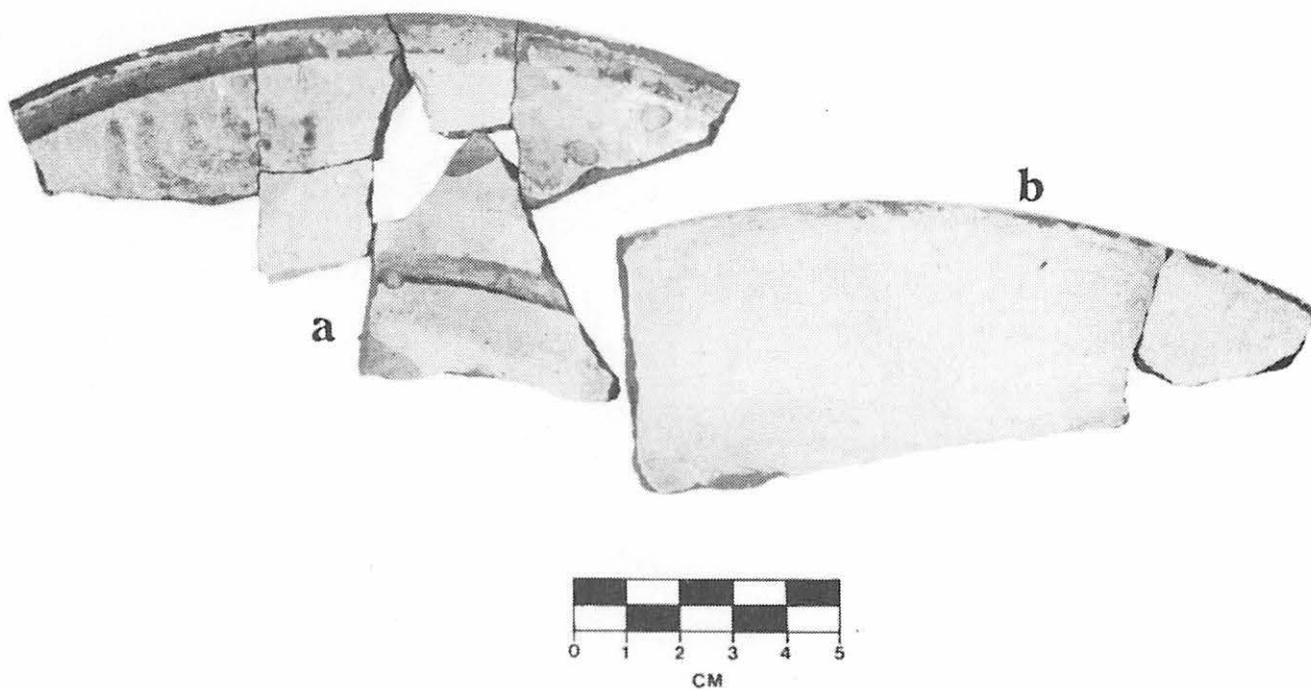


PLATE 3

Beauvaisis White-Bodied Ware

Basal fragment from a Jar (Appendix 2, No. 9).



## PLATE 4

## Northern Mediterranean Wares

- a. Flanged bowl with glazed decorations (Appendix 1, No. 19).
- b. Flanged bowl without decorations (Appendix 1, No. 20).

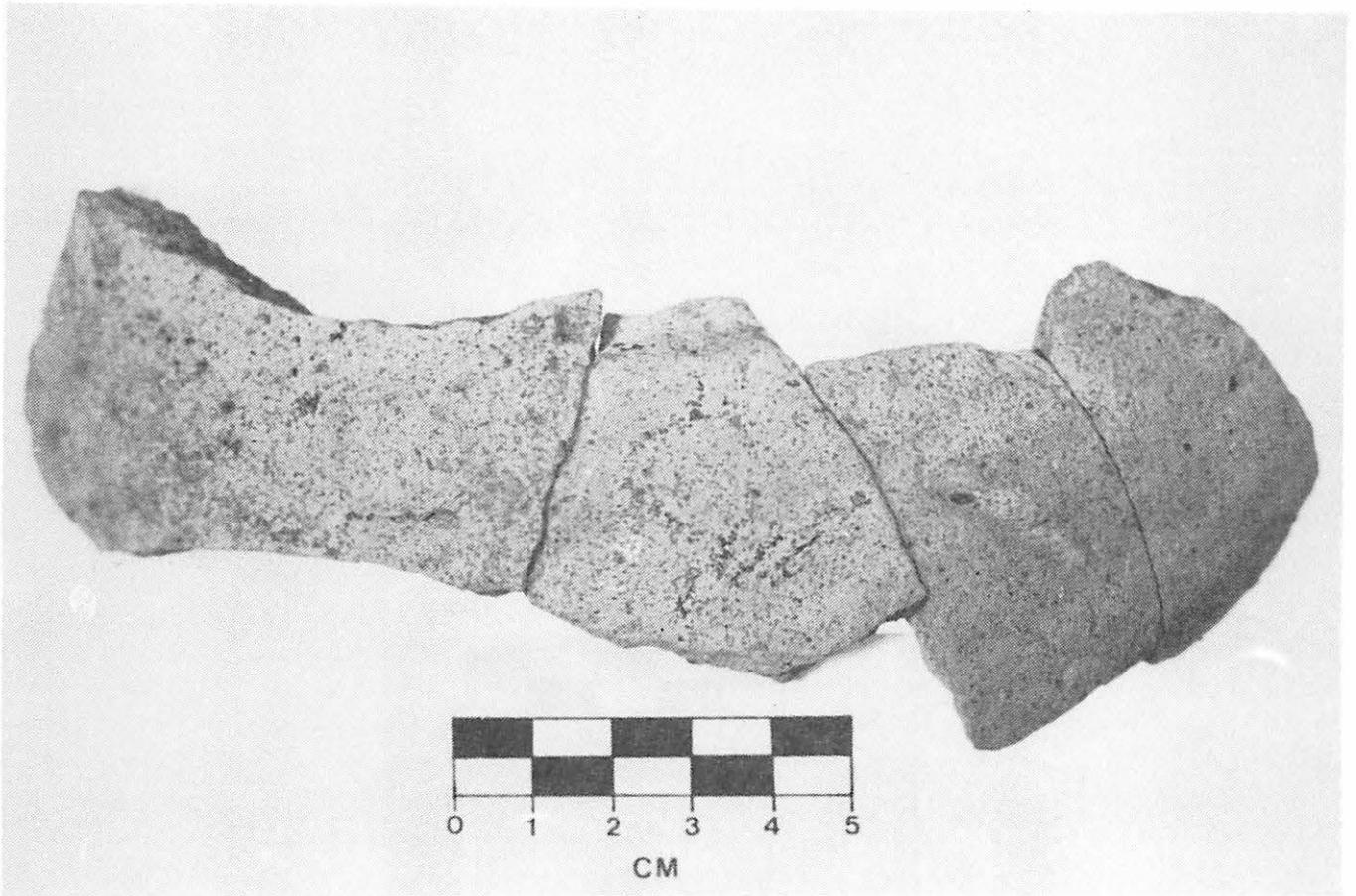
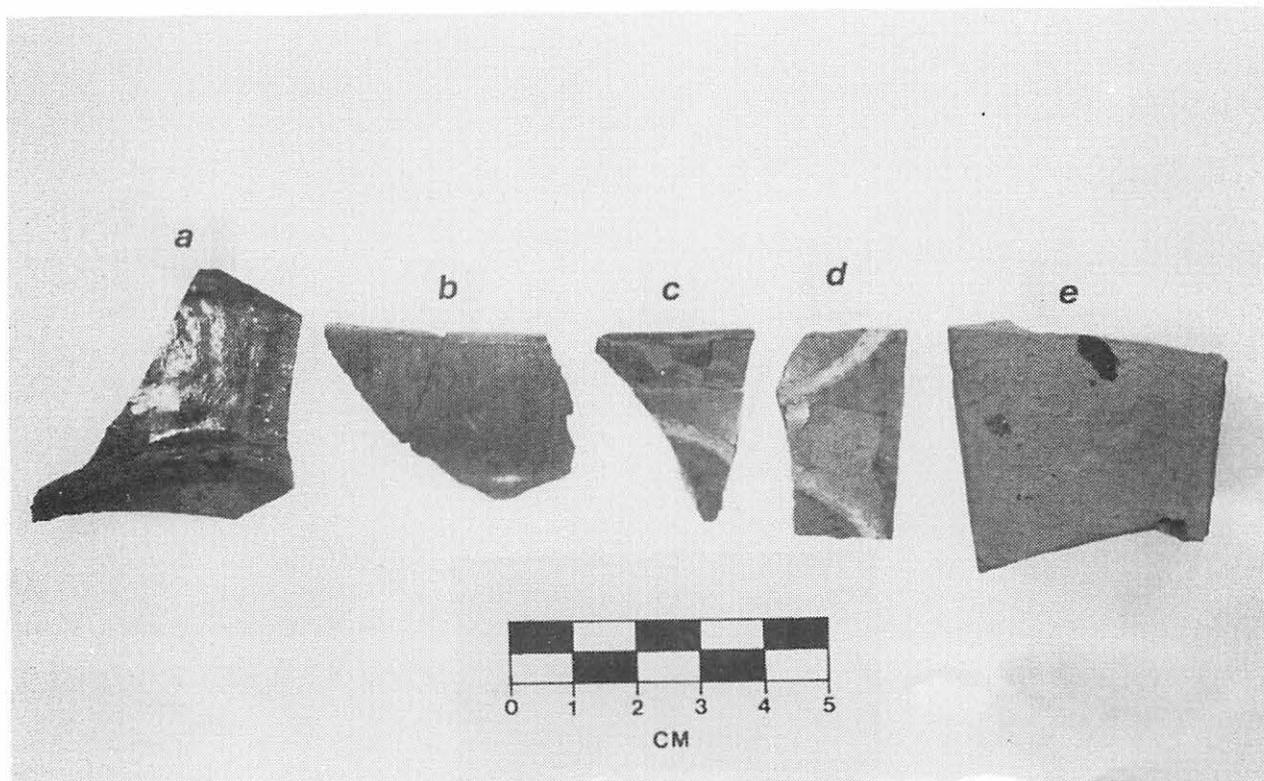


PLATE 5

Amphora shoulder fragments (Appendix 1, No. 25).



## PLATE 6

New England Wares.

- a. Base of storage jar (Appendix 1, No. 33).
- b. Posset cup's rim (Appendix 1, No. 28).
- c,d. Slip-decorated storage jar fragments (Appendix 2, No. 15).
- e. Storage jar's basal fragment (Appendix 1, No. 32).

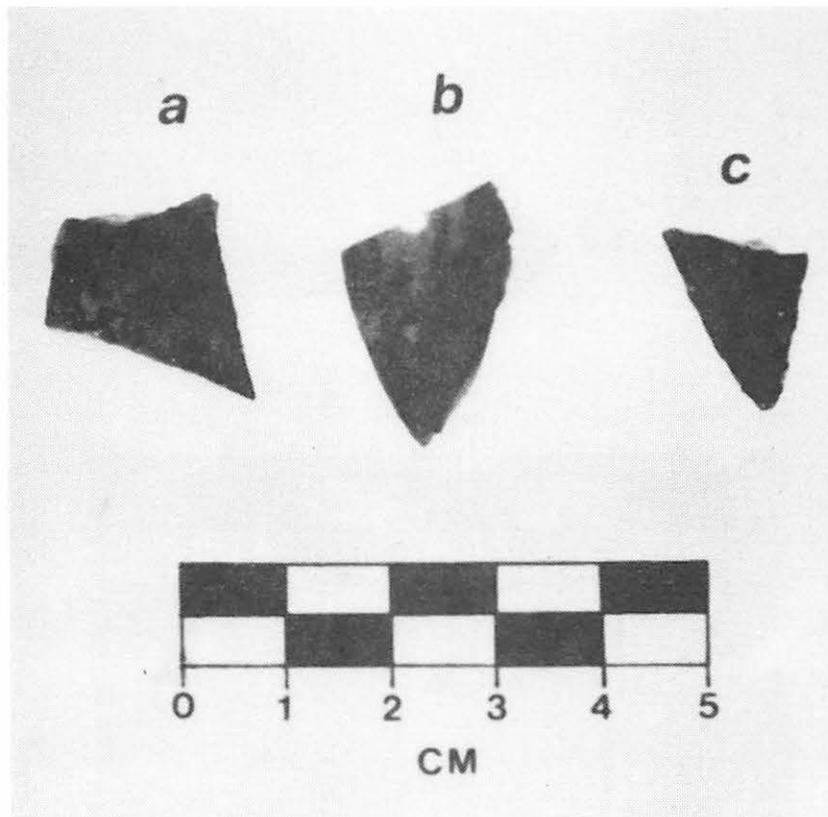
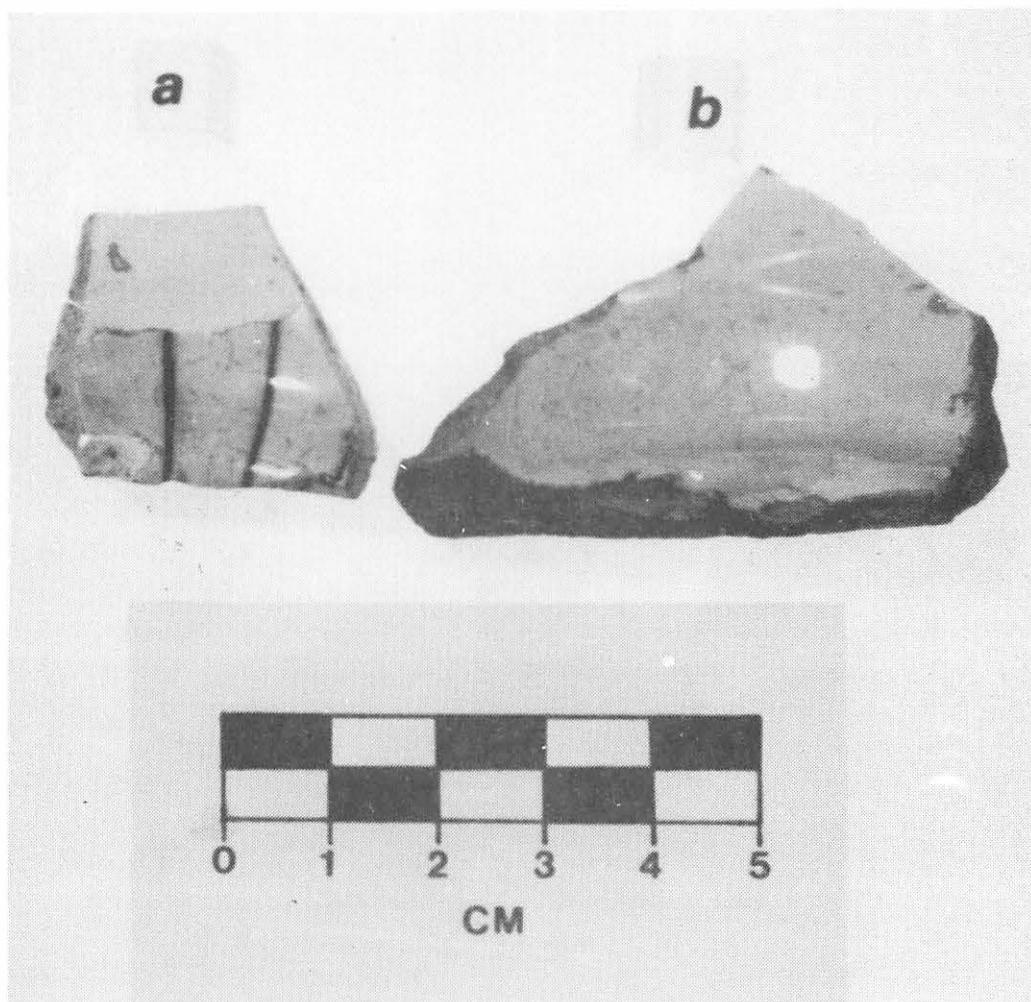


PLATE 7

English Wares with Mottled-Brown Finishes.

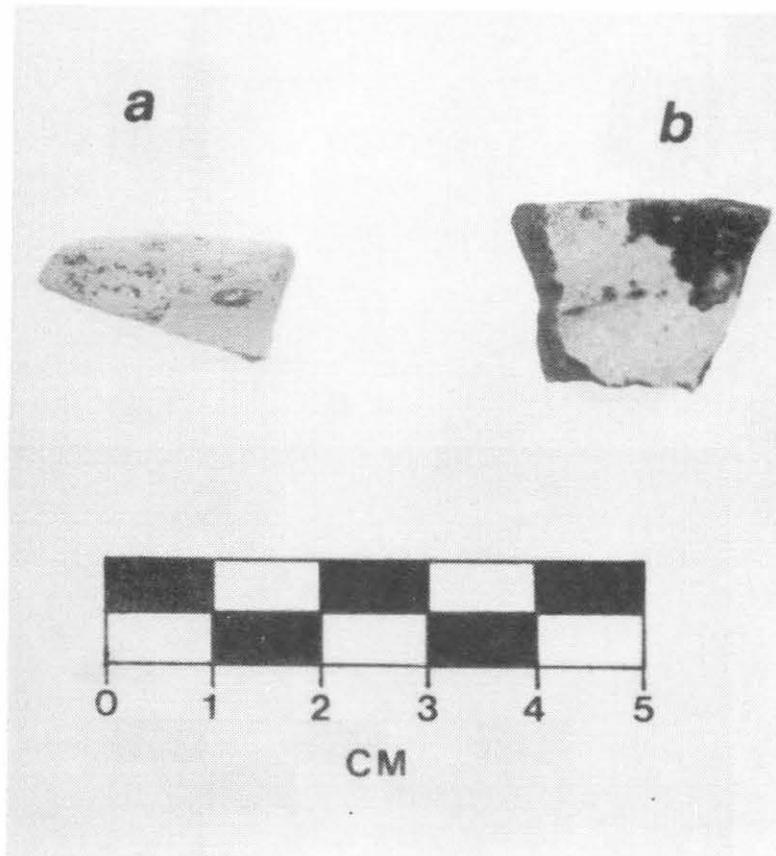
a-c. Unidentified vessels (Appendix 2, No. 19; Appendix 1, Nos. 37-38).



## PLATE 8

English Slipwares.

- a. Posset cup (?), (Appendix 2, No. 21).
- b. Jar (Appendix 2, No. 20).



## PLATE 9

Unidentified Coarse Earthenwares.

- a. Rim sherd (Appendix 1, No. 39).
- b. Body sherd (Appendix 1, No. 39).

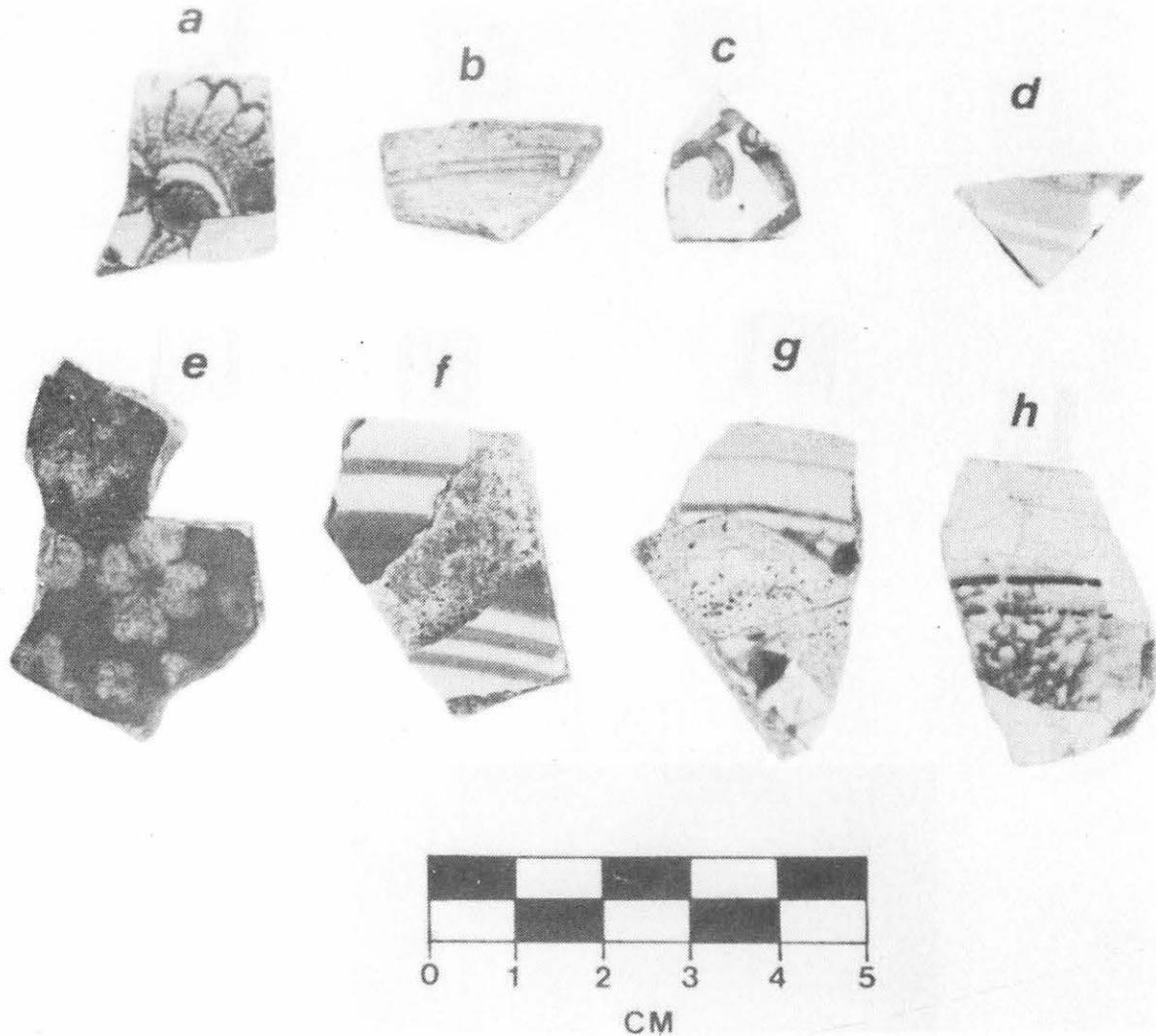


PLATE 10

## Tin-Glazed Refined Earthenwares.

- a. Nevers-like faience (Appendix 2, No. 29).
- b. Rim sherd from French Jam pot (Appendix 1, No. 49).
- c. Rouen plate sherd (Appendix 1, No. 43).
- d. English cup fragment (Appendix 1, No. 48).
- e. Bristol plate sherd (Appendix 2, No. 23).
- f. English plate, brim (Appendix 1, No. 40).
- g. Plate's basal fragment, Bristol (Appendix 1, No. 42).
- h. Bowl fragment, manganese ground (Appendix 1, No. 46).

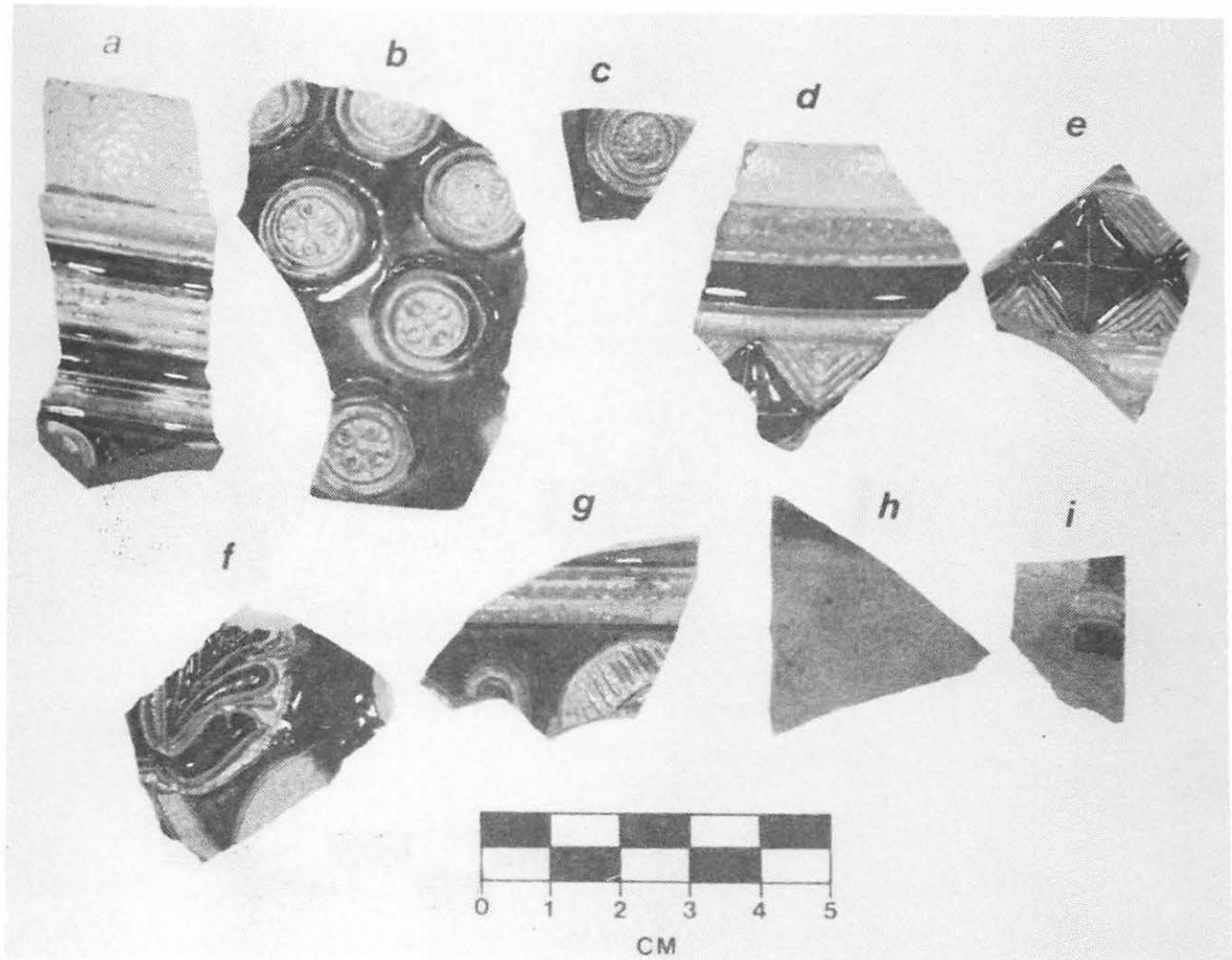


PLATE 11

## Rhenish Stonewares.

- a,b. Rim and body sherd, Mug or Jug, rosette-like medallions (Appendix 1, No. 54).
- c. Scroll-like medallion (Appendix 1, No. 56).
- d,e. Rim and body sherd, alternating green and blue diamond design (Appendix 2, No. 33).
- f. Body sherd, mug or jug (Appendix 1, No. 58).
- g. Mug or tankard fragment (Appendix 2, No. 34).
- h,i. Body fragments, late Rhenish (Appendix 2, 36).

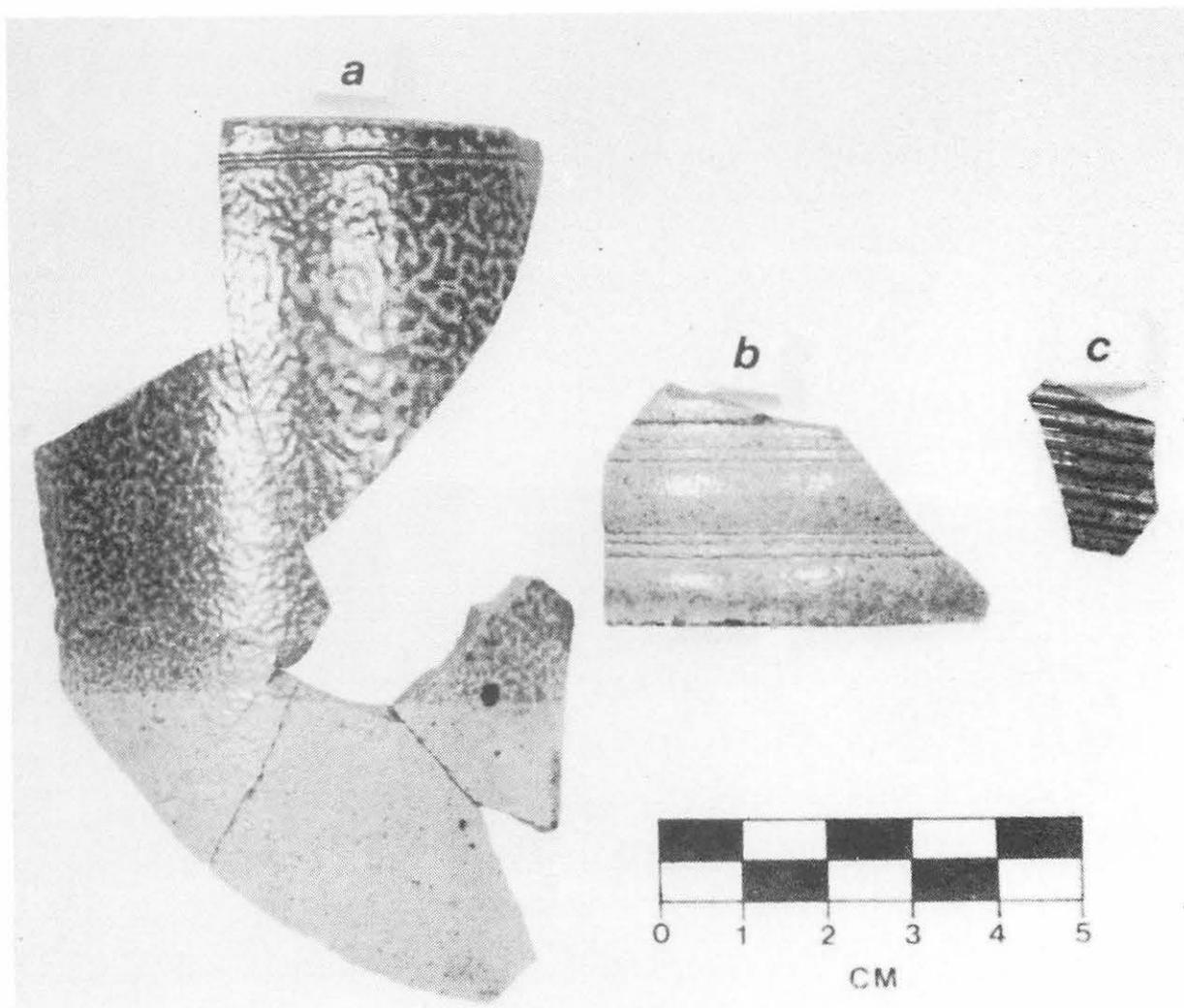


PLATE 12

English Brown Stonewares.

a,b. Body and basal fragments from a tankard (Appendix 1, No. 60).

c. Body fragment, Nottingham tankard (Appendix 1, No. 61).

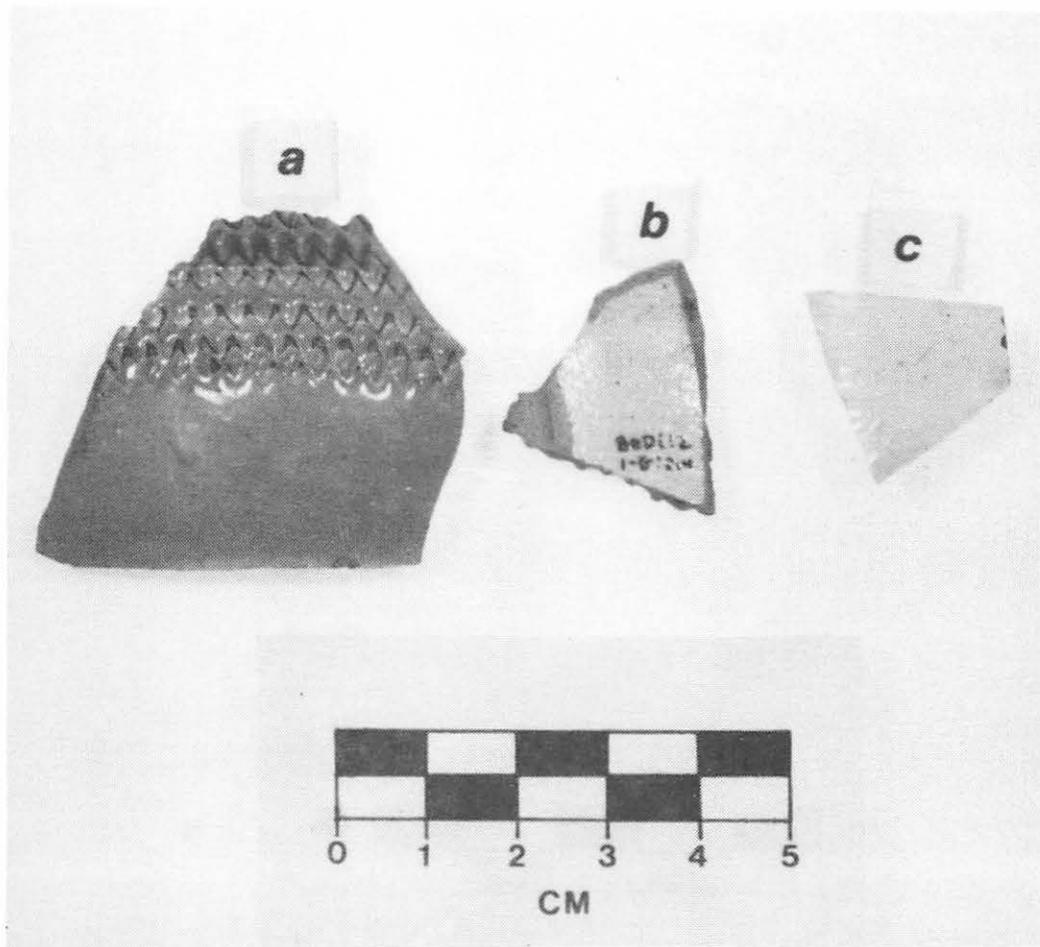


PLATE 13

English White Salt-Glazed Stonewares.

a,b. Exterior and interior surface of mug or jug (Appendix 1, No. 63).

c. Body sherd, unidentified vessel (Appendix 2, No. 41).

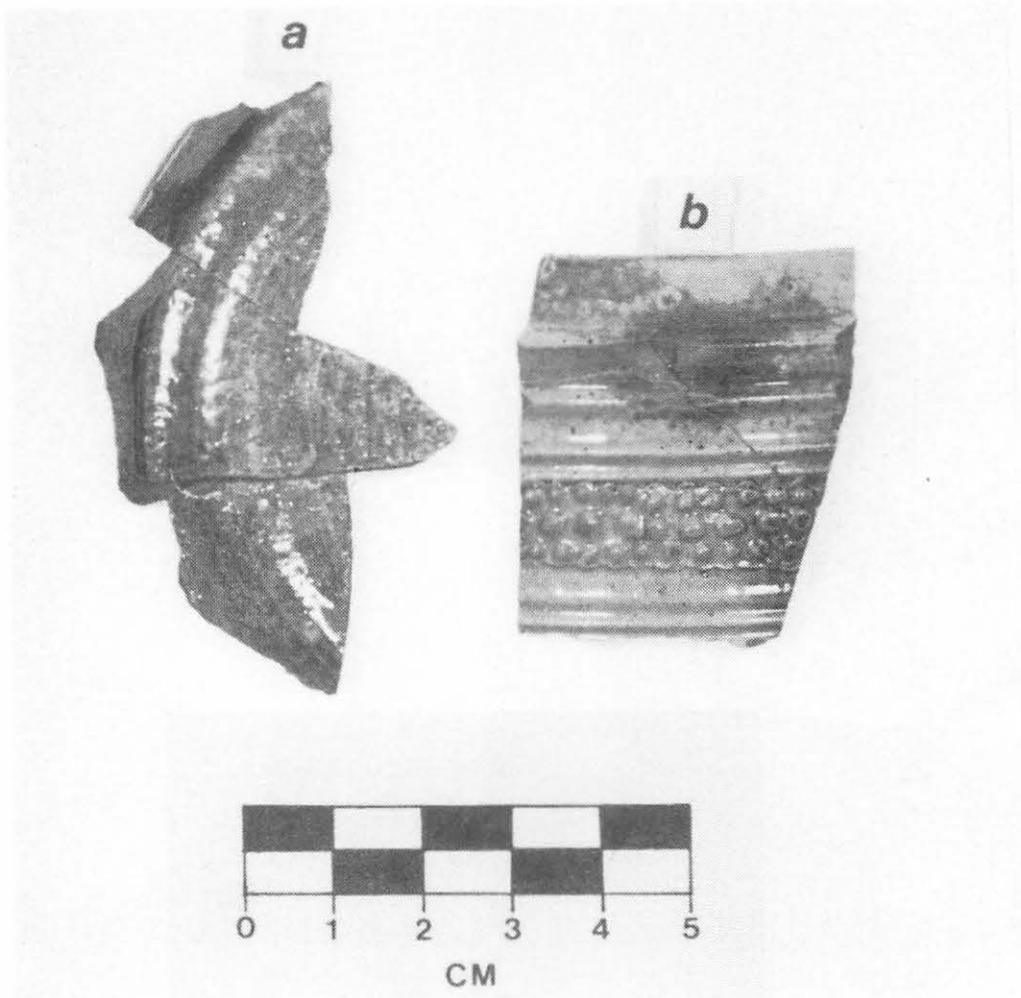


PLATE 14

American Stoneware.

a,b. Basal and side fragments from a mug or tankard (Appendix 2, No. 40).

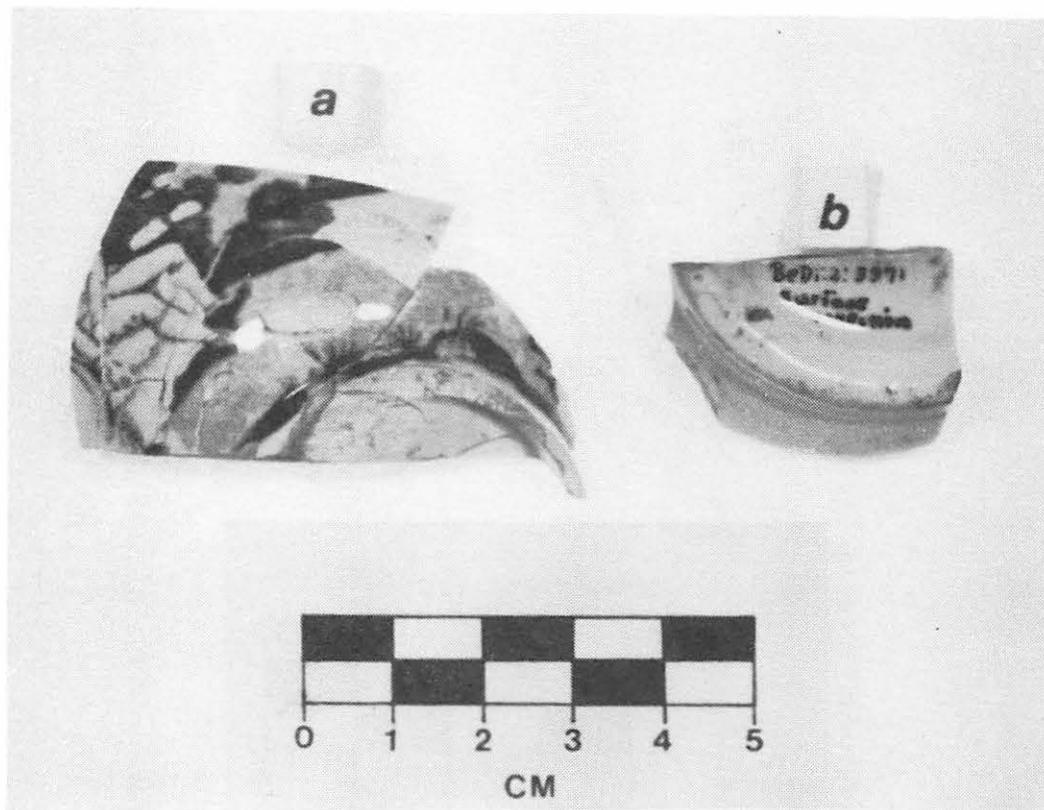


PLATE 15

Pearlware and Ironstone.

- a. Pearlware cup fragment with blue-printed pastoral scene (Appendix 1, No. 69).
- b. Basal fragment from an ironstone cup (Appendix 2, No. 43).

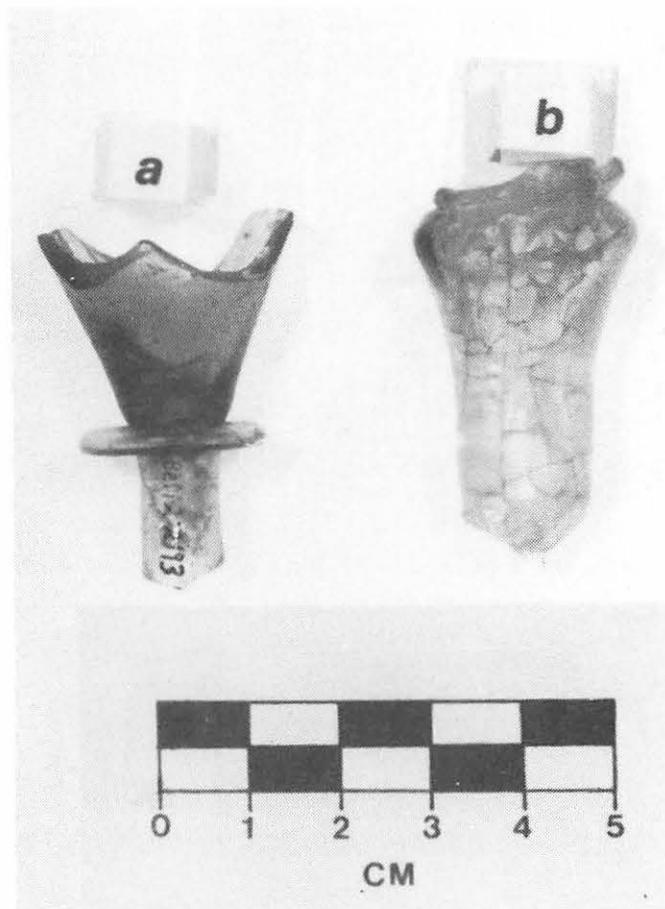


PLATE 16

## Stemmed-Glasses.

- a. Verre fougère drinking glass (Appendix 2, No. 44).
- b. English lead-glass with inverted baluster stem, quatrefoil-styled, London.

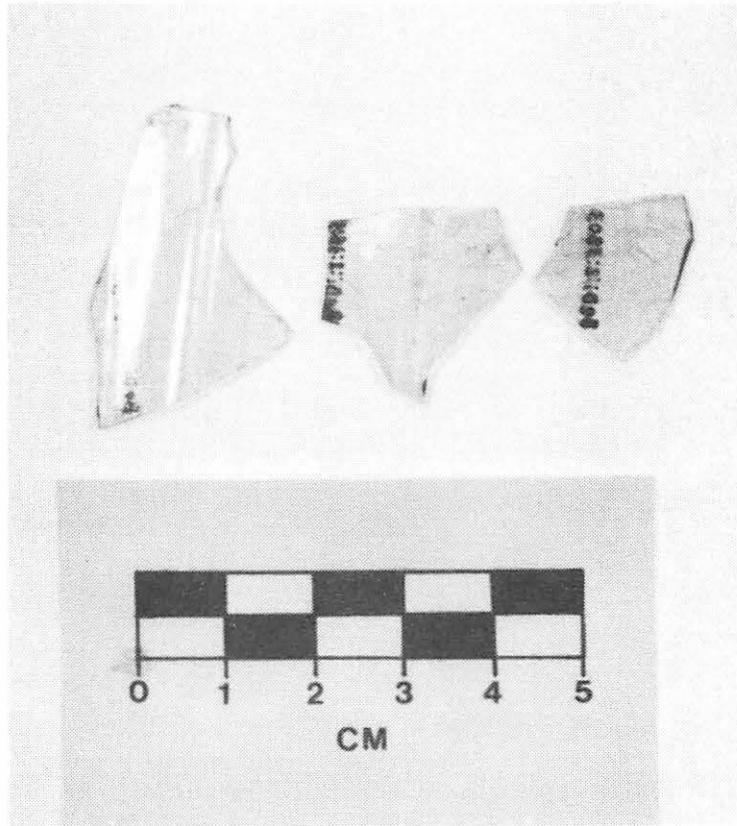


PLATE 17

Toiletry bottle fragment.