SEVENTEENTH-CENTURY LIFE IN RENEWS, NEWFOUNDLAND: ARCHAEOLOGICAL ANALYSIS OF AN ENGLISH WEST COUNTRY PLANTER'S HOUSE

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Seventeenth-Century Life in Renews, Newfoundland:

Archaeological Analysis of an English West Country Planter's House

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Abstract

During a 1993 survey of eighteenth-century civilian gun batteries on The Mount in Renews, Newfoundland evidence of a seventeenth-century occupation was uncovered. Subsequent excavation of the site in the summer of 1994 exposed the foundation and internal features of a one-room domestic structure and more than 34,000 artifacts. Many of these artifacts, including several tools associated with the fishery, were associated with the occupation of the site during the third quarter of the seventeenth century. Ceramics and other artifacts from the Barnstable and Bideford area of north Devonshire in England's West Country dominated the assemblage. Fifty ceramic vessels were identified from the pot sherds, including many vessels associated with the storage, preparation, presentation and consumption of food and drink. Other ceramic and glass vessels were associated with medicinal products. The nature of the artifacts from the seventeenth-century deposits, together with the substantial structural remains, suggest that a long-term habitation had occurred at this site.

This thesis describes and interprets the findings from the site including the architectural remains and the artifactual remains. Chapter I introduces the site and its physiography and the early historical background to Renews. The methodology employed for the study is also explained in this chapter as are the dating techniques and the site stratigraphy. Chapter II focuses on the architectural evidence and describes each element of the house

present within the archaeological record. Missing elements of the dwelling are inferred by the archaeological and historical evidence. Chapter III is dedicated to the artifacts discovered on the site. The research parameters are described as are all the major artifact groups. Chapter IV offers interpretations on what the various artifacts represent and what they can tell about the life of a planter in Renews during the seventeenth century. The artifact assemblage was analyzed in a way to allow for inferences to be made regarding several important facets of seventeenth-century life on the site. These facets include foodways, health care, leisure activities and occupational activities. Chapter V concludes the study by summarizing the findings. The appendices contain the figures and information on clay tobacco pipe stem bore analysis, Event descriptions and an informative report on pollen discovered in the seventeenth-century cultural deposits.

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The Introduction

1.1 Preface

Renews is a small outport on the east coast of Newfoundland's Avalon Peninsula, 90 kilometres south of the provincial capital of St. John's (Figures 1a and 1b). It is but one of many harbours along Newfoundland's "Southern Shore" (also known in historic times as the "English Shore") where the cod fishery has been the primary economic focus since the early years of the European exploitation of the New World. Although the European migratory fishery has been conducted out of Renews since the first half of the sixteenth century, year-round settlement was not attempted until the early seventeenth century. Settlement on a long-term or permanent basic was largely the domain of fishermen and their families from the West Country ports of southwestern England. Fishing plantations sprung up in a number of harbours along the Southern Shore, where fishermen exploited the rich inshore fishing grounds. Salting and drying their catches in the summer months these entrepreneurs, many accompanied by their families, would sell the salted codfish and related byproducts in the European market.

By choosing to live in the Newfoundland, these industrious folk, with hired crews manning their fishing boats, stood to gain from a longer fishing season and undertook secondary sources of income such as boat building, wood cutting and trapping. These

winter activities would provide additional income from the fishing crews that migrated back to Newfoundland every spring. Although hundreds of such plantations developed on the Avalon Peninsula during the seventeenth century, detailed descriptions are limited. Generalized accounts of fishing activities exist in several sources, however, the physical evidence was lacking. Ongoing archaeological excavations at Ferryland have exposed a number of ruins from the seventeenth-century Colony of Avalon, however, prior to the discoveries at Renews, small scale planter's dwellings were missing from the archaeological record.

An archaeological survey in Renews in 1993 and full scale excavation the following year exposed the ruins of a planter's home dated to the third quarter of the seventeenth century. The archaeological discoveries on The Mount in Renews offer an opportunity to view the material remains of a seventeenth-century English dwelling. Although an ocean away from England, the Renews planter remained connected to the homeland by a systematic industry, the cod fishery. Life in seventeenth-century Newfoundland was probably similar in some ways to that back in England's West Country. The people were familiar, the customs, social structure, clothes, tableware and basic foodstuffs were likely also the same. The natural environment was one of the major differences and perhaps the only one they had no control over. Nature also provided the raw materials which were used to build a home, so adaptation was no doubt a part of the regular routine. The rich cultural remains from the site provide evidence left behind by one of what were probably

hundreds of English families (planters) that chose to live in Newfoundland during the seventeenth century.

Various segments of this thesis will focus on the material evidence from a single planter's household - the type of dwelling inhabited and the varieties and availability of ceramic table and storage wares. The existence of numerous clay tobacco pipes from the site shows that smoking played a significant role in everyday life. Most of the artifacts from the site were typical for the time. They reflect a reliance on stored foodstuffs and sturdy cooking wares. Others show the degree of social activity that occurred in the home. Inferences on economic status and trade networks are revealed through the artifacts as well. The pattern of refuse disposal tells something of the accepted behavioural characteristics of the time. Such a narrow "window" into the past is rarely obtainable in the archaeological or historical sense.

The architectural remains are a study unto themselves. It is one of the earliest English-built dwellings uncovered in Canada to date. The structural evidence speaks of availability of valued iron nails and the ingenuity of the builder/occupant. In several ways the house conforms with what is known as traditional techniques and standards while in other ways it departs from the same. Although not all of the physical elements are preserved, the archaeological record does reveal several details previously unknown in early colonial Newfoundland architecture.

1.2 Introduction

During the seventeenth century, Renews was arguably one of the busier harbours along Newfoundland's Avalon Peninsula. Fishermen from the southwest of England, particularly those from the northern part of Devon, routinely sought out the harbour during their annual voyages to the rich fishing grounds surrounding the Avalon (Poynter 1962:56; Matthews 1968:184). Evidence of this North Devon presence was unearthed in Renews in 1993. The remnants of a single-celled house were uncovered along with thousands of artifacts dating to the third quarter of the seventeenth century. A number of fishing-related tools, including hooks, jiggers and net weights found with broken cooking and food storage pots indicate that the house was occupied by a fisherman, possibly accompanied by his family. The function of the ceramics is important as it suggests that food storage and preparation played a significant role in the dwelling. This would indicate a year-round occupation instead of one by migratory fishing crews.

The archaeology of the seventeenth-century English presence along the east coast of Newfoundland dates to the early 1960s when cursory excavations uncovered seventeenth-century artifacts in Ferryland's inner harbour (known locally as The Pool) (Harper 1960). Although Harper's testing was limited in its scope, it provided proof that physical evidence from that time was present in the town. Two decades later, a renewed interest in the period arose when a concerted effort was again undertaken in Ferryland by archaeologists from Memorial University. This research, led by Dr. James Tuck,

succeeded in exposing substantial archaeological deposits linked to Lord Baltimore's 1621 colony of Avalon (Tuck 1985, 1989, 1992, 1993; Tuck and Robbins 1986). An archaeological survey by Peter Pope uncovered sites of similar age in Conception Bay (Pope 1989). The discovery of rich archaeological resources at Ferryland led to the Colony of Avalon Project involving extensive excavations in and around The Pool.

The Colony of Avalon Project also included a survey of eighteenth-century gun batteries along the east coast of the Avalon Peninsula. During that survey, a small seventeenth-century deposit was discovered in the town of Renews, 15 kilometres south of Ferryland. Shovel testing in an area known locally as The Mount produced ceramics and tobacco pipe stems dating from the seventeenth century in association with wrought nails and structural-type stones. A subsequent program of controlled excavation uncovered hundreds of additional artifacts in an area measuring approximately 10 m by 12 m.

The presence of early domestic artifacts and fishing equipment with structural artifacts suggested that the remains of wooden dwelling were buried nearby. Encouraged by the prospect of uncovering a seventeenth-century fisherman's house, a full-scale excavation was planned for the summer of 1994. The second season was incredibly fruitful, as the remarkably preserved foundation of a small domestic house was uncovered and more than fourteen thousand artifacts collected. The datable artifacts suggest the site was occupied during the second half of the seventeenth-century, with an intense habitation during the

1660s. By far, the bulk of the cultural material was associated with the seventeenth-century occupation. Evidence of later usage was also uncovered in the strata overlying the house collapse. Artifacts from the eighteenth century suggested that the site continued to be used sporadically during that time. This material includes a collection associated with an occupation by soldiers from the British Royal Artillery in 1779/1780. The eighteenth-century occupations are outside the scope of this thesis. Surprisingly little evidence of nineteenth-century usage was documented in the archaeological record. Artifacts from that century could literally be held in one hand.

1.3 Research Objective

This thesis has a single overall objective: the descriptive presentation of the remains from a mid-seventeenth-century English West Country fisherman's house. To achieve this objective, the physical evidence from the site will be presented in a descriptive format that will allow for comparisons with other early colonial sites. The analysis of the structural and nonstructural artifacts allows an examination of the architectural, household and occupational materials needed to survive in a hostile environment, isolated for many months each year from contact with the home country. The site in Renews stands as an example of seventeenth-century English existence in the New World, a period of Newfoundland and Canadian history that, until recently, was known largely through historical documents.

1.4 Physiography

Renews is located on the east coast of Newfoundland's Avalon Peninsula, about 90 kilometres south of St. John's. Although not one of the most protected harbours on the coast, and not particularly deep, its inner reaches have offered safe anchorage to small vessels for centuries. Rocky outcrops punctuate stretches of flat cobble beaches throughout much of the harbour.

A dominant feature in Renews is "The Mount", a rectangular grassy and rock headland jutting out from the shore, approximately one kilometer from the harbour mouth (Figures 2 and 3). While much of the meadow on The Mount is between 10 and 15m above sea level, a bedrock massif on its south side rises some 25 m straight out of the ocean. Earthworks and half buried cannon barrels from two eighteenth-century gun batteries that once protected the harbour from American privateers are clearly visible on the west edge of The Mount. Depressions in the ground mark a number of nineteenth-century house locations.

The earliest reference for the name "The Mount" dates to 1778 when Captain Robert Pringle of the British Royal Engineers visited Renews in preparation for the defence of the harbour during the American Revolution. Pringle refers to defences under construction on "a spot called the Mount" to defend the entrance to the harbour (G.N. 2/1/a vol. 7 ff.153-154). It is not difficult to perceive why this area was chosen to defend

the harbour. In addition to being an elevated and central position, The Mount also protects a prime stretch of beach frontage from the southeasterly winds that often blow in from the open Atlantic. This beach was a choice location for drying fish since at least the seventeenth century and subsequently became the location for the community wharf in modern times.

The archaeological site is in a well-protected grassy hollow on The Mount, at the base of the bedrock massif (Figures 4 and 5). Lesser rock outcrops immediately to the east and north of the site range in height from one to three metres and offer additional protection from the cold and wet northeasterly winds. Although the site was situated on dry ground, moderately dense sandy clay subsoil in the area combined with the bowl-like shape of the grassy hollow resulted in considerable water retention during periods of rain. Fissures in the bedrock bordering the east side of the site channel rainwater down from higher ground through the site and into low-lying ground to the west.

A small stream empties onto the beach at the southern edge of The Mount a short distance from the site. Conceivably, this stream could have provided fresh water to those living there in the past. As in many of the communities on the southern Avalon Peninsula, the area surrounding Renews including The Mount, has long been cleared of large trees. Wild berries and a limited variety of fruit trees grow in the area and small garden plots produce several varieties of vegetables, namely root crops such as potatoes, carrots and

turnips. As is noted in the following historical background, the agricultural potential for Renews was commented upon as early as the first decades of the seventeenth-century.

The grassy meadow and bedrock outcrops on The Mount provide wonderful vistas of the picturesque harbour and open ocean and the seemingly ever-present breezes in this part of Newfoundland's east coast keeps air-born insects to a minimum often producing an delightful atmosphere on The Mount. Consequently, The Mount is frequently visited by residents and visitors alike who come to enjoy the view. Whales, iceberg and a variety of sea birds can regularly be seen during the summer months.

1.5 Historical Background

The origin for the name Renews comes from the English corruption of *Rougenoust*, the sixteenth-century French name for the harbour, which itself is derived from the word *rogneux*, meaning scabby or mangy, as in rocks covered with weeds, slime and shells (Poole 1993:575). At low tides, many weed-covered rocks are exposed in Renews harbour and it was probably for this reason that the harbour got its name.

Renews was known to Europeans in the early period of North American exploration and exploitation. Perhaps the earliest documented reference for Renews dates to 1506 when Jean Deny, a French fisherman left several of his fishing boats in *Rougenoust* (Barnable 1992:2). Jacques Cartier also stopped over in 1536 to re-supply his ship with wood and

drinking water on his way back to France from his explorations up the St. Lawrence River (Cook 1993:89). He called it ***Hable Rougnouse.*** Other early names for Renews include *Arenhosa* and *Rhenus.*

Before the third quarter of the sixteenth century, Renews was probably the domain of migratory fishermen from France, Portugal and Spain (Cell 1969: ix). English fishermen began their large-scale involvement in the Newfoundland fishery in the late-1570s (Cell:1969:22-33). It is likely that they began using Renews as a fishing base at that time as by the 1580s it was a well-known port to Englishmen. Sir Humphrey Gilbert identified it and the neighbouring harbour of Fermeuse as a rendezvous for his small fleet of five ships before they departed Plymouth on his British empire-building voyage of 1583 (Morison 1971: 573).

In the early seventeenth century, Renews was again recognized as a perfect place to complement the English colony of Cupids in 1612. Henry Crout, a contemporary of Richard Whitborne and a shareholder in the Newfoundland Company, (the organizers of the Cupids colony) spent the summer of 1612 fishing in Renews and exploring the area for potential mineral deposits. That same summer, a group of Cupids settlers attempted to colonize Renews. Owing to the threat of harassment from the pirate Peter Easton, this plan was short lived and the colonists lasted only a few days in the harbour (Cell 1982: 8, 81). Six years later, in 1618, the Welshman Sir William Vaughan attempted to settle the

harbour with a disorganized group of settlers. That attempt lasted little more than a year (Cell 1969:84; 1982: 13, 23-25). In 1623 a third attempt was ventured, when Sir Henry Cary (Viscount Falkland) established a colony which survived for at least three years (Cell 1969: 90-91). Cary's was the last organized attempt at populating the harbour. Any settlement that followed, was likely on a smaller scale by fishers from the nearby colony of Avalon (Ferryland) or directly from the West Country of England (Cell 1969: 96). Planters may have been attracted to Renews through the words and writings of Richard Whitborne, a man who was deeply involved in the Newfoundland fishery. Through this involvement, he was intimately familiar with Newfoundland and wrote favourably about Renews, citing its agricultural potential, bountiful game, fresh water and wood (Cell 1982:152).

Because Renews was neither an administrative nor economic center like Ferryland and St. John's, it has escaped the attention of historical writings which usually focussed on the political and economic activities in Newfoundland. Census taken during the last quarter of the seventeenth century suggest that the harbour was occupied as much or more than many other smaller outports on the Island (Table 1.1). Shipping records noted in the census and from other sources indicate that Renews was regularly visited by several hundred English fishermen during that time (C.O. 1/44 f. 110; Matthews 1968:184). These fishermen participated in the migratory fishery that began early in the spring with the preparation of fishing stages and drying facilities and continued to late summer. By

Table 1.1 Total Population of Renews in Selected Years Between 1663-1682

Year	Planters/min. # in families	Planter's boats/ servants	Ships/ boats	Migratory fishermen	Minimum population
1663	5/5	9/42*	5/40	200*	247
1675	6/21	7/36	6/31	165	222
1676	n.a.	n.a.	6/54	260	260
1677	6/19	13/39	4/29	144	202
1679	N.A	N.A	3/37	190	190
1681	10/51	25/131	4/41	212	394
1682	15/41	27/171	3/57	285*	479

* based on 5 men per boat

N.A. figures not listed

Sources: **1663** (Poynter 1963:55,57)

1675 Census (CO 1/35 (17ii): f.150)

1676 (Matthews 1968)

1677 Census (CO 1/41 (62 iv, vi, vii): f.158); (Matthews 1968)

1679 (CO 1/44: f.110)

1681 Census (CO 1/47: f.112)

1682 Census (CO 1/49: f.192)

late September, most of the migratory crews had departed for the European market ports in Spain, Portugal or France. Some of the fishermen chose to stay in Renews over the winter months instead of returning to England. These men, often accompanied by their families, were known as "planters" as they operated plantations (shore-based fishing enterprises). Some planters also employed servants, who for the most part assisted with the fishing operations. The harbour likely became more peaceful following the departure of the last migratory ship for Europe in the fall of each year. Those remaining busied themselves by catching and preparing even more fish and making preparations for the long cold winter. Winter activities included hunting and trapping for food and furs, cutting and sawing wood for small boat building, fuel and as building materials for sale to the migratory crews returning in the Spring (Poynter 1963: 60; Pope 1992: 72-74).

A number of details are available on some of the seventeenth-century planters in Renews. In addition to providing the names of planters, the census also recorded quantitative information on family size, livestock, residences, and fishing-related buildings. For example, five planters were named for 1663 (Poynter 1963: 55) and the five censuses taken between 1675 and 1692 show that overwintering population of the harbour fluctuated between six and fifteen families. In his doctoral thesis on the seventeenth-century south Avalon planters, Peter Pope identifies 13 planters residing in Renews at various times between 1645 and 1681 (1992:532-547). An additional 4 names show up on the census from 1675 and 1677 (C.O. 1/35 (17ii):150; C.O. 1/41

(62iv,vi,v11):158). These figures show that at least 18 different planters lived in Renews, either with or without families between the mid 1640s and mid 1680s.

During the seventeenth century, Renews was likely a typical Newfoundland fishing harbour. The available documentation on population size taken between 1675 and 1692 can be used with the lists of ships and crew sizes to represent the mid to late seventeenth-century population. The harbour was typically bustling during the fishing season (April to September). At least 200 migratory fishermen and planters lived in the harbour in a given year and in the early 1680s that number nearly doubled (Table 1.1). The ships carrying the migratory crews originated in such West Country ports as Bideford, Plymouth, Dartmouth, and Falmouth (Distribution of Fishing Ships in Newfoundland 1675-81, Maritime History Archives). Renews was particularly favoured by men from the north Devon ports of Barnstable and Bideford, two of the ports that sent many men to fish between Ferryland and Trepassey (Matthews 1968:184, Poynter 1963:56). Sack ships were also sent to Newfoundland to pick up cargos of dried fish. These cargo ships would visit the various harbours collecting what they could before returning to the continent to trade dried cod fish for wine, oil or other Iberian or French products. Renews was also one of the English harbours attacked in 1696 by a powerful French military force led by d'Iberville (Williams 1987). The extent of the damage during this raid is unknown.

The next significant event relating to the site history did not occur until 1779, when, during the American Revolutionary War, two battery positions were constructed on The Mount to defend the harbour against attacks by American privateers (G.N. 2/1/a vol 7: ff. 153-154). The strength of the British military in Newfoundland was regularly recorded in the annual (or sometimes bi-annual) census of men and materials, known as Troop Returns. The Troop Returns recorded in July, 1779 indicate that 11 members of the Royal Artillery werestationed in Renews (G.N. 2/1/a vol 7: 86). The next Troop Return (November 1779)shows this number had been reduced to two (C.O. 194 vol. 34: 78). The August, 1780 Troop Return fails to mention Renews, which indicates the absence of regular soldiers in that harbour (C.O. 194 vol. 35: 39). The governor sent 50 stand of muskets for the civil defence of the town in the absence of the soldiers (C.O. 194 vol 34: ff. 71-72). The soldiers stationed in Renews were likely barracked on The Mount (as indicated by the presence of military and domestic artifacts from this period in the archaeological deposits discovered above the seventeenth-century occupation). It appears that the site was abandoned following the departure of the British troops. Although there is no documentary evidence for the nineteenth-century habitation of The Mount, the 1993 archaeological survey discovered several house depressions which apparently date to that century.

1.5.1 James Yonge's Journal

For the purposes of this thesis, perhaps the most important figure in the history of Renews was James Yonge, a 16 year old surgeon on board the 100-ton Plymouth fishing vessel the Reformation that spent five months in Renews in 1663. When he was not administering to the health of the fishermen there and in the neighbouring harbour of Fermeuse, Yonge kept a journal in which he recorded many of his observations on life in the harbour. Although brief (representing just several months in a journal that covered over half a century), his Renews entries are an informative account of ordinary occurrences that generally escape the pages of formal histories. Yonge commented upon such seemingly mundane occurrences as the processing of fish, types of bait used and some of the winter activities of the planters. Because of his detailed accounts of the early fishery and everyday life, Yonge's journal is perhaps one of the most important documents for this period of Newfoundland's history. He also gives the only record of the construction technique for migratory fishermen's houses in Newfoundland during the seventeenth century.

James Yonge illustrated his journal with sketches of the places he visited and the things he saw. These sketches included the harbours of Renews (Figure 6), Fermeuse, Ferryland and Caplin Bay (Calvert). He also drew a fishing stage, flanked by a cook room, flakes and a four-manned fishing boat (Figure 7). Yonge's sketch of Renews contains landmarks that can be traced today: shoals, beaches, coves and a point of land on the

north side of the harbour that is unmistakably The Mount. Six fishing stages (wharfs) and two houses are depicted on this sketch. One of the houses was labelled "Planters" and is slightly to the west of the "Amhorals Place" [sic] (the fishing admiral's premises). The other house was labelled "Tho Faulcon" and is situated adjacent to The Mount. This map may provide important clues to the interpretation of the archaeological remains. Yonge departed Renews on 14 September 1663 for England. He returned to Newfoundland for several additional seasons (1668, 1669 and 1670), but fails to mention Renews again.

1.6 Methodology

The archaeological research was carried out under permit number 93-09, issued by the Historic Resources Division of the Provincial Department of Tourism and Culture. The permit holder was Dr. James Tuck while the author directed the excavation and undertook the analysis. Artifacts recovered from the site were processed at the archaeological field laboratory in Ferryland and those requiring conservation were treated both at the Ferryland facility and the archaeological conservation laboratory at Memorial University. The processing and conservation of the artifacts was under the direction of Cathy Mathais while the artifact collection was managed by Ellen Foulkes.

Standard archaeological hand equipment, mainly trowels, brushes and occasionally small custom-made digging tools were used during all the excavations. A metric grid was established over the site prior to the full-scale excavation. Where possible, the

excavation followed the natural and cultural stratigraphy of the site. Perhaps the most beneficial aspect of this method of excavation is that deposits of contemporaneous age were exposed simultaneously. This is particularly helpful in assigning provenience to artifacts and archaeological features.

To assist with the interpretation of the site stratigraphy, the various strata and lesser deposits were classified as Events. Two elements of the sub-floor drainage system inside the house were further classified as Event 4, Features 1 and 2. An Event can signify a chronological occurrence ranging from an occupation spanning a decade, or the collapse of the house which may have occurred in a single day. On large sites, Events are sometimes further combined into phases, however, the restricted physical and temporal parametres of this site limited the analysis to the Event. This method of stratigraphic analysis was based on Dr. Edward Harris' work on stratigraphic control of archaeological deposits (1989). The complete list of Events from the site is displayed in Appendix C and will be summarized at the end of this chapter.

Each artifact discovered during the excavation was recorded *in situ* using two horizontal measurements and one vertical measurement. The horizontal measurements were taken from the southwest corner of each unit, while the vertical measurements were recorded from the modern ground level, nearest the artifact. This method of artifact recording is the standard used by the Memorial University Archaeological Program and ensured an

accurate means of documenting the position of archaeological specimens in the ground. All measurements were recorded in metric units.

Several baulks were left in place around the site to maintain the stratigraphic record and to provide benchmarks for measuring vertical depths. Two primary intersecting baulks, 50 cm wide, were maintained through the center of the excavation to record the archaeological deposits along east-west and north-south axes. A third baulk was positioned at the east side of the site, over what turned out to be the hearth area. Additional baulks were also maintained on the western part of the site. After they had been drawn and photographed, most of the baulks were removed toward the latter part of the project.

1.7 Dating

Dating an archaeological site requires a variety of methods including historical documentation and the analysis of the artifacts from the deposits. Especially useful are the tobacco pipes and everyday ceramics. When the site was first discovered, the presence of North Devon ceramics indicated that there were cultural deposits present that dated to the seventeenth century. The coarse utilitarian wares produced in the North Devon towns of Bideford and Barnstable were largely replaced (except locally) by finer wares produced elsewhere in England in the early eighteenth century (Grant 1983: 132).

Of all the artifacts found on historic sites from the late-sixteenth to the eighteenth century none is more useful for dating than clay tobacco pipes. These fragile pipes often appear in notable quantities on sites that postdate the late sixteenth century. Over the past five decades a great deal of research has been dedicated to clay tobacco pipes and their use in dating archaeological deposits. Scholars have recognized that pipe stem bores grew smaller as time progressed and they could be used as a relative dating tool. Others refined this technique but noted that it was only accurate with large numbers of pipe stems (Oswald 1975:93). The bore diameter from every Renews pipe stem was measured and calculated using the Harrington/Binford formula for dating clay pipe stems to give a stem bore date for the various deposits (Oswald 1975:92). Many of the pipe stems had bore diameters that measured 6/64 of an inch or greater. The calculations are presented in Appendix B and summarized in Table 1.2 below. Because of the small number of stems from Event 1 (n=63), they were added to those from Event 2.

As early as the 1830s, tobacco pipe researchers recognized that pipe bowls changed with time, a trait thought to be due to a drop in the price (and therefore increase in the availability) of tobacco (Oswald 1975: 29). As tobacco became cheaper and more readily available, the bowls grew larger (Ayto 1994: 4). Regional variations became established especially in the major pipe manufacturing centers of London and Bristol and useful typologies have been established for English pipes (Oswald 1975: 29-61). English West Country and London styles dating between 1660-1680 dominate the Renews pipe

Table 1.2 Harrington/Binford Dating Formula Applied to Renews Tobacco Pipe Stems.

Event	# of stems	Harrington/Binford Formula Date
Events 1 & 2	366	1710
Event 3	579	1697
Event 4	388	1659
Event 36	147	1638
Total	1480	N/A
Events 4 & 36	535	1652

Table 1.3 Maker's Marks on Seventeenth-Century Tobacco Pipes From Renews

Mark (name)	*MNI*	*Event(s)*	*Origin*	*Date Range*
"PS" (Peter Stephens)	14	3, 4 & 36	Barnstaple	1647-68
9-spoke	4	4	Barnstable	1640-80
8-spoke	3	3 & 4	Exeter	1650-70
"LE" (Lluellin Evans)	2	4& 36	Bristol	1661-88
"BARUM"	2	3	Barnstaple	1680-1700
"PE" (Philip Edwards I)	2	4 & 37	Bristol	1649-69
Rosette	1	4	Dutch	1640-80
Terra Cotta	1	4	Chesapeake Bay	1645-60

bowl shapes. Many of these are similar to pipe found in similarly-dated cultural deposits from Ferryland and correspond to the Ferryland Type Codes established by Peter Pope in 1991.

Undoubtedly, the most accurate tool for dating tobacco pipes was the stamp applied to the pipes by their makers. These marks (usually initials or symbols) were used by pipe makers to identify their products. In the earliest times these marks were stamped on the base of the flattened heel beneath the pipe bowls; later they were stamped on the sides of heels, on the bowls and on pipe stems. The true value of the pipe maker's marks was that, if identified, they can date a pipe to the working life of its maker, which normally spanned two to three decades (Oswald 1975:52-53).

Marks from eight seventeenth-century pipe makers were discovered on twenty-nine of the one hundred and fifty-four pipe bowls from the seventeenth-century house collapse and underlying occupation strata (Table 1.3). Another partial mark was present on a bowl fragment. As it was likely that the house collapse stratum could contain pipes dropped on the site after the house had been abandoned, only the ninety-seven specimens from the occupation strata (Events 4, 36 and 37) were used to date the habitation of the house. Of these, twenty-two exhibited maker's marks (Figures 8 to 13). The identities of three of these makers have been identified while the place of manufacture and date range have been traced for the other five marks. The dates of these maker's marks range from the

1640s for the earliest to the 1680s for the latest.

Nine of the twenty-two marked bowls or bowl fragment from the occupation strata were stamped with the initials "PS" which, based solely on their numbers, play an important role in dating the occupation of the house (Figures 8a, 8b and 9). Specimens were discovered in and below the earthen floor, in the hearth area and in the midden outside the house. An additional five "PS" bowls were recovered from the house collapse stratum. This mark has been attributed to Peter Stephens (Stevens) from Barnstable (b. 1616, d. 1668) (Grant and Jemmett 1985:472-473). Although it is unclear when Stephens began stamping his own pipes, it was probably circa 1646 as he is recorded as taking on an apprentice that year and therefore was a master pipe maker by that time (Grant and Jemmett 1985:472-473). Presumably, based on the fragility of the clay pipe, pipes bearing his stamp would not have survived long after his death. All the recognizable "PS" pipe bowls (some of the marks are on incomplete bowl fragments) are of a style attributed to the period 1660-1680 (Oswald 1975:58-59). As Peter Stephens died in 1668, it would appear that the pipes from Renews were likely made during the last decade or so of his life.

The second identifiable pipe maker was Lluellin Evans who marked his pipes with a "LE" on the bowl facing the smoker. This mark was found on a complete bowl and on a fragment from another. There are two adjoining diamonds shapes between the initials

and a dot beneath the "E". The whole mark in enclosed within a circle. Evans made tobacco pipes in Bristol between 1661 and 1688 (Oswald 1975:152). He stamped his pipes with several styles of his initials, on both the heel and the bowls of his pipes (Alexander 1979, Walker 1977:1428-13). The complete Renews example is identical in form as one of Evans' pipes (also stamped with an "LE" on the bowl) illustrated in Walker (1977:1429 [d]). An incomplete pipe bowl bearing an identical "LE" mark, separated by two diamonds and a dot beneath the "E", was recovered from the Buck Site in Maryland (Alexander 1979:48, Figure 6, #4). Incidently, that pipe was found with fragments of North Devon sgraffito-decorated pottery (Alexander 1979:51). Similarly marked Evans pipe have also been found on the seventeenth-century English and French fort at Pentagoet in Maine (Faulkner and Faulkner 1987:174-175). Pipe bowls and stems with Evans' marks were also recovered from the Hallowes Site in Virginia. That site has been interpreted as a yeoman's cottage dating to the 1660s (Buchanan and Heite 1971).

The discovery of a complete Evans pipe bowl in the first earthen floor of the house, beneath the beach cobble sub-floor, is significant as it provides a *terminus post quem* for the deposition of the beach cobbles. As the owner of that mark, Lluelin Evens, began making pipes in 1661, therefore the discovery of one of his pipes in the first floor of the house indicates that the beach cobbles were not deposited until at least 1661.

A third identifiable maker's mark was found on two bowls, one from Event 4 and the

other from Event 37, a deposit associated with the second earthen floor inside the house (Event 36). This mark, a "PE" is accepted as the mark of Phillip Edwards, a pipe maker working in Bristol between 1649 and at least 1669. Edwards lived until 1681, but it is uncertain how long he was making clay pipes (Walker 1977:1125-1126). Like Lluellin Evans, Philip Edwards stamped his mark on the bowls (facing the smoker), heels and stems of his pipes.

Two versions of "spoked wheel" marks were found on six of the pipes from the seventeenth-century occupation deposits. A seventh specimen was discovered in the house collapse stratum. Although both are "spoked wheel" marks, one is much cruder than the other. It had a mark made up of nine spokes pressed into the heel of four pipe bowls (Figures 10a and 10b). These pipes were found in the deepest deposits on the site, two of them within a metre of one another on the floor of the hearth area, at a depth of over 50 cms beneath the surface. The other two were found deep in the midden deposits. Each of these pipes had a bore diametre of 9/64 of an inch. Although the mark has yet to be identified and wheel-shaped marks done in relief can be found on pipes made in London and Plymouth between 1640-1660 (Oswald 1975:66), the shape of the bowl was more reminiscent of pipes manufactured in Barnstable between 1640 and 1680 (Grant and Jemmett 1985:546). The large bore diameter suggests these pipes may be from the earlier rather than later period. The same mark was present on a bowl fragment from one of the seventeenth-century deposits from Ferryland (Gaulton 1999:2).

The second variety of a "spoked wheel" mark was present on two pipe bowls in Event 4 and a third bowl from Event 3 (Figures 11a and 11b). It is of a style known as an "eight-spoked wheel" that matches marked pipes from Ferryland identified as having an Exeter origin dating between 1650 and 1670 (Pope 1992:526).

The fifth seventeenth-century maker's mark featured a rose enclosed by a circle (Figures 12a and 12b). The fabric of this pipe is unusual as it is peppered with tiny ferrous clumps. Although rosettes were used on Plymouth and other West Country pipes ca. 1640 (Oswald 1975:66), this particular example is identical to one found on two pipe bowls from Ferryland (catalogue #'s CgAf-2-6215 and CgAf-2-235261). This mark has been attributed as having a Dutch origin (Duco 1981:258). The shape of the bowl is similar to the "PS" and "8-spoked wheel" specimens and likely dates between 1660 and 1680.

The last of the marked pipe bowls from the house occupation strata was found at the bottom of the seventeenth-century midden near the foundation of the house. It was mistakenly assigned to the house collapse stratum (Event 3), however, its recorded depth of 37 cm below surface, at the interface of the midden deposit and the subsoil implies it was deposited during the initial occupation of the house. This pipe bowl was made from marbled white and terra cotta clays and was decorated with a peculiar roulette and floral design on the bowl and stem (Figure 13a and 13b). Terra cotta pipes are generally

accepted as being made in the Chesapeake Bay region of Virginia and Maryland. (Henry 1979:14) Clay pipe fragments with identical markings and fabric have been found in archaeological deposits from Martin's Hundred, Virginia (Noel Hume 1979:17, Figure 4, #7) and at the St. John's and Pope's Fort sites in St. Mary's City, Maryland (Miller 1991:84, 85, Figure 7, d,f). The stem fragments from Martin's Hundred (Site A) are believed to date from the first half of the seventeenth century (Noel Hume 1978:41) while the St. John's (Maryland)site specimens date to ca. 1660 (Henry 1979:23). As the pipes from Pope's Fort were recovered from sealed deposits inside the defensive ditch they are believed to date between 1645-1650 (S. Hurry pers. com. 1996). The Renews pipe shared the same attributes as the specimens found on the American pipes: shape and style, agate clays and most importantly, the same unique dies used for decoration. The mid-seventeenth century date for the American pipes is also consistent with that of the Renews site.

Of interest to note is that the date of 1653 extrapolated from the pipe stems recovered from the combined occupation deposits (Table 1.2, Events 4 & 36) are earlier than the 1660-1680 range proposed by the analysis of the pipe bowls and maker's marks (Appendix B and Table 1.3). Based on the measurements of the pipe stem bores, a date of 1638 for Event 36 is even more skewed when compared to the pipe bowl and maker's marks data. The only maker's marks from that deposit were on bowls of a style that has been attributed to the post-1660 period (1660-1680) and the makers themselves were not

producing pipes around the stem formula date of 1638. Pipe bowls from the same pipe makers (Lluellin Evans, Phillip Edwards and Peter Stephens) were found in both floors of the house (Events 4, 36 & 37) suggesting that the floors were temporally close in age (see descriptions of Events 4, 36 and 37 below). Similarly, pottery sherds from twenty-two vessels were recovered from both floors.

Clearly, the two forms of pipe dating do not match. Although this problem was recognized in the 1960s and methods were proposed to correct it (Hanson 1971, Heighton and Deagan 1972), current research on seventeenth-century clay pipes from various sites in Newfoundland indicate that this may be related to regional variation within England (Pope 1998). Pope speculates that cultural deposits from Ferryland and the site of an early eighteenth-century (Circa 1708) civil fort in St. John's can be dated some fifteen to twenty years later than the pipe stem dates indicate. The data from the Renews clay pipe fragments concurs with Pope's speculation.

In summarizing the dating evidence, data extrapolated primarily from clay tobacco pipe fragments found on the site indicate that the house was occupied during the third quarter of the seventeenth century, likely between 1660 and 1680. It should be noted that only pipe fragments from the sealed midden and earthen floor deposits were used for dating the seventeenth-century occupation. Later artifacts were deposited on the site after the house was abandoned. The following points summarize this dating evidence:

1. All of the marked pipes from the sealed deposits were made between 1640 and 1680.
2. The date range can be further refined through the lack of pipe bowls from the styles common in the periods before 1660 and after 1680.
3. The discovery of a pipe bowl made by Lluellin Evans in the original earthen floor of the house indicates that this floor was not covered by the beach cobble deposit before 1661. As Evans did not begin producing pipes until 1661, the discovery of one of his pipe bowls beneath the beach cobbles (Event 4, Feature 1) provides a *terminus post quem* for the deposition of the cobbles.
4. The stem bore data suggests an occupation in the 1650s, however, current research in Newfoundland suggests that dates derived from stem bores are earlier than dates derived from pipe bowls and maker's marks.

1.8 Stratigraphy

Maintaining stratigraphic control is perhaps the most critical element of an archaeological excavation. Lack of proper stratigraphic control will make it impossible to accurately interpret cultural deposits, including the separation of the various strata. Mixing deposits from a stratified site will render any subsequent separation unlikely, with only very broad analysis possible. Determined adherence to stratigraphic control is the best method for isolating deposits from different dates and ensuring temporal control of the artifacts and

site features. Complications are occasionally encountered, particularly those involving human judgement and mother nature. To minimize the complications associated with human judgement by having too many interpretations of the stratigraphy, only the author assigned event designations to various stratigraphic deposits. Dealing with natural events was sometimes a more difficult complication. The annual freeze-thaw cycle, combined with the rocky nature of some of the deposits, namely the house collapse and the eighteenth-century deposit overlying the collapse, resulted in some degree of mixing of the deposits. At times, the distinction between the two deposits was difficult to establish. To compensate for this, an arbitrary break was used when it was not possible to recognize a stratigraphic distinction. In these cases, the lower portions of the deeper, house collapse were not mixed with the more recent (eighteenth-century) deposits above.

Every effort was made to ensure that the entire excavation followed the various cultural and natural strata. Much of the site was dug in a fashion which allowed for the simultaneous excavation of large areas. This strategy was generally successful in exposing and recording deposits of contemporaneous age. Several baulks were preserved during the project to help maintain stratigraphic control. The profiles from these baulks were drawn and photographed during the final phase of the project before being removed (Figures 14, 15 and 22b) . The overall stratigraphy on the site was not particularly complex, consisting of seven major strata and several lesser stratigraphic deposits. Each major stratum (or Event) will be described below, while all the stratigraphic units are

presented in Appendix C.

Event 1

Event 1 represented the sod and organic humus development over the entire site. It ranged in depth from 4 to 10 cm, depending on the amount of grass and plant growth. Numerous artifacts were present in the sod, ranging from modern beverage bottle glass to seventeenth-century ceramics. On the east half of the site this sod covered Event 2, while on the western half it interfaced directly with the parent subsoil (Event 5).

Event 2

Once the sod stratum was removed a thin organic deposit containing numerous flat hand-sized stones was discovered in the eastern half of the site. This stratum was designated Event 2. Because of its localized position and multitude of 1770s-1780s artifacts (Figure 16), this deposit is believed to represent a brief occupation of the site by soldiers from the British Royal Artillery during the fall of 1779 and early winter of 1780. Occasionally this stratum was difficult to distinguish from the underlying house collapse stratum. When the clear distinction was not visible, an arbitrary break was made at 10 cm below the surface.

Event 3

The most extensive stratum encountered over the entire site was designated as Event 3, a

20-50 cm thick deposit of flattish stones mixed with organic soil (Figure 17). The stones ranged in size from 20 cm square to 50 cm square and every conceivable size in between. As with Event 2, this stratum was also found only on the east half of the site. The organic matrix together with the large number of flat, structural-type, stones suggests that this stratum likely represents the collapse of the structure. It is therefore referred to as the "house collapse stratum". Several thousand seventeenth-century artifacts were recovered from this layer as was a collection of eighteenth-century material.

Event 4

Event 4, a deposit of dark brown organic sands, was discovered beneath the house collapse stratum both inside and outside the house foundation. Outside the house, this deposit was immediately underlain by Event 5 (natural subsoil). However, inside the foundation it lay sandwiched between the rock-filled house collapse (Event 3) and the beach cobble sub-floor and drain (Event 4, Features 1 and 2). This stratum represented the seventeenth-century occupation of the house and is believed to also represent one of two earthen floors inside the dwelling. Some stones were also present within this layer, although not nearly to the degree as in the stratum above. Occasional lenses of cream-coloured sandy clay were also noted, particularly inside the house. In one area of the house interior one of these clay lenses was thick enough to warrant its own Event designation (Event 34, Figure 18). The significance of these lenses was not realized until a connection was made between them and the matrix of the similarly coloured sandy clay

subsoil from a nearby pit (Feature 3) (see Event 6 below). Once it was determined that the sandy clay lenses were actually re-deposited subsoil dug from this pit, it became clear that the pit was the origin of the sandy clay for the earthen floor of the house. Inside the house foundation, this deposit was far greasier in texture than outside the foundation. This phenomenon was probably due to nature of the deposit and the activities which occurred inside the house.

Event 4 also represents the house midden, outside the dwelling, where the majority of the seventeenth-century artifacts were recovered. It stretched for several metres in a fan-like direction from the southwest corner of the house (where the door way was located). As the midden and the house interior were both capped by the house collapse, they share the same terminal date.

Event 4, Feature 1

Between the two earthen floors inside the house lay a deposit of rounded beach cobbles. As it was determined to be an architectural feature of the house, it was assigned as a Feature designation within Event 4. It consisted entirely of water-rolled beach cobbles ranging in size from 2-10 cm in diameter. The beach cobbles were not present over the entire house interior. They were absent in the hearth area and in places along the south side of the interior, particularly near the doorway. Several crushed sherds of coarse earthenware and tobacco pipe stems were discovered in this deposit. This feature has

been interpreted as a sub-floor drainage system sandwiched between the original earthen floor (Event 36) and the second earthen floor (Event 4). It will be described in detail in Chapter 2.

Event 5

The parent subsoil beneath the cultural strata was designated as Event 5. It consisted of two types of soil matrix. In places, it was characterized as a reddish-brown sandy gravel while in other areas, notably along the southern most portion of the site, it had a greyish white sandy clay matrix. A small number of seventeenth-century artifacts was recovered from this stratum. They had likely found their way into this otherwise sterile stratum through the heaving action of the annual cycle of freeze-thaw activity.

Event 6

This designation was assigned to a fill deposit discovered in a borrow pit (Feature 3, Figure 19) near the south side of the house. The soil matrix consisted of what appeared to be redeposited grey-green or cream-coloured sandy clay subsoil. A small number of artifacts was recovered from this pit fill, the date range of which was unusually broad for such a spatially limited deposit. They have been dated from the seventeenth to the late eighteenth and possibly even early nineteenth-centuries.

Event 7

The pit interface with the parent subsoil has been designated as Event 7. This was necessary to distinguish the original excavation of the pit from the activities involved with its infilling. As the artifacts from the fill inside this pit have a date range that spans a more than a century (circa 1650-1780), it is important to differentiate between the activities involved with the original excavation of the pit and its subsequent infilling. It would appear that the pit was dug in the mid-seventeenth century and filled in over a long period of time, with considerable refuse being thrown in during the military occupation of the site in 1779/1780.

Events 36 and 37

The next major stratigraphic unit was a loamy organic deposit typical of buried sod. It was discovered beneath the beach cobble deposit (Event 4, Feature 1) and above the natural soils (Event 5). A number of seventeenth-century artifacts were present in this stratum. They were similar, both temporally and functionally to those from Event 4 and 22 of the ceramic vessels from this event shared sherds with other events. As this stratum bottomed onto the natural subsoil, it has been interpreted as the surface upon which the house was built, and was probably its original earthen floor prior to the deposition of the beach cobble sub-floor. Event 37 was assigned to the jumble of large flat stones found within Event 36.

Chapter II

The Architectural Evidence

2.1 Introduction

At the time of its discovery, the structural remains from the dwelling were overgrown with grass and weeds with no visible evidence on the surface. The foundation was buried beneath 20-50 cm of stones and organic soils and since the house had been built in a low dish-shaped hollow, its collapse caused a levelling of the area. The house collapse also resulted in the development of a thick stratum of organic soils full of large flat stones. Many of these stones are believed to be part of the structure, probably the east gable wall (where the hearth was located) and possibly also from the roof. The nutrients from the organic structural debris and discarded food remains in the midden likely promoted a healthy growth of vegetation over the house collapse. This heavy overburden was thickest on the east side of the site and tapered to the south and west. Once the house collapse was recorded and removed, the unmistakable remnants of the house became clear. The dry-laid coursing from the foundation enclosed the earthen floor and hearth area.

Certain structural features were discernable during the course of the excavation, while the entire dwelling with its internal elements was not obvious until the latter part of the

project, when the house was completely exposed. These internal elements include the foundation, earthen floors, sub-floor drainage system, hearth area, and cooking area or fire box. The surviving elements of the structure were made from the most durable materials: stone and clay.

Uncut local stone was used in the foundation and hearth construction while beach cobbles and stone slabs made up the drainage system. With the exception of the hearth area, the floor was made from sandy clay (Event 4). The organic structural features, namely the walls and roof, were totally absorbed back into the soil. The elements of the structure that survived, did so because of their durable nature and the fact that the site was largely abandoned after the house was vacated. The relatively isolated location of the house probably also contributed to the survival of the structural remains. Other than sporatic use (as evidenced by small hearth features) and a brief occupation by members of the Royal Artillery in 1779, the site has basically been unoccupied since the collapse of the house (circa 1670).

2.2 The Foundation

The house foundation was built from undressed local stone, which in the area consists of coarse-grained dark grey sandstone and shale (Williams 1974:12). The cleavage pattern of the bedrock produced thin angular stones with more-or-less flat surfaces (Figure 20). This made them entirely suitable, if not ideal, for building purposes. None of the

foundation stones shows any obvious signs of preparation. It appears that suitable stones were chosen, rather than manufactured from larger pieces. Nor was there any attempt to place the foundation in a builder's trench. Thin traces of buried sod were noted beneath several foundation stones suggesting that the foundation was set directly upon the grass. Although the size of the foundation stones varied, most measured between 30-40 cm long, 20-25 cm wide and 5-10 cm thick (Figure 21). The largest stone in the foundation (in the south wall) measured 1.2 m long by 50 cm wide and 24 cm thick.

The hand drawn map of the house foundation was digitized and reproduced using the computer assisted design software package AutoCAD 13 (Figures 22a and 22b). Related structural stones are coded to help visualize the various elements of the house. Footing stones and the fire box in the northeast corner of the house are stippled. Additional internal structural features, namely the V-shaped drain and hearth floor support footings are shaded. The three solid black areas are post holes. The beach cobbles used in the sub-floor (Event 4 Feature 1) are only reproduced in Figure 22a.

The height of the foundation varied, likely because of the thickness of the stones and the lie of the ground. Up to two courses of the foundation along the west wall survived as two parallel rows of flat stones slightly offset from one another. In most places, only the primary course of foundation stones survived. The ground sloped gradually from the northeast to southwest and, as a result, the foundation was likely the highest in the

southwest corner to provide a level base for the wall sills. The foundation may have shifted during the collapse of the walls, resulting in the displacement of the stones. This may explain the discovery of a jumble of structural-type stones in that area.

The best preserved portion of the foundation turned out to be the northeast corner of the structure, where the fire box was discovered. There, it measured between 50-60 cm wide. This width suggests that the foundation was wide enough to support a sill measuring up to 30 cm or one foot thick. Using both the northeast corner and the large stone slab in the south wall (mentioned above) as an average, it would appear that the foundation could have measured approximately 50 cm wide.

The only surviving evidence of a bonding agent in the house foundation was preserved in the back wall of the fire box. There, traces of the same local sandy clay used for the floor were discovered among the stones. It may be possible that the foundation was low enough to have supported itself without the need for a bonding material. No trace of lime mortar was found anywhere on the site.

2.3 The Doorway

The only sizable opening in the foundation was located in the west wall, near the southwest corner of the house (Figure 22a and 22b). There, two postmolds were discovered approximately 1.1 m north of the southwest corner. The southern postmold

(still retaining the core of the post) measured 14 cm (5.5") square, and was slightly rounded on the interior face. The second postmold was a darkened stain in the light-colored subsoil measuring 14 cm by 19cm (5.5" by 7.5"). Several small sherds of North Devon pottery were found in the second postmold. These two postmolds, likely representing the door frames, are believed to be the only remains of the entrance to the house.

Additional evidence supports the location of a door in this area. Beach cobbles, from the sub-floor (mentioned below) were scarce in that corner of the house interior but, conversely, were present outside the doorway. It would appear that foot traffic in the doorway resulted in the displacement of the beach cobbles from inside the house to the outside. Also, a major midden deposit was also discovered off the southwest corner of the house. The location of this midden suggests that refuse from inside the house was discarded directly outside the doorway. The artifact numbers in the 1 m square excavation units in the vicinity of the door were the highest on all of the site.

2.4 The First Earthen Floor

Two earthen floors were recorded inside the house. The first lay immediately beneath the debris from the house collapse, while the second floor was discovered beneath a beach cobble sub-floor. The first floor was represented by an irregular stratum of mottled, charcoal-flecked organic sandy clay, between 4-10 cm thick. It covered the entire interior

of the house and was littered with artifacts. This stratum lay beneath the house collapse and above the beach cobbles (where present). The sheer weight and jumbled, rocky matrix of the house collapse, combined with the smooth matrix of the earthen floor, resulted in the considerable compression of the earthen floor in several places. Where it was intact, the floor was very distinct and easily recognizable by its smooth greasy mottled texture. Occasionally, lenses of cream-colored clay were observed within this stratum (Figure 18).

2.5 The Beach Cobble Sub-Floor Drainage System (Event 4, Features 1 & 2)

2.5.1 Feature 1

Beneath the first earthen floor lay an unusual deposit of water-worn beach cobbles which formed a wedge-shaped stratum covering much of the house interior with the exception of the hearth area. (Figures 14, 22a to 25). These cobbles were generally slightly smaller than palm-sized, and appear to have been randomly dumped inside the house with no obvious indication of having been deliberately set into a clay or sand base. They were present to a lesser degree in the southernmost 1 m (nearest the south wall) and nearly absent in the hearth area. In places, such as inside the doorway, there were only a few cobbles resting on the soil while in other areas, particularly along the north side of the house, they were piled 10-15 cm deep. The pattern of these cobbles around the doorway could be a product of intense foot traffic in that area which would have resulted in their

displacement inside and outside the house. Relatively few artifacts were found on or in this feature. The few sherds of pottery and clay pipe fragments that were discovered within the cobbles were badly shattered and, in some cases, virtually ground into powder.

One would think that if the cobbles were used as a floor, that in addition to being an unstable surface, they would also have been stained by grease and fat from food preparation. None of the beach cobbles displayed any signs of staining or heat fractures. This suggests that they were covered by the earthen floor soon after they were placed inside the house. Once the entire cobble sub-floor was completely exposed, its surface appeared notably undulating. This may have been the result of the irregular surface the cobbles rested upon combined with the weight of the roof collapse which likely scattered some cobbles from their original positions and pushed them into the softer soils below.

2.5.2 Feature 2

An alignment of flat slabs, "V" -shape in cross section and 1.55 m long, was uncovered near in the center of the floor, within the beach cobble deposit. The surface of these slabs were roughly level with the top of the cobbles, parallel to the long axis of the house and sloped downwards toward the doorway (Figures 22a, 22b, 25 and 26). Although some of these flat slabs were also displaced, probably during the house collapse, their alignment and "V"-shaped placement clearly identifies their function as a drain. This drain could have collected water percolating through the beach cobbles and directed it beneath the

foundation or out through the front door. When the beach cobbles were removed, it became clear that the drain had been deliberately set into the soil (Figure 27). A cover for this drain was not identified, however, cobbles were found within the drain which suggests that it may not have needed a cover.

Together, the beach cobbles and drain are believed to be a part of a sub-floor, installed by the occupants to help raise and level the floor and to drain ground water away from the house interior. Incidentally, during the excavation of the site, the need for a drain was often evident as the house interior quickly filled with water whenever it rained (Figure 28). Flooding was prolonged by the position of the house against a bedrock outcrop. A large fissure at the base of the bedrock acted as a channel for rainwater permeating down from higher ground east of the house and actually directed ground water into the house. The sub-floor and drain likely functioned as a channel for ground water to flow through to keep the clay floor free from excessive moisture and hopefully, allowed the inhabitants to remain dry during wet weather.

2.6 The Second Earthen Floor

Towards the end of the excavation the beach cobble sub-floor was recorded and removed. Beneath it lay another buried cultural stratum of organic soil and stones, which has been interpreted as evidence of an earlier earthen floor (Event 36). It may well have been the very grass upon which the house was constructed. A jumbled arrangement of stones was

discovered in this stratum (Figure 27). Some of these stones were larger than those used in the foundation and it was a great surprise to see them buried beneath the beach cobbles. Their jumbled appearance may have been caused by frost heaving over so many years. Subsoil was discovered directly beneath these stones, suggesting that they were not deliberately placed on the floor prior to the installation of the beach cobbles. Had they been placed over an existing earthen floor, then organic soil from that earthen floor should have been present beneath the stones. Although these stones are likely a part of Event 36, they were assigned a separate event designation (Event 37). A fragmented 1660-1680 style pipe bowl (catelogue # CfAf-5-8855) was found among the stones. It was stamped with a "PE", the initial of Philip Edwards (see page 25 above).

Close to 1,200 seventeenth-century artifacts were recovered from this stratum, suggesting two possibilities: the site had been occupied before the house was built; or that this was actually an earlier earthen floor. The artifacts from this deposit indicate that the latter appears to be the case. These artifacts were similar to those found in the other strata on the site, including the first earthen floor and in the midden. No less that 22 of the ceramic vessels represented in Event 36 had sherds in other deposits on the site, including many in Event 4. Two marked pipe bowls bridges this deposit temporally to the first earthen floor of the house. The first bowl (Catalogue # CfAf-5:8553), was stamped with a "PS" on it's heel. the same maker's mark as was found on seven of the pipe bowls from the clay floor, hearth and midden. The second bowl, with a "LE" maker's mark (Catalogue #

CfAf-5:8520) is arguably most important as it may also provide a date after which (*terminus post quem)* the house was constructed (see page 24 above). The discovery of these two pipe bowl nicely links the two floor deposits together.

2.7 The Borrow Pit (Feature 3)

The sandy clay used as flooring material for the earthen floor discovered inside the house was likely dug from the ground just metres from the doorway. During the first season on the site, a 1 by 1.5 m steep-sided oval pit was discovered on a low rise, some 4.5 m southwest of the house (Figure 19). It had been excavated into the subsoil to a depth of at least 30 cm. At its deepest point the bottom of this borrow pit feature was 50 cm below the modern surface. The re-deposited fill inside the pit consisted of small stones and several large angular boulders in a sandy clay matrix that was similar to, but slightly more organic than the subsoil itself.

Approximately one-half of this pit feature was excavated during the archaeological project and 190 artifacts were recovered, including wrought nails, ceramics, clay pipe fragments, a fish hook, a honey coloured French- or Flemish-style gun flint, North Devon ceramics and case bottle glass. Eighteenth-century stoneware and creamware sherds constituted about 50 per cent of the artifacts from the pit fill. Because of the high frequency of eighteenth-century artifacts and the gun flint, it was first thought that this feature was associated with the eighteenth-century military occupation of the site.

However, a different interpretation emerged when an intact tobacco pipe bowl was found embedded in the subsoil at the base of the pit. The pipe bowl was a perfect example of West Country-style pipes dating between 1660 and 1680 (Figure 29). This bowl, together with the North Devon ceramics and the case bottle glass suggested a seventeenth-century origin for the pit. It was not until the following year that its function was realized.

The function of the pit was not detected until lenses of cream-colored sandy clay were discovered on several occasions during the excavation of the house floor and midden deposits. The soil matrix of these lenses was virtually identical to the sandy clay subsoil exposed at the bottom of the pit (Figure 18). Curiously enough, the subsoil around the house was basically gravelly, however, in the vicinity of the pit, the subsoil was a smooth cream-colored sandy clay. Clearly, the builders of the house had realized this clay source and used it for the second floor inside the home. The seventeenth-century artifacts from this feature, particularly the pipe pressed into the soft clay at its base suggests that this pit was dug during the 1660s. The eighteenth-century refuse was likely deposited during that occupation when a shallow pit on the site made a convenient receptacle for refuse.

2.8 House Dimensions

When calculating the interior and exterior dimensions of the house, several elements of the structure were used. Although the rough outline of the foundation was clearly discernable, a precise measurement of the length and width of the structure was difficult

because of the displacement of many foundation stones. The beach cobbles, hearth area and doorway post molds were helpful benchmarks in calculating the interior space dimensions. The interior face of the doorway post molds and the back wall of the fire box were used to determine the overall length, which was measured at 6.1 m (20'). Estimating the width of the house was more difficult as the hearth area was narrower than the main portion of the house interior. This discrepancy might have been because of the position of the hearth between two bedrock outcrops.

The overall dimensions of the hearth area were 2 m (6.5') deep by 3.6 m (11.8') long [north-south], totalling 7.2 square metres (77.5 square feet). Outside the hearth area, the house interior was roughly square, measuring 4.1 m (13.5') [east-west] by 4.0 m (13.1') [north-south], for a total area of 16.44 square metres (176.5 square feet). When combined, the total house interior was estimated at between 3.6- 4 m wide by 6.1 m long (11.8'-13.1' by 20'). Adding the dimensions of the narrower hearth area to that of the wider clay floor gives an overall interior dimension of 23.6m (254 sq. ft.) of living space on one floor (Figure 22).

Determining the precise exterior dimensions was also difficult, although it was possible to make an estimation. Measuring from the exterior edge of the northern door post mold to a line parallel with the back of the fireplace gives an exterior length of 6.5m. Establishing the width of the house was again slightly more difficult because of the

displacement of the foundation stones. At its narrowest point, at the east end of the house, it was 4.3 m across. In the center of the house and on the west end, it appears to widen to 4.5 m. The width of the east end of the house was dictated by the recess in the bedrock which limited the space available to about 4.3 m. It may not have mattered strongly to the builder that the house was 15 cm (7.5") wider at one end. Give or take a few centimetres, the exterior dimensions of the house was approximately 4.4m by 6.5m (14.4' by 21.3').

2.9 The Walls

Aside from several surviving courses of stone behind the fire box, little evidence of the house walls survived. Although nothing remained of their wooden elements, several inferences on the wall construction are possible through the artifacts that survived, namely the foundation, nails and the door post moulds. The presence of about 850 nails, in and below the house collapse stratum, provide clear evidence that at least three of the walls were likely made from wood. The east gable wall could have been constructed wholly or partly from stone as the wall collapse covering the east side of the house would suggest. The position of the hearth against that wall strongly indicates that it was constructed from stone.

As was mentioned above, the foundation would have supported a sill which may have measured up to 30 cm (1') wide. The two post molds in the foundation implied that the

size of posts used in the wall construction measured between 14 and 19 cm in diameter. Presumably larger posts were used for the corners. The straight sides on the door posts also implied that they had been probably hewn or otherwise dressed.

If any openings (other than the door) existed in the walls, they were most certainly not covered by glass panes. Not a single sherd of window glass was found in either the seventeenth-century occupation layer or the house collapse stratum. The only piece of building hardware (other than nails) found at the site was a pintle-shaped iron concretion found near the west wall. This artifact may have held the door or a window shutter in place.

Wood for building material abounded in the area, including spruce, fir, pine and birch (Cell 1982:210; Kelso 1995, Appendix D). Whether cut locally or imported, the house in Renews was presumably covered with a wooden siding, probably clapboard nailed to dressed studs. Historical documentation in the form of contemporary descriptions from St. John's can be used to help fill in gaps in the archaeological data. This will be further addressed in the discussion.

2.10 The Roof

Like the walls of the house, the roof was also difficult to discern from the archaeological record. However, there was evidence to suggest that sods played an crucial role. The

house collapse stratum covering the foundation and floor of the house consisted of a thick stratum of organic soil (Figures 14 and 15), containing flat stones of various sizes and numerous artifacts, including 662 nail fragments. The presence of so many nails is clear indication that wood was a major component of the house, including in all likelihood the roof frame. The breadth and highly organic matrix of the house collapse stratum suggests that it may have been partially derived from sods covering the roof of the house. The large flat stones contained in this stratum indicate that they too were a part of the roof structure. Whatever it was constructed from, the roof was supported by a central post in the middle of the house. A circular post mold measuring 16 cm (6 1/4") in diameter was discovered near the center of the floor (Figure 22b). A post in this position would likely have been an internal support for a load-bearing central ridge beam, resting upon the walls. The archaeological evidence of seventeenth-century structures in Tidewater Virginia indicate that central posts are not were not used (Carson et. al. 1981). There, the roofs were traditionally carried by the walls instead of with the use of central posts. That there was a central post in the Renews house further suggests a heavy roof system, certainly more massive than the shingled roofs used in the southern colonies of Virginia, and therefore requiring additional support.

The composition of the roof structure will be discussed later in this chapter, although another related discovery should be mentioned at this point in the description of the structural remains. There was evidence that sods were stockpiled against the side of the

house. A continuous smooth organic sandy deposit, 50 cm wide and 3-4 m long, was discovered against the north wall of the foundation. This deposit (Event 35) was laced by of a series of alternating lenses of cream-coloured sandy clay which stood out against organic brown sands. These clay lenses have been interpreted as evidence of subsoil clinging to sods that had been cut and stacked against the side of the house. They were buried beneath the house collapse stratum and therefore must have been in place before the walls gave way and the massive roof covered them. Only seven artifacts were found in Event 35: three clay pipe fragments, two nails and one sherd each of bottle glass and North Devon coarse earthenware. Although the purpose of this bank of sods is unclear, they could have functioned as anything from a stockpile of roofing material to a barrier or plug to keep water or cold from entering the house.

There are a number of historic references for the use of sod as a roofing material in the seventeenth century on both sides of the Atlantic Ocean, in Britian, Renews, Placentia, Cape Breton and New Amsterdam (New York). A discussion of this will follow later in this chapter.

2.11 The Hearth Area

Of all the architectural elements from the house, the hearth area was the most nearly intact internal element. It was also the most obscured, having been buried by up to 50 cm of stones and dirt . As it helped complete the entire house interior, the hearth was also

the most exciting part of the house to excavate. Because of the amount of stone rubble covering the east end of the house and some uncertainty as to its location, the hearth area was not exposed until the final week of the excavation. The patient excavation and mapping skills of the crew members were well demonstrated during this phase of the project as the jumbled remains of the hearth area were exposed without actually being dismantled in the process.

The hearth area had been completely covered by the collapse of the east gable wall, a wall which may have been constructed entirely of stone. The wall collapse over the hearth was different from the rest of the house collapse in that it consisted mostly of stones and comparatively little soil (Figures 30 to 32). In several instances, these stones rested directly on the floor of the hearth area and on the fire box. The soils present in and around this part of the wall collapse originated from the sod development during the three centuries since the house collapsed instead of from the decomposition of the organic elements of the structure. Like the rest of the site, the house collapse over the hearth area had been completely covered by sods. Unlike the rest of the site, the small flat stones which characterized the eighteenth-century occupation stratum were not present in this area. The stones from the wall collapse were directly beneath the sod.

When these stones were recorded and removed, the entire well-preserved hearth area was revealed (Figure 33 to 34). It measured 2.0 m wide and approximately 3.6 m long and

constituted the entire width of the east end of the house, taking up nearly one-third of the house interior. The hearth area consisted of two components: a compact rectangular fire box in the northeast corner, and a working/living area in front of and to the side (south) of the fire box (Figures 22b, 33 to 35). The fire box had been built into the northeast corner of the hearth area where it rested on a bed of gravel some 10 cm above the ground (Figures 36 and 37). It measured 75 cm by 85 cm (2.6' by 3') and was constructed entirely of stone with a base consisting of several flat slabs, the largest of which measured 50-60 cm wide by 75 cm long. This slab was oxidized to a deep red colour, heat-fractured in a number of places and had concretions of iron corroded onto it (Figure 38). Several other flat slabs in front of the fire box did not display as much heat damage. The north and east sides of the fire box were incorporated into the foundation of the house.

The back and sides of the fire box were constructed from long, thin stones. Although almost the entire east wall of the house was gone (likely collapsed over the structure) perhaps as many as four courses of the back wall of the fire box were preserved (Figure 39). These rocks were severely eroded and heat-fractured to the point where it was impossible to determine the exact number of courses remaining. Fine, sandy clay, similar to the subsoil at the bottom of the borrow pit, was discovered in association with the fireplace stones. This clay was most evident between the wall stones at the rear of the fire box and in a mound immediately to the south side of it. It may have served as a crude bonding material, cementing the stones together.

Several artifacts were found lying directly upon the stone floor of the fire box. Mostly, these artifacts were severely corroded iron concretions which, judging by their shape, appeared to be nails. A well-preserved pipe bowl, with a partial stem, was also found embedded in clay in the northeast corner of the fire box. This specimen was typical of the West Country-style pipes dating from 1660 to 1680 and was similar to many found at the site.

The earthen surface of the hearth area was relatively free from stones and had a smooth organic soil matrix. It was similar to, but not exactly the same consistency as the greasy clay from the floor covering the rest of the house interior. It also had a noticeably higher charcoal content which may have contributed to making this soil the blackest of all the soil deposits on the site (Figure 33 and 34). This was especially true in front of the fire box and to a lesser degree in the central portion of the hearth. The southernmost metre was different again in that its soil matrix contained noticeably more gravel and stone and much less charcoal. As the large, foundation-type stones were few in this corner of the house, it is speculated that the gravel and stone may have been a part of the foundation. The depth of the occupation stratum in the hearth area resembled a wedge in that it was up to 10 cm thick in front of the fire box and gradually tapered to 3 cm as it terminated against the south foundation.

An unusual feature was that the surface of the hearth area was approximately 10 cm lower

than the top of the cobble sub-floor and had been partitioned from the rest of the house interior by an alignment of three long flat stones (Figure 40). Considering that the clay floor covering the beach cobbles averaged about 5 cm thick, this would place the surface of the hearth area (excluding the fire box) some 15 cm below the level of the floor. This was an unexpected discovery as it offered speculation that the hearth area (except the fire box) was covered, perhaps by a wooden floor, since numerous nails were among the artifacts found in the hearth area (see discussion).

Close to 400 artifacts were recovered from the house collapse over the hearth and a further 250 were found buried in the hearth area. It seemed that with every scrape of the trowel another artifact would appear (Figures 41 and 42). A number of large potsherds, including several from fragile drinking cups were among the discoveries. Clay pipe fragments, including 40 complete pipe bowls were also retrieved. Several of the pipe stems were in excess of 10 cm long. Additional finds included case bottle glass, a latten spoon finial and a silver Charles I half groat coin. As mentioned above, there were a number of poorly preserved nails in the occupation stratum around the hearth.

2.12 Discussion

The surviving structural remnants from the house offer fascinating details on a number of architectural elements including the foundation, size and basic configuration of the house, the flooring material, sub-floor drainage system and position of the entrance way. There

are, however, many elements missing, particularly those made from organic materials, namely wood. Missing are details on the walls and roof, joinery techniques, presence or absence of a storage/sleeping loft, and the position of window openings. Although some of these details will never be known, the archaeological record allows some inferences to be made. Several questions were also raised by the architectural evidence. The hearth area, in particular, had several unusual features that require a measure of creative interpretation. Using the physical remains, together with available historical documentation from Newfoundland and elsewhere, it is possible to fill in some of the missing details.

Two sources of seventeenth-century references relate to architecture and architecturally-related activities in Newfoundland. The first, by James Yonge, describes the houses and stages built by migratory fishermen in Renews in 1663 (Poynter 1963:56). Yonge also writes about certain winter activities of the Renews planters which relate to the availability of building materials. The second source is the planter, John Downing, who wrote of conditions in St. John's in 1675 (Prowse 1895:205). These two sources will be discussed later.

The architectural remains from Renews offer a rare example of a what may have been a common type of housing used in Newfoundland during the seventeenth century. For this reason, it was perhaps the most valuable discovery of the entire site. The house probably

contained a combination of English West Country architectural elements together with the alterations required for adaptation to life in Newfoundland. It may have resembled a typical West Country cottage, but it had to be suitable to withstand the ferocious winters for which the east coast of Newfoundland is renowned.

The house shared several characteristics with known seventeenth-century domestic structures from the United States and Great Britain. The overall dimensions of the house appear to be quite standard for the era and are well within the range of houses built along the eastern seaboard of North America in early colonial times. The 4.4m (14.4') by 6.5m (21.3") exterior, with an estimated 23.6 square metre (254' sq.) of interior living space conforms closely to "single-cell" structures in the 14' by 20' range uncovered on early colonial sites in the United States. Similar and occasionally even smaller houses were discovered at Martin's Hundred (Noel Hume 1982:140), at the Maine Site, in Jamestown (Outlaw 1990) and at a variety of other sites in Tidewater Virginia and Maryland (Cotter 1994:19-21). The simple one-room plan was also predominant throughout much of England for centuries and was especially common among farmhouses from the end of the sixteenth century onwards (Mercer 1975:60).

The small size and/or apparent absence of internal partitions were probably intentional as the lack of architectural complexity (in this case meaning more than one room) meant that it was easier to construct and maintain. Another, perhaps more important factor was that

a smaller house would have been more economical to heat, especially during the cold, damp months which characterize much of the year on the east coast of Newfoundland. Private living space does not appear to have been a priority in the seventeenth century, with communal sharing of interior space being more the norm (Deetz 1977:115). This should not be surprising when it is considered that nature provided all the room one could hope for just outside the door.

The single-celled floor plan was also typical for the time period as the records of 144 houses built in Massachusetts between 1625 and 1725 show (Cummings 1979:23). Well over half of these houses were documented as one-room dwellings. Overseas, in the early seventeenth century English colony of Ulster, the Renews house might even have seemed large when compared to the 18' x 12' tenements built to house some of the newly arrived tenants in some English plantations (Robinson 1979:20).

The relatively compact size of the house should not hide the fact that it was probably well built. The 50 cm wide dry-laid foundation was designed to support a sturdy structure. Unfortunately the soil conditions at the site were not sympathetic to organic preservation. Therefore, elements of the house construction, namely those made of wood, did not survive, or in the case of the post molds, survived only as organic stains in the subsoil. Certain inferences, however, can be made with a reasonable assurance that the house was largely constructed from wood. The presence of some 657 nails in the house collapse and

190 more in the occupation strata makes this evident. Most of the nails appear to be in the range of three to four inches in length and therefore were probably not used in the house frame. They were likely used to fasten the siding onto the house frame. Although the joinery techniques are unknown, standard practice for joining principal frames in the seventeenth century would have been through the use mortise and tenon or simple lap joints fastened by wooden pegs (treenails) and/or lashing (N. Alcock, Pers. Com.1995). The relative scarcity of large nails in the assemblage may be evidence of such joinery techniques used in this house.

Certain speculations can be made about the construction of the house walls. At half a meter wide, the foundation should have been able to support sills measuring half that size, say 25-30 cm. Using the two postmolds found in the doorway as indicative of the thickness of wall studs, a sill measuring 25-30 cm across would be appropriate to accommodate studs in the range of 14 cm by 19 cm (5.5 by 6 inches). No doubt, larger posts might have been used at the corners.

The actual frame of the house may have been along the lines of the timber "box-frame" house common in England and other places where English people moved, notably in Ulster (Northern Ireland) (Gailey 1984:44; Robinson 1979:13-24). Two types of box-frame construction were normally employed, each using upright timbers as studs set into sills at the bottom and plates at the top. The difference between the two types of framing

lay in the proximity of the studs to one another. Close studding, as the name implies, has the studs placed close together, while the second style had the studs further apart and braced with diagonal and horizontal ties. The spaces between the studs in both styles of framing were normally in-filled with boards, mud or brick and plastered over (Robinson 1979:18-19). Although it requires additional timber, close framing is less complicated to erect as it requires fewer mortice and tenon joints for the internal braces and ties and the closely spaced studs required less insulation for infilling. In Renews, where the emphasis likely fell more on fishing than carpentry, the less complicated close studding may have more practical. Supplies of wood for building materials were not a problem.

The exterior of the house was probably covered in locally cut boards. James Yonge records that the planters in Renews cut boards for boat building and for sale to the migratory fishing crews (Poynter 1963:60). Also, John Downing mentions planter houses in St. John's were covered with boards either cut locally or imported from New England (Prowse 1895:205). Behind the boards, acting as a weatherproofing, the planter probably used birch rinds, just as the migratory fishermen did in their shelters (Poynter 1963:56). Overlapping strips of birch bark would be an effective underlay beneath a heavier material, just as tarred paper is used in modern times as a weatherproofing on modern exteriors. Neither Yonge nor Downing mentions the use of a particular insulating material, nevertheless, in the absence of brick nogging (no bricks were recovered in the seventeenth-century context), the numerous peat bogs around Renews could have

provided plenty of peat moss for this purpose.

If windows were present in the walls, they must have been covered by something other than glass as there was no sign of pane glass in the seventeenth-century deposits. Likewise, building hardware (other than nails) was scarce. One possible piece of hardware was a heavily corroded object resembling a small pintle. It may have supported a window shutter or even the door, although its small size suggests the former. It was found outside the house in the vicinity of the doorway.

The type of roof covering the house is uncertain, however, the organic matrix and large flat stones of the house collapse suggests some form of massive organic covering. Stratigraphic profiles through the center of the house also show flat stones near the top of the house collapse as well as throughout it. The house collapse stratum was so full of flat stones that excavation was difficult. In many places the rocks rested directly upon the beach cobble sub-floor, having landed with such force that they displaced even the earthen floor of the house. Photographs of the excavation half way through the archaeological project illustrate the multitude of stones covering the house floor (Figures 43 and 44). For the house collapse to contain so many flat stones, it would appear that they were used on the roof of the house as well as in the gable wall containing the hearth.

Although it was not universal throughout the country, the most common roofing material

used in England in the seventeenth century was probably thatch (Robinson 1979:22). A thatch roof is constructed by pinning and lashing tight bundles of straw, rushes or sedges together onto a close framework of wood. The result is a smooth tightly sealed covering up to 30 cm thick which normally lasts many years. Even an inexperienced person would probably know enough about the craft to construct a passable thatch roof (N. Alcock, Pers. Com., 1995). Thatched roofs have been recorded both archaeologically and historically in seventeenth-century Colony of Avalon at Ferryland,. One of the structures uncovered there was a seventeenth-century cowhouse-storage shed (Gaulton 1997:16) that contained evidence suggesting that at one time during its existence it was covered with a thatch roof. In 1621, Captain Edward Wynne, the overseer for the initial construction of the colony, reportedly thatched a part of the mansion house roof with the sedge, flagges and rushes which he found growing in Ferryland (Cell 1982:196). As Wynne stated that he only covered a portion of the structure with thatch, it could be that he could not find a supply sufficient enough to cover the entire roof. Although he prefers thatch to wood for covering "... both for warmth and titeness [sic]." (Cell 1982:196), he does not mention why he only covered a part of the house. To thatch a roof adequately, a plentiful supply of suitable material is necessary and it is doubtful whether enough rushes, straw or sedges grew in Renews in the seventeenth century to thatch even a small roof (P. Scott, Pers. Com., 1995).

Sods, on the other hand, were plentiful all over Newfoundland and they offer a perfectly

suitable roofing material. A sod roof would also be relatively simple to construct considering the availability of the raw material. It would also be far less flammable than thatch. Constant windy conditions on The Mount would present a serious fire hazard to a thatched roof, particularly with sparks and hot ashes sputtering from a chimney that was probably constantly in use.

In reconstructing the roofing material, historical documentation can also be used to support the existence of a sod roof. James Yonge records that the houses built by the migratory fishermen in Renews were roofed with sods, holding down birch rind which they used as weather proofing (Poynter 1963:56). Additional historical references abound for the use of sods as roofing material in the Old and New Worlds including Newfoundland. A drawing of a French house in Placentia, likely from the seventeenth or early eighteenth century shows a sheep grazing upon a sod roof (de la Potherie 1722:op.17) (Figures 45a and 45b). Sods were recommended as a roofing material to settlers in the Dutch colonies of New Netherland (New York) in the seventeenth century (O'Callaghan 1851:23) and were used on houses in New England (Hawke 1988:47-48). A traveller in Cape Breton in 1635 describes the roof of a small cottage there as having a sod roof (Twaites 1897:281). In his work on seventeenth-century England, Randle Holme describes sod as a roofing material, especially on "little houses" (Holme 1688:266).

To visualize what a sod roof looks like, consider the late-nineteenth-century photograph from Ireland showing flat stones holding down the sod roof on a turf and stone house in Donegal (Figure 46). Similarly shaped stones were found in the Renews house collapse, suggesting their use for the same function. In addition to holding the sods in place, large stones would serve the dual purpose of adding weight to the roof. The high winds that buffet the coast of Newfoundland, especially in winter, could easily dislodge a poorly secured or lightweight roof from a structure.

Evidence from the occupation stratum beneath the house collapse suggests that the floor plan was divided into two areas. The eastern one-third was taken up by the hearth area, while the main portion of the house had a floor composed largely of sandy clay, at least in approximately two-thirds of the living area. The greasy, sandy clay matrix discovered over top of the beach cobbles has been interpreted as an earthen floor. Certainly, the beach cobbles would not have been a suitable flooring material as the loose composition of the cobbles would have made for unsure footing. Lenses of the cream-coloured sandy clay were recorded in the floor stratum, along with *in situ* pot sherds and beach cobbles mixed throughout. These lenses are identical in matrix and colour as the subsoil found in a borrow pit several meters from the house which suggests that the floor material was dug from this pit.

The hearth was typical of seventeenth-century cottages, although it did display certain

unique peculiarities. Its position on one of the gable ends and it's size relative to the rest of the house conforms with other one room dwellings. Heat sources for small English cottages had been traditionally situated on a gable wall since Tudor times (Barley 1961:49). One of the reasons for this it that central open hearths were prone to drafts from doorways. Therefore, by placing the hearth with its open flame along a wall, this problem was solved. The center of the floor was then free for other activities.

The sheer size of the hearth area, virtually one-third of the house interior, suggests that a considerable degree of activity likely occurred there, especially those activities requiring heat or warmth. In addition to food preparation and consumption, the abundance of clay smoking pipes, case bottle glass and drinking cup sherds indicate that the hearth area was the scene of much leisure activity. Tobacco and alcohol consumption were popular forms of leisure activities enjoyed by English fishermen during the seventeenth century (Churchill 1984).

There were several features from the hearth area that appear to be unusual. The first obvious peculiarity was the location of the fire box. In seventeenth-century Devon, corner hearths were occasionally used to heat individual rooms in large houses, but on the whole, they were not a normal feature in one-room houses (N. Alcock pers. com. 1995). A heat source in the center of the wall would be more suitable for throwing heat, whereas the heat from a fireplace in the corner of a room would be partially absorbed by the side

wall of the house. Why then would the occupants construct their fire box, likely the only source of heat in the house, in the corner? To answer this question, the other hearth features must be carefully analysed. Considering that the fire box was in the corner of the hearth, why would there be such a high charcoal content in the center of the hearth area (suggesting this area was also used for fires)? And, why was the elevation of the floor 10-15 cm lower than the rest of the first earthen floor inside the house?

A possible explanation of all these questions may lie with the discovery of the second, deeper earthen floor beneath the beach cobble sub-floor. It appears that when the house was first constructed, the heat source was located directly on the earthen floor in the center of the hearth area. This would explain the high charcoal content noted in the soil in that part of the hearth. Upon experiencing the discomfort of flooding brought on by groundwater permeating through the east gable wall (positioned against a fissure-filled bedrock outcrop), the occupants may well have decided to alleviate the problem by raising the earthen floor and adding a drainage system. However, that leaves the question of how to heat the house and cook meals. The solution was to relocate the heat source onto stone slabs in the northeast corner where it was pedastaled on a mound of gravel.

There was also something different about the condition and quality of some of the artifacts recovered from the hearth area. In addition to being plentiful (which in itself is not entirely unusual considering the importance of the hearth area to the floorplan),

several extraordinarily large sherds of pottery and long pipe stems were found on the floor of the hearth area. It seems strange that the part of the house that was probably used the most would also produce some of the largest sherds of fragile, thin-walled drinking vessels and pipe stems in excess of 10 cm long. Considering the degree of foot traffic in the hearth area, it would be expected that the most fragmented potsherds and pipe fragments would be found there. Clearly, the archaeological evidence implies that this was not the case. One explanation for this would be that the area was covered by a wooden floor, one that may have had loose planks that could be lifted for the disposal of broken cups, case bottles or pipes. Precious items, such as the silver half groat coin could have been concealed beneath the floor. Nails, too, were discovered in the hearth area. Although not in any recognizable pattern, their presence alone is corroborating evidence for a floor covering the hearth area. The alignment of stones bordering the west side of the hearth area may have been intentionally placed in position to support a floor.

If the hearth area (excluding the fire box) was not covered by a floor of some sort, there would surely have been serious water problems in this area. As the sub-floor drainage system was needed to channel ground water out of the house, it would have been counter-productive to have the hearth area awash in a quagmire of mud, especially if it was a focal point for the home and the sole source of heat for the house. A wooden floor in the hearth area, near the fire box would also serve as a warm and dry sleeping platform. Sleeping close to the heat source would certainly be beneficial during the long

harsh winter months, especially if one had to lie on a bag of straw. A cold and damp clay floor would be much less appealing.

To address the question of when these alterations to the floor plan would have occurred, the crucial dating evidence for the entire house should be considered. Tobacco pipes made by Peter Stephens and Lluellin Evans were found on both earthen floors and in the hearth area. Their discovery points to a close temporal connection for all three deposits. Ceramic cross mends also links these deposits together.

In summarizing the architectural evidence from Renews, it is perhaps safe to say that the house was built in a traditional style, but with several innovations necessary to adapt to living in Newfoundland. The size, floor plan and flooring material appear to have conformed with to structures of the period and even a sub-floor drainage system was probably not beyond the ability of the occupants. The unusual features uncovered inside the house and within the house collapse point to creativity and adaptability. If thatching material were not available in necessary quantities, sods were apparently used to cover the roof. When flooding interrupted the sole source of heat in the hearth area, the fire was relocated to a more secure area. The archaeological evidence also hints that at least a portion of the hearth area was covered with a wooden floor. Taken individually, each of these unusual features attests to the occupants' ability to adapt to what was likely serious flooding problems. When they are observed collectively, the alterations truly illustrate

the ingenuity of the North Devon fisherman.

Chapter III

The Artifact Collection

3.1 Introduction

In terms of sheer artifact numbers, the 34,049 artifacts recovered from the archaeological site at Renews is impressive, although not all of these date to the seventeenth-century occupation of the house. A single cache of 18,890 tiny lead shot from the house midden (Event 4) is included in the overall number as are several thousand specimens from occupations that postdate the collapse of the dwelling. If the cache of shot is set aside for statistical purposes, the artifact count is reduced to 14,255 fragments (Table 3.1). Of these, several thousand date to eighteenth-century utilization of the site and a handful are nineteenth-century pieces. Because of the degree of intermingling of artifacts from different time periods in the house collapse stratum, the precise number of artifacts deposited by those that occupied the house will never be known. The artifact inventory records 5,045 specimens in the main seventeenth-century occupation strata (Events 4 and 36). An additional 5,462 artifacts were recovered from the deposit representing the collapse of the house. Many of these date to the seventeenth century, including some 3,000 potsherds but, clearly, many were deposited by later visitors or occupants. The actual artifact quantitative information is presented in tables throughout the text of this chapter. Since the structural artifacts were discussed in Chapter 2, only the nonstructural

artifact collection from Renews will be presented in this chapter. The discussion of the artifacts, and what they can reveal about seventeenth-century life at the site, will follow in Chapter 4. Suffice to say, this collection offers a rare opportunity to examine the physical evidence from a period of Newfoundland's early colonial past that is rarely illuminated.

Table 3.1 Total Artifact Quantities from Renews, Area C

Event	Ceramics	Glass	Pipes	Nails	Lead	Misc	Total
1	225	73	111	68	4	1	482
2	1395	401	420	371	34	3	2624
3	3446	318	988	662	45	3	5462
4	2782	110	619	175	165	4	3,855*
5	108	2	6	9	--	--	125
6 & 7	139	17	18	27	3	9	213
8	62	6	54	119	5	11	257
9	--	3	3	1	2	--	9
10	8	5	5	2	2	--	22
34	--	--	1	--	3	--	4
35	1	1	3	2	--	--	7
36	917	10	208	13	38	4	1190
37	--	--	4	--	--	--	4
44	1	--	--	--	--	--	1
Totals	9084	946	2440	1449	301	35	14255

* Excludes the single cache of 18,900 lead pellets

The entire artifact collection was catalogued in Memorial University's Archaeological Field Laboratory in Ferryland and analyzed by the author. Domestic ceramics made up the largest single class of artifacts, followed by tobacco pipes and nails. The artifact assemblage also included a number of floral and soil samples. Five soil samples from various cultural deposits were analyzed for the presence of pollens (see Appendix D). The collection was separated into five major artifact groups: ceramics, clay tobacco pipes, glass, nails and a miscellaneous group which includes lead, metal tools, faunal remains, lithics (European flint) and samples. The soil conditions at the site prohibited the preservation of organic objects with the exception of several calcined (burnt) bones and resin.

3.2 Research parameters

With an artifact assemblage that spans four centuries of occupation, it was necessary to set the research parameters for the analysis. As this thesis proposes to maintain a seventeenth-century focus, only those specimens that were determined to date to that period will be considered. Even though there was a certain degree of mixing in the upper portion of the midden deposits, it was possible to separate the seventeenth-century artifacts from those dating to later centuries. This was largely possible through the identification of datable ceramic ware types and in the case of glass, container shape and

size were used. For the smoking pipes, their size, style and maker's marks were important dating tools. Other artifacts, in particular the corroded wrought nails which are not easily datable, were arbitrarily dated stratigraphically or through their association with datable materials. For example, the nails recovered from the house floor deposits were assigned a seventeenth-century date as these layers were capped by the house collapse and were sealed from later activities at the site.

Artifacts from the eighteenth, nineteenth and twentieth centuries were largely confined to the uppermost two strata. The site formation process assisted in distinguishing seventeenth-century cultural deposits and, for the most part, the more recent artifacts were easily discernable from the earlier material. As the two main occupation phases were over a century apart (ca. 1650 vs. 1779), technological improvements in the ceramic and clay pipe industries made it possible to distinguish between these two artifact classes. When the planter's house was occupied in the mid-1600s, many of the ceramics utilized on the site were hand thrown and fired in small-scale pottery kilns in southwestern English towns, particularly in Devonshire. Generally, these vernacular potteries employed just four to six men (Grant 1983:9, 66). By contrast, when the second phase of site occupation occurred in 1779/1780, the ceramics available in the British marketplace were mass-produced in industrial pottery centers such as Staffordshire, utilizing state-of-the-art press molds and fired in large, temperature-controlled industrial kilns. Even to the untrained observer, it is quite evident that the thick, gravel-tempered coarse earthenware

potsherds from a hand-thrown North Devon pot are noticeably different from the white-pasted refined earthenware sherds from a creamware plate. For some pieces, such as the tin-glazed vessels and coarse red earthenware storage vessels from Buckley Wales, a higher degree of comparative analysis was needed to assign a date of manufacture.

3.3 Ceramics

In the case of the ceramics, it was possible to separate the earlier materials from the eighteenth- and nineteenth-century wares. With the notable exception of the tin-glazed vessels, all the seventeenth-century potsherds can be classified as coarse earthenwares. Conversely, with the exception of a small number of distinctive coarse earthenware sherds, all the eighteenth- and nineteenth-century potsherds were either refined earthenwares or stonewares. Therefore, all the coarse earthenware sherds (except those that were definitely identified as later pieces) will be considered as a part of the seventeenth-century occupation.

The ceramic analysis was based upon the minimum number of individual vessels present (MNI). This approach was chosen as it offers a useful method of functional analysis and also intersite comparison. Raw sherd counts have their place in historic archaeology although the numbers can be extremely misleading. For example, with over 7,000 seventeenth-century ceramic sherds, it would appear that a substantial number of vessels is present in the Renews sample. However, this number is deceptive as 649 sherds are

from just one vessel while another pot is represented by just a single fragment. Whether whole or shattered into hundreds of pieces, it is the vessel and its function that are important for this study. Functional analysis is crucial for determining the activity associated with the object, be it a matter of basic food storage, as in a butter pot, leisure activity as in a drinking cup or a sociological activity, such as a decorative dish.

The provenance (place of origin) for each vessel was also determined to offer insights into the network of trade available to the seventeenth-century Renews planter. Being a seaport, Renews enjoyed the best transportation available at the time: the ocean-going sailing ship. This was evident from the presence of pottery and smoking pipes from England, Continental Europe and the British colonies in Tidewater Virginia and Maryland.

The seventeenth-century ceramic assemblage from Renews represents a total of 50 vessels, ranging from cooking pots (pipkins), globular-shaped storage pots and jars to tableware vessels such as serving jugs, dishes, drinking cups and porringers (Table 3.3.1). Several galley pots, used to store medicinal products were also present. With the exception of the galley pots, all the ceramic forms from Renews were somehow associated with foodways. Such a range of vessels clearly indicates the important role ceramics played in many aspects of the lives of the Newfoundland planters, particularly their foodways, health care and leisure activities. The information that the ceramics can

tell us about these three aspects of life will be elaborated upon in the next chapter.

3.3.1 Vessel Forms

When analyzing the various ceramic vessel forms from Renews, the Potomac Typological System (POTS) was employed to assign names to each form. This system of identification was developed in the Chesapeake Region of the American eastern seaboard as a tool for standardizing the names researchers used when identifying early colonial ceramic forms (Beaudry et al 1988). Those who developed POTS realized that various terms were being applied to the same form of vessel. What a vessel was called depended upon a number of factors, including the background of researchers and their sources of information. Even the documentary sources use different names to identify the same vessel. By developing and encouraging the use of POTS researchers will know, with some degree of confidence, that when they are comparing vessel forms from different sites they are comparing apples with apples and not oranges.

It is reported that the function of most of the ceramic forms on North American archaeological sites were utilitarian and related to foodways (Deetz 1973:16). This was certainly the case with the ceramic collection from Renews. Of the ten different ceramic vessel forms present, nine were related to foodways, either through storage, preparation, serving or consumption. The tenth form, a galley pot, was used for storing medicinal

Table 3.2 Seventeenth-Century Ceramic Vessel Types from Renews

#	Vessel Type	Ware type	Min. # of Sherds	Event(s)
1	Porringer	North Devon Smooth Tempered CEW	68	2,3& 4
2	Porringer	North Devon Smooth Tempered CEW	11	2,3,4 & 5
3	Jug	Merida CEW	95	3,4 & 6
4	Jug	Tudor Green CEW	35	2,3 & 4
5	Bottle	Totnes Calcareous Tempered CEW	25	4 & 36
6	Dish	North Devon Smooth Tempered CEW (Sgrafitto)	25	4
7	Dish	Majolica (Iberian tin glazed earthenware)	45	2,3 & 4
8	Porringer (?)	Low Country Yellow and Green CEW	15	2,3 & 4
9	Cup	North Devon Smooth Tempered CEW (Sgrafitto)	89	2,3 & 4
10	Cup	North Devon Smooth Tempered CEW	18	1,2,3 &4
11	Cup	South Somerset CEW	19	3,4 & 36
12	Cup	North Devon Smooth Tempered CEW	60	2,3,4 & 36
13	Cup	North Devon Smooth Tempered CEW	8	2,3,4 & 36
14	Cup	North Devon Smooth Tempered CEW	6	3 & 4
15	Cup	North Devon Smooth Tempered CEW	4	3 & 4
16	Cup	North Devon Smooth Tempered CEW	13	3 & 36
17	Pipkin	North Devon Gravel Tempered CEW	88	3,4 & 36
18	Pipkin	North Devon Gravel Tempered CEW	51	2,3,4,5 & 36
19	Pipkin	North Devon Gravel Tempered CEW	56	2,3 & 4
20	Pipkin	North Devon Gravel Tempered CEW	143	4 & 36
21	Pipkin	North Devon Gravel Tempered CEW	154	4 & 36
22	Pipkin	North Devon Gravel Tempered CEW	92	3,4 & 36
23	Pipkin	North Devon Gravel Tempered CEW	3	4 & 36
24	Jar (storage)	Spanish Heavy CEW	17	3,4 & 10
25	Pot (storage)	North Devon Calcareous Tempered CEW	197	2,3,4 & 36
26	Pot (storage)	North Devon Calacreous Tempered CEW	106	1,2,3,4 ,5 & 6
27	Pot (storage)	North Devon Calcareous Tempered CEW	39	2, 3 & 4
28	Pot (storage)	North Devon Smooth Tempered CEW	5	3 & 4
29	Butter Pot	North Devon Smooth Tempered CEW	61	3,4 & 5
30	Butter Pot	North Devon Smooth Tempered CEW	127	2,3,4 & 36
31	Butter Pot	North Devon Smooth Tempered CEW	128	2,3 & 4
32	Butter Pot	North Devon Smooth Tempered CEW	57	3,4,5 & 36
33	Butter Pot	North Devon Smooth Tempered CEW	75	3,4 & 5
34	Butter Pot	North Devon Smooth Tempered CEW	94	3,4 & 36
35	Butter Pot	North Devon Smooth Tempered CEW	124	2,3,4,5 & 36
36	Butter Pot	North Devon Smooth Tempered CEW	105	2,3,4,5 & 36
37	Butter Pot	North Devon Smooth Tempered CEW	90	3 & 4
38	Butter Pot	North Devon Smooth Tempered CEW	195	3,4,5 & 36

Table 3.2 (cont.) Seventeenth-Century Ceramic Vessel Types from Renews

#	Vessel Type	Ware type	Min. # of Sherds	Event(s)
39	Butter Pot	North Devon Smooth Tempered CEW	368	2,3,4 & 5
40	Butter Pot	North Devon Smooth Tempered CEW	22	3 & 4
41	Butter Pot	North Devon Smooth Tempered CEW	4	4 & 36
42	Butter Pot	North Devon Smooth Tempered CEW	11	4 & 5
43	Galley Pot	South Somerset CEW	7	2 & 3
44	Galley Pot	Tin Glazed Earthenware (Delftware)	8	3 & 4
45	Galley Pot	North Devon Smooth Tempered CEW	17	2,3,4 & 36
46	Cup	North Devon Smooth Tempered CEW	5	3 & 4
47	Cup	North Devon Smooth Tempered CEW	58	4,5 & 36
48	Butter Pot	North Devon Smooth Tempered CEW	48	3,4 & 36
49	Butter Pot	North Devon Smooth Tempered CEW	3	4
50	Butter Pot	North Devon Smooth Tempered CEW	4	3 & 4

products.

The most popular form of ceramic vessel from Renews was a tall, slender storage container called a "butter pot" (also referred to as tall pots or pilchard pots) (Figures 47 and 48). Portions of 17 butter pots were pieced together from the thousands of sherds in the collection. All of the Renews butter pots were made from smooth-tempered North Devon coarse earthenware. Although referred to as a smooth-fabric coarse earthenware (Pope 1986:101), the typical Renews butter pot was tempered with varying amounts of fine, angular quartz. Each of these pots had the same baluster shape, approximately 30 cm high, and bulging just below the rim before narrowing in the lower one-third. The rims were pronounced and everted to enabled a cloth or paper cover to be secured with a string (Grant 1983:54). Several rim forms were present, probably a reflection of the variety of individual craftsmanship rather than a deliberate stylistic trait. As the term suggests, these pots were used for the transport and storage of butter, although they also likely held other foodstuffs once the butter was consumed. The notable absence of milk pans, used in the production of butter, may help explain the high incidence of butter storage pots. If butter was not made on the site, then it appears that this commodity must have been stored there in significant amounts (see the discussion on foodways in Chapter 4 below).

Another storage vessel form from the assemblage includes four globular-shaped storage

pots similar to those shown in Figure 49. These are also known as crocks or steans in seventeenth-century Devon (Grant 1983:54). One of these pots was partially rebuilt. It has an estimated capacity of four to five litres (approximately three quarters to one imperial gallon). Three of these storage pots were also made in the North Devon region of England from a clay paste tempered with sea shells instead of pebbles and as a result were known as "calcareous tempered pots". After three centuries in the ground, the calcium from the shell tempering leached away, resulting in a noticeably pitted surface glaze on the potsherds. An olive-green lead glaze had been applied to the interiors of all three pots. They were unglazed on the exterior. The forth storage pot was slightly smaller that the others and was a smooth-tempered North Devon coarse earthenware vessel. Storage pots of a similar size were referred to as "gallons" in North Devon (Grant 1983:54).

Fragments from an unglazed Heavy Spanish earthenware storage jar was also discovered, including its base, handle and entire rim portion. It likely stood about 30 cm high and judging by its narrow (2.8 cm wide) mouth, was used for liquid storage, possibly cooking oil. Olive oil, used for cooking, was one of the commodities that Newfoundland salt fish was traded for in Spain during the seventeenth century (Cell 1969:103).

Seven cooking vessels, called pipkins, were discovered. They can be grouped into two sizes, according to the diameter of the opening. The larger of the two groups (n=4) had

an opening in the range of 18-19 cm, while the smaller sized group ranged from 10-12 cm. The larger vessels were often used to cook meat and were commonly called flesh pots. The smaller vessels were often used to prepare sauces (Grant 1983:54) (Figure 50). Both varieties had three stubby legs on their bases so they could sit directly upon hot coals in the hearth. The rims on the flesh pots were wider, and more flared than the smaller pipkins. The edges on two of four of the flesh pot rims curled inwards as if in an attempt to decorate the vessel. Several of the pipkins were burnt on the exterior in testament to their use in the hearth. They also had lifting handles that were either applied to the sides or, on the rims of the vessel. Fragments of seven handles were recovered as well as 12 legs, some adhering to base sherds. Four pot lids were also found, two each from flesh pots and smaller pipkins (Figures 51a and 51b). Each of the cooking pots, including the pot lids, were made from North Devon gravel-tempered coarse earthenware. Although also tempered with gravel, the smaller lids were comparatively thinner and more fragile than the flesh pot lids. All seven vessels were glazed on the interior, while the lids were unglazed. One of the smaller lids was also slipped on the interior.

Eighteen tableware vessels were found, including ten drinking cups, two and possibly three porringers, a jug and a bottle for decanting beverages, another smaller jug presumably for sauce or similar condiments, and two serving dishes. The drinking cups were all well made, with all but one being glazed on the interior and exterior. The single exception was a South Somerset cup which was only glazed on the interior. There were

three styles of cups present, the most common having a globular body with a high straight collar and a single vertical handle (Figures 52 and 53). Both flat and pedestaled bases were present. Two of the cups, including the South Somerset specimen appear to be straight-sided. The North Devon example of these had two lines incised near the rim. One of the cups was decorated with a repeating pattern of sgraffito incised wavy vertical lines. Although this cup was most likely made in North Devon (J. Allen pers. com. 1997), the wavy vertical lines used to decorate it are similar to a decorative style on the pottery manufactured in the South Somerset town of Donyatt (Coleman-Smith and Pearson 1988). It was the most nearly complete cup (Figure 54).

Two and possibly three porringers were discovered. These vessels resemble a cross between a small pot and a large drinking cup and were used to eat semi-liquid meals such as pottage (stew) or porridge-like gruels (Anderson 1971:248). Two of these were made in North Devon; one was partially reconstructed (Figures 55). It has a transverse (horizontal) handle and had been slipped and glazed in the interior only. The second North Devon porringer was slipped and glazed on the interior and exterior. The third specimen is represented by just fifteen small rim sherds. Based on its thin body and rim diameter, it appears to be a porringer, or perhaps a small bowl. It is a Dutch piece of a variety known as Low Country Green and Yellow coarse earthenware (Wilcoxen 1987:Pl.16, op. P.49). The name reflects the two colors of glaze over a buff body, green on the outside and yellow on the inside.

Additional tableware pieces from the site include two jugs and an eathernware bottle. The larger of the two jugs and the bottle were likely used for decanting beverages such as ale, wine, or cider which would normally be stored in kegs or larger staved storage vessels. This jug was possibly made in the Merida region (Extramadura) of southwestern Spain and is of a type that is commonly known as Merida ware or Merida style coarse earthenware (Figure 56). It had a vertical strap handle, stood 23 cm high and had a 7.5 cm wide collared opening. Its capacity is estimated to be 1.0 to 1.5 litres. The exterior of this unglazed micaceous jug was burnished smooth and was decorated with vertical lines scraped down its side. A single line was incised on the shoulder. An identical Merida jug (with two incised lines instead of one) was discovered during the excavations in the Castle Street area of Plymouth England (Brown 1979:86 Figure 35 # 274).

The second jug is very small by comparison (9 cm high) and would have held perhaps .25 to .33 litres (Figures 57a and 57b). It has a neatly everted rim, coated in an apple-green coloured lead glaze. The glaze dripped down the interior of the jug. Wear marks on the rim suggests that it would have been covered with a lid. There is evidence of burning on the base of the vessel, with burnt residue on the interior. The burning indicates that it may have sat close to an open flame, which suggests that the contents of the jug were meant to be heated. The small size of this jug also suggests that it was used for sauce or gravy which was dispersed in small amounts. It was made from a pale buff-coloured coarse earthenware containing tiny inclusions of pinkish clay. Although this

ware type is currently referred to as Border ware, it has gone by several names in the past including Tudor Green, Farnam ware, Southeast Dorset ware and Southern White Bodied earthenware (Pope 1986:107).

The bottle was made in the South Devonshire area around the town of Totnes. It is a dark-grey bodied coarse earthenware with a dark green mottled glaze on the exterior (Figures 58a and 58b). It has a globular body on a pedestaled base with a short neck. Evidence of a vertical handle was noted on the body and near the top of the neck. The capacity for this bottle is probably not more that .5 litres. Because of its small size, this bottle was probably not used for beer, cider or wine, but rather a distilled spirit such as aquavit, rum or brandy. Although English in manufacture, its shape is reminiscent of a Rhenish bellarmine bottle (Figure 59).

The two serving dishes are perhaps the highest quality artifacts from the site (Figures 60 and 61). One of these was of North Devon manufacture and had been slipped on both sides and decorated in the sgraffito style common to that area. Only the center of this dish was recovered, however, it is thought to represent a sizable dish approximately 30 cm across, with sloping sides (J. Allen pers. com. 1997). The other dish was an Iberian tin-glazed majolica piece with overglaze blue and magenta painted decoration. As only a few sherds from this vessel were recovered (including pieces of the foot ring) it is difficult to estimate its size.

The only non food-related ceramic form present at Renews were galley pots. These small, open-mouthed vessels contained medicinal ointments, salves or elixirs (Noel Hume 1985:203). Their slightly everted rims would be used for securing a paper covering with string. Fragments from three galley pots were found: one from South Somerset, one from North Devon and one tin-glazed specimen (Figures 62a-b, 63 and 64). The North Devon galley pot is slipped and covered with a yellow lead glaze on the interior and exterior, while the South Somerset example has an interior brown lead glaze. The tin glazed galley pot has a soft, buff-coloured fabric covered in a pinkish-white tin-glaze inside and out. This type of pottery, commonly known as delftware, is named for the Dutch town of Delft (Noel Hume 1985:106). It is difficult to determine the country of origin for this piece as this ware type was manufactured in England and Holland. During the sixteenth and seventeenth centuries, migrant Dutch potters were often working in England and conversely, English potters worked in Holland. As if the shared labor pool was not enough to mask the pottery's provenance, the raw materials were also shared. English clay from Norfolk and Suffolk was exported to Holland (Garner and Archer 1972:2), thus eliminating any attempts at determining the origin of the pottery based on clay identification. For these reasons, tin-glazed ceramics from England and Holland share many characteristics and except for the most discriminating eye, they are virtually indistinguishable from one another (Noel Hume 1985:110).

3.5 Glass

The analysis of the glass artifacts was similar to that used for the ceramics. With the exception of three late-seventeenth-century wine bottles from the top of the house collapse stratum (Event 3), the seventeenth-century glass artifacts were from light-green case bottles or egg shell-thin pharmaceutical bottles. A number fragments from cylindrical eighteenth-century wine bottles and two wine glass stems were discovered on site. The wine bottles and one of the stems are believed to be associated with the military occupation of 1779/1780. A second stem dates to the early eighteenth century and was found in a small hearth feature mixed with pipe fragments. Only the seventeenth-century glass will be considered in this study (Table 3.3).

Unlike the ceramics, the seventeenth-century glass was limited in both quantity and form. With only 122 fragments from the planter occupation strata, exclusive of the house collapse, it appears that glass vessels were not common. As with the ceramic analysis, a minimum number of vessels was determined from the glass assemblage. Although the number of vessels may be slightly higher than the MNI, only five vessels were positively identified. These consisted of two case bottles and three small pharmaceutical bottles.

Table 3. 3 Number of Glass Artifacts From Renews

Ev. 1	Ev. 2	Ev. 3	**Ev. 4**	Ev. 5	Ev. 6/7	Ev. 8	Ev. 9	Ev. 10	Ev. 34	**Ev. 35**	**Ev. 36**	Ttl.
73	401	320	**110**	3	19	6	3	5	0	**1**	**11**	952

Bold denotes seventeenth-century deposits

The two case bottles were represented by neck, rim and shoulder fragments, a square base and a number of flat body sherds (Figure 65 and 66). Both were mould-blown from light green metal (glass) and each has an everted hand-finished lip. The most complete neck of the two case bottles is just 1.8 cm high, with an aperture of just over 1.5 cm. The other specimen is too fragmentary to determine its height, but its aperture was also measured at 1.5 cm. The single empontilled base was 5.5 cm wide, suggesting a bottle capacity in the range of 700 ml. The body sherds from these case bottles vary in tint and thickness, depending on whether they were shoulder, body or base sherds. The middle of the case bottles are usually the thinnest and were therefore the lightest tint.

As the name implies, case bottles were transported in wooden cases and were used to ship distilled spirits rather than wines or beer. Because of their popularity, beer and wine were

bulk-shipped in larger staved containers (Faulkner and Faulkner 1987:232). Although case bottles continued to be used into the nineteenth century, "globe and shaft" or "onion" bottles became more common midway through the seventeenth century (Noel Hume 1982:42). The presence of case bottles at the Renews site confirms that they were certainly still in use in Newfoundland, at least into the third quarter of the seventeenth century. Similarly, it is interesting to note that no "onion" bottles were present at this site.

Three pharmaceutical bottles were identified from the dozens of tiny glass sherds from Events 4, 5 and 36. One of these was bluish-green in colour and was identified by its base and a number of body sherds (Figures 66 and 67). The body sherds from that vessel were remarkably thin, usually between 0.4 and 0.6 mm thick. Although mostly very small in size (less than 1 cm square) several of the sherds are large enough to indicate that this bottle was globular shaped with an estimated capacity of 100 ml (4-5 ounces). The second bottle is represented by three light-green neck sherds and two body sherds. As only the neck portion was recovered, it is not known what the shape the body looked like. Two of the neck fragments mended together, revealing a portion of the finish or rim at least 2.7 cm high with an opening as much as 2.5 cm wide. The third pharmaceutical vessel appears to be a small pale green bottle, considerably larger than the vials. Judging by the tapered body sherds, this vessel was shaped like an inverted cone with the widest portion closest to the base of the vessel. A similar example is illustrated in Noel Hume

(1985:73 #7).

3.6 Tobacco Pipes

Of the 2,440 tobacco pipe fragments from the archaeological deposits at Renews just over one-third, or 834 fragments, were recovered from the sealed seventeenth-century occupation strata (Events 4, 35, 36 and 37). This latter figure can be broken down into three groups: complete or nearly complete bowls (n=95), stem fragments (n=537) and bowl sherds (n=202). An additional 988 pipe fragments, including 61 complete or nearly complete bowls, were found in the house collapse stratum (Event 3), however, since this stratum contained a mixture of seventeenth-century and eighteenth-century artifacts, they are not included in this study. Seven styles of maker's marks were present on 21 of the pipe bowls. Six of these have been identified (Table 1.3). As the datable attributes from these pipes were discussed in Chapter 1, their physical attributes will be addressed here.

All but one of the pipes were made from fine whitish-coloured clay commonly referred to as "ball clay". Variants of white ball clay were available throughout southern England, with certain areas of north and south Devonshire being dominant suppliers by the late-seventeenth century (Oswald 1975:12). Regional styles developed throughout England, particularly after about 1640 when London's supposed monopoly on pipe manufacturing ended (Oswald 1975:42). Bristol was another major manufacturing center. Because of its proximity to excellent ball clay beds together with an established tradition of ceramic

production, the area around Bideford and Barnstaple in North Devon also supported a modest pipe manufacturing industry (Grant and Jemmet 1985:447). Because of the free trade in labour between England and Holland in the middle quarters of the seventeenth century, pipes from Holland and England, London in particular, are quite similar. Pipemakers, carrying their own molds, moved back and forth between the two countries, therefore making a definite origin for some pipes difficult. (Faulkener and Faulkener 1987:166)

The only pipe that was not made in either England or Holland was a mottled terra cotta and white clay example which is believed to have been made in the Chesapeake Bay region of Tidewater Virginia or Maryland (Figure 13a and 13b). This uniquely-decorated bowl has numerous identical matches from several early colonial sites in the Chesapeake Bay region and has been dated to the middle of the seventeenth century (see section 1.7 Dating).

Based on their general shape, the pipes from Renews can be grouped into two broad categories. As can be expected from a site where the overwhelming majority of the pottery came from North Devon, many of the pipes appear to be of a West Country manufacture. As a number of the pipes were molded in styles thought to originate from London, that city seems to be the other major supplier of pipes. Other examples are believed to be from Bristol, Exeter, Poole and Holland. Most of the Renews pipes from

the house occupation deposits are of styles that date between 1660-1680. The bore diametres of the pipe stems range from 5/64 to 11/64 of an inch, with about one-half of the sample being 7/64 of an inch. A breakdown of the pipe bore diametres by Event also appears in Appendix B.

3.7 Small finds

A number of small finds were also made on the site. These include a silver coin, fragments of two seventeenth-century pewter spoons, a pewter goblet stem, lead shot, fishing equipment, tap augers, ferrous strap-like objects and miscellaneous pieces of worked lead. Several other small fragments of pewter were recovered, however, because of their small size and nondescript forms, they are not identifiable. As well, several iron objects were likewise discovered in the seventeenth-century occupation strata. At least two of these appear to be possible handles (artifact numbers 8153 and 6077), but their advanced state of corrosion did not allow further identification. Unfortunately the soil conditions were very acidic and the more refined metals, such as wrought iron, did not survive well in the ground. Conversely, less refined artifacts, such as lead jiggers and shot survived well enough to be conserved with non-intrusive methods of treatment such as air drying.

3.7.1 Currency

A silver alloy coin was discovered in the hearth area during the last days of the project. It

was heavily corroded and had been misshapen. After being thoroughly cleaned by conservators at the Canadian Conservation Institute in Ottawa, the coin was identified as being an English half groat, a low denomination currency (Figures 68a and 68b). Nevertheless, it was significant to the site as it could be dated and more importantly, it inferred that hard currency was available in early-colonial Newfoundland. Although this coin was undated, the mint mark was partially visible (Figure 69). It has been identified as either a "lis" or a "sceptre". Both marks were used in the Tower Mint and are very similar in appearance. The "lis" mark was used in 1625, and the "sceptre" mark was applied between 1646 and 1648 (Michell and Reeds 1989:179). Both minting dates fall under the reign of King Charles I (1625-1649).

3.7.2 Tableware

Pewter tablewares, in the form of plates, spoons and drinking vessels were common in seventeenth-century yeoman households throughout England (Anderson 1971:238-240). Evidence of two of these forms were found at Renews. The stem and partial base of a cast pewter goblet was discovered beneath one of the foundation stones at the doorway to the house (Figures 70a-b and 71a-b). Molded in relief on the base of the goblet are two heraldic shields that may identify the origin of its manufacture. One of these shields appears to have at least two fleur-de-lys, while the second sheild has a variant of the "Chains of Navarre", the coat of arms from the southern French province of Navarre (Larousse 1984:7299). Legend has it that the chains are symbolic of the thirteenth

century victorious attack by Sancho "The Strong" on Miramomelinin's Moorish army camp in the year 1212. During the attack, Sancho and his troops had to cut through the chains surrounding the camp. In memory of battle, chains have been assumed into the heraldic coats of arms of the noble families alleged to have fought with Sancho during that campaign (Woodward and Burnett 1969:353). King Henry IV reunited the province of Navarre with France in 1607 which could explain the inclusion of the fleur-de-lys next to the chains of Navarre on the base of the goblet. These two crests identifies Navarre as the place of origin of the craftsman who made the goblet.

Fragments from two seventeenth-century spoons were also discovered. The most complete of these was a fragmented slip-top pewter specimen with a bowl that had been decorated with a scrolled floral pattern molded to its underside (Figure 72). Although slip-top spoons initially date to the late fifteenth-century they made a revival during the second quarter of the seventeenth century. This spoon likely dates to the post-1660 period as the scrolled floral decoration on the back of the bowl and the "rat-tail" attachment for the stele (handle) would suggest (Moore 1987:6-10).

The second spoon is a totally different style and was recovered from the floor of the hearth, some 54 cm beneath the ground. This 3.8 cm long fragment is the baluster-shaped knop, or finial of a cast latten (brass) spoon (Figure 73) It has a slightly beveled flat top with a tiny bump in its middle, which is unusual considering that the flat top to these

spoons were often decorated with the initials of its owner. This specimen was of a variety known as "seal-top" spoons, because of the mark or seal on its top. It appears that this knop broke from the spoon's stele at the point where they had been soldered together. The baluster shape of the seal-top knop was sometimes adorned with anthromorphic and zoomorphic shapes and were popular from the sixteenth century to the Commonwealth Period (1649 to 1660), at which time they were replaced by a plain, unadorned flattened handle known as a "puritan" spoon. Knopped spoons made a resurgence after the Commonwealth Period as did the "trefid" type with its broadened three-lobed terminal becoming fashionable (Moore 1987:4-7, 10).

3.8 Fishing equipment

Since the seventeenth-century planters in Renews sought their livelihood from the sea, it was expected that fishing equipment would be discovered on this archaeological site. The variety of fishery-related artifacts includes composite lead and iron jiggers, iron fish hooks, lead net weights, resin and a copper alloy implement that may have been used to make or repair nets.

The most abundant form of fishing equipment found on the site were jiggers, cast from lead with small iron hooks set into the bottom end (Figures 74 and 75). Jiggers such as these were commonly used to catch squid. Squid, which was used as bait to catch cod fish, arrive in large numbers to the coast of Newfoundland in the late-spring and early-

summer months. Several jiggers would be attached to a line and pulled through the schools of squid. Seven jiggers were found on the site; four from the house collapse stratum (Event 3), two from Event 2 and one from the seventeenth-century midden (Event 4). The two jiggers from Event 2 were found at the interface with Event 3 and may actually be seventeenth-century in origin. Most of these jiggers had traces of the iron hooks adhering to the bottom (widest) end of the tool and one was discovered with two of the hooks detached but still *in situ* with the jigger. Remnants of seven to nine hooks were visible on all but one of the Renews jiggers. An eighth jigger was recovered from a test pit a short distance from the site and although it is similar to the other jiggers, its date is uncertain. They may not all date to the seventeenth-century occupation of the house, but all the jiggers are essentially the same shape, varying only in length and weight (Table 3.4).

Each of the jiggers was mold made, some still having cast lines visible on their tapering sides. The tops (narrow end) were flattened and pierced for attachment to a line. Two are complete, with the line holes still visible, while the others have their ends corroded away. Similarly shaped jiggers have been recovered from the wreck of the HMS Sapphire, a fifth-rate British ship-of-the-line scuttled in Bay Bulls in 1696 (Figure 76). Cruder versions of the same style of jigger were also found near London and are believed to date to the Medieval Period (Steane and Forman 1991:97, Fig.12.8). Squid jiggers have maintained the same basic shape into modern times, with the newer styles made from

hard plastic with many more hooks than the seventeenth century examples.

Table 3.4 Lead jiggers from Renews

Artifact Cat. #	Event	Length (mm)*
1584	2	86
2716	3	60
2821	3	52
2822	3	75**
2825	N/A	75**
3189	4	62
3909	2	60
4615	3	65

*Measurements do not include hooks

**Complete specimen

Squid may have been used to bait some of the five fish hooks that were also recovered on the site. Four hooks were recovered in Event 3 and one from Event 6. Only one of these (from the house collapse over the midden) is complete. It measures 132 mm long (Figure 77). This hook has a flattened snood (end of the shaft) instead of an eye for attachment to

a line. The other four specimens are fragmentary and heavily corroded, but judging by their appearance and rounded or oval cross section, they have been identified as fishing hooks.

A 32.5 cm long, needle-like copper alloy implement was found on the second earthen floor (Event 36) inside the house. This tool was broken into two pieces and may have had a wooden component judging from wood fibres found in association with it. It had a rectangular eye on one end with a flattened protrusion at its terminal (Figures 78a and 78b). Although an exact match has yet to be discovered for this tool, it is believed to be a netting needle, used to make or repair fishing nets (Mary Beaudry Pers. Com. 1994). Similar netting tools (except with a diamond-shaped eyes), were used in England during medieval times for making hair nets (Crowfoot et al 1992:147, Fig. 118) and fishing nets (Steane and Foreman 1991:96) Whereas, the medieval netting tools had two closed prongs (or eyes) on either end, the Renews artifact has a single closed rectangular eye. Being of a later period, the Renews specimen may have been a variation or improvement on the same type of tool, or the other eye may have broken off.

Various lead weights were recovered, including two heavy net weights (Figures 79a and 79b). One of these semi-ovoid net weights had holes at either end for attachment to a line. The second, larger weight, had not yet been perforated. Four tubular and one small conical lead weights were also found (Figure 80). The tubular variety were simple

affairs, made by folding a thin slab of lead into a tubular shape through which a rope could be threaded. One of the miscellaneous chunks of lead from the site may have served as a core for making these folded-slab weights as it had knife marks cut into all of its surfaces (Figure 81). One of the flat surfaces from this core had roughly the same overall dimensions as one of the tubular net weights. This small slab had not been detached from the core. The single small conical weight is similar to the jiggers in shape, but much smaller. These weights were likely used on the bottom rope of bait nets or along the edges of cast nets and are important finds as they represent a different method of fishing from the hooks and jiggers. James Yonge describes some of the nets used for catching bait fish such as caplin, herring and squid in Renews in 1663 (Poynter 1963:60) but he refrains from mentioning line or net weights.

3.9 Ammunition

Various calibers of lead balls and smaller shot were found in many of the strata at the site. These range from a spectacular cache of 18,890 tiny pellets measuring little more than a millimeter in diameter to dozens of buckshot-type shot and large balls up to 20 mm in diameter (Table 3.5). As lead shot was found in all the major strata and could have been deposited during later periods, only those from the seventeenth-century occupation stratum (Event 4) were measured to get a range of the variety of ammunition used by those living onsite. Aside from the cache of tiny pellets, the most commonly found ammunition was bird shot, averaging about 5 mm in diametre. Lead sprue from this

caliber was also found, indicating that ammunition was manufactured on the site. Two balls, measuring close to 13 mm in diameter, may have been suitable for a pistol.

The cache of tiny pellets was an unusual find for several reasons, not the least of which is their extraordinarily small size (Figure 82). Many of these pellets had the telltale appearances of them having been produced by the Rupert process, where molten lead is poured through a heated colander into a container of water, which immediately hardens the droplets into spherical pellets (Faulkener and Faulkener 1987:155). This process sometimes leaves a slight depression or dimple on the pellet, and occasionally a tiny tail-like projection. A slightly larger pellet, with a maximum diameter of 3.3 mm also exhibited a dimple rather than a sprue line or scar, indicating that a variety of Rupert shot was manufactured on-site.

The cache of pellets was found together in a matrix containing wood fibres suggesting that they had been stored in a wooden container, perhaps in prepared cartridges. Prepared cartridges were made by rolling a sheet of paper or another combustible material into a tube that was the same diameter as the musket barrel. First gunpowder and then lead pellets would be poured into the cartridge and its open ends twisted shut. Cartridges could be torn open before being rammed into the barrel of a musket prior to it being discharged. Similarly prepared cartridges with both buckshot and larger balls were recently recovered in Quebec from a New England shipwreck in the St. Lawrence River. That wreck is

thought to date to 1690 (Bradley and Dunning 1998). If these pellets are indeed projectiles, it would be difficult to imagine successfully pouring such a small caliber shot into a musket barrel without them first being in prepared cartridges.

Table 3.5 Lead Artifacts from Renews

Event #	Ammunition	Sprue	Jiggers/ Net-line Weights	Unid.	Total
Event 1	2	0	0	2	4
Event 2	12	6	2/4	10	34
Event 3	21	8	5/4	7	45
Event 4	90	56	1	18	165
Event 36	0	31	0	7	38
Total	125	101	8/8	44	286

3.10 Miscellaneous worked lead

Aside from sprue associated with the casting of lead shot, additional evidence of lead-working was abundant over much of the site. Sundry fragments of lead in flattened fragments, chunks and droplets were discovered both inside and outside the house. A

number of these had been cut and shaped although their functions remain unknown. Several flat pieces of lead had impressions of dirt and gravel on their surfaces, suggesting that they had fallen to the ground while still in a molten state and solidifying around particles of soil.

Chapter IV

Seventeenth-Century Material Culture

4.1 Introduction

An archaeological discovery is truly a window into the past. Unlike archival sources, the artifacts from the ground are the physical representation of past cultural activities. This is why the architectural ruins and the associated artifacts from Renews are so important in helping to understand the culture of those who chose to depart the shores of England in the early stages of New World colonization and venture into a new land. Most often, our knowledge of the past has been derived from the written record, usually in the form of legal documents, maps and journals. Likewise, artists have preserved various scenes in paintings and sketches that hang in public galleries, private collections or in books. Historic objects can also be viewed in museums or antique shops.

The combination of written sources, illustrations and museum or private collections is valuable, although not always the most accurate representation of the way things were, especially for the common folk who constituted the overwhelming majority of any population, past or present. There is a danger when relying upon the written record or museum collections for when we rely upon the eyes and biases of the writer, painter, or museum benefactor, we are at the mercy of subjective thought. Even first hand accounts

are influenced by the observer and his or her point of view. As useful as all those media are at providing insight into the past, be they on paper, canvas or in an exhibit case, none can compare to the archaeological record for disclosing the physical evidence, the material culture of the past.

Material culture can be defined as the material objects people use in their everyday life. It is the product of our culture and includes the modifications of things found in the physical world to suit our needs (Deetz 1977:24). The tools of a fisherman, a tobacco pipe or the bowl that meals are served in are all examples of material culture. All too often, it is the most common elements of material culture that are often forgotten in history, the "small things forgotten" in our lives, the packaging for a printer ink cartridge or a nail dropped on a construction site. It is those seemingly insignificant items that are most common on archaeological sites and fill the drawers in research collections: tiny bits of metal or pottery, sherds of glass or pipe stems. They must be viewed in a way that will allow for their full research value to be realized. It is the function or activity these objects represent that is as important as the artifact itself, for if an artifact's function is not realized, it is little more that a curiosity that still holds the secret of its purpose. To be most useful in uncovering the secrets of past human behaviour, an artifact must be identified and expounded upon if it is to be utilized in understanding its context on an archaeological site.

For a number of reasons, not all elements of material culture are preserved in the archaeological record, particularly those made of organic materials such as wood, leather or wool. Conversely, durable items made from iron or pewter are not easily broken and therefore are less likely to be discarded. When metal objects did get broken, worn out or outdated, they were often recycled into something else as they were at the seventeenth-century French fort at Pentagoet, Maine (Faulkner and Faulkner 1987:135).

Fortunately for archaeologists, ceramic vessels, glass bottles and tobacco pipes do break and get tossed away. Similarly, when no longer useful or perhaps carelessly dropped or abandoned, metal objects also enter the archaeological record. When properly excavated, documented and identified, archaeological artifacts become the true representation of the material culture used by the site's inhabitants and provide an important database from which the entire site is analyzed. However, having said this, it is important to realize that the artifact collection, in itself, should not be seen as the defining representative of the past. It is most valuable when merged with historical documents, museum collections and all other available sources to fully understand past cultural activities and in a larger sense, society as a whole.

The Renews artifact collection was approached in such a way as to determine what it could reveal about four inter-related aspects of seventeenth-century life in Renews, and by extension, early colonial Newfoundland. These aspects are: *foodways, health care,*

leisure and occupational activities. Whereas each of these aspects involves facets of everyday life at the site, taken as a whole, the assemblage of artifacts also provides insight into the availability of goods and materials in the harbour and the surprisingly cosmopolitan trade network of a seventeenth-century Newfoundland planter.

Foodways was clearly an important aspect of the Renews planter's existence as it was represented by over one-half the total number of artifacts recovered from the site. It involves most of the ceramic artifacts as well as other tableware items made from pewter and latten. Health-related activities were represented by ceramic and glass medicinal vessels while the third aspect, leisure activities are evidenced by the smoking pipes, bottle glass and those ceramic vessels used in the serving and consumption of alcoholic beverages. Occupational activities principally involves fishing equipment although the leisure items related to alcohol and tobacco consumption may also be considered as occupational artifacts. According to some of the West Country merchants, the Newfoundland planters were debauching the migratory fishermen by providing them with alcohol and tobacco. Such complaints may have had more to do with competition than their concern for the well being of the fishermen (Pope: 1992:81, 365). Therefore, artifacts relating to alcohol and tobacco consumption on this site have a dual purposes: personal consumption by those living in the house (leisure activity) and as items to be sold or bartered to others for goods or services (occupational activity) .

4.2 Foodways

The term "foodways" has been used to describe ... "the interrelated system of food conceptualization, procurement, distribution, preservation, preparation and consumption by all members of a particular group." (Anderson 1971:xl). Performing these activities consumed much of the seventeenth-century yeomanry existence (Anderson 1971:5). Whereas Anderson's work includes all the elements of the interrelated system of foodways, this thesis will only address those elements relating to storage, preparation, presentation and consumption. To this end, ceramics play a limited, but crucial role. Reportedly, ceramics generally served a minor role in English yeoman foodways during the study period (Deetz 1973:25). If it is considered that meals were largely prepared in metal cooking pots and eaten from wooden trenchers or pewter plates, this leaves only storage and serving roles to be fulfilled by ceramics. This is not entirely true for the Renews assemblage where over one-half of the ceramic vessels relating to foodways were associated with food preparation and consumption.

Although not all the processes of foodways are represented in the Renews assemblage, there is enough information to reconstruct some of the unrecorded activities in the planter's daily life. Iron implements, the mainstay of a seventeenth-century hearth, were missing from the archaeological record. Iron pots, tramels, spits, hooks and cranes were important parts of food preparation, however, the durability and high value of these tools probably ensured their survival. Conversely, the organic nature of other food-related

implements, such as wooden or horn spoons, ladles and trenchers, also prohibited their preservation in the ground. Just the same, the 50 ceramic vessels from Renews present a wonderful insight into the domestic life of the seventeenth-century planter, particularly for the tasks associated with foodways, i.e. preservation, storage, preparation and consumption of food.

In discussing the foodways of a seventeenth-century Newfoundland planter it should be pointed out that the soil in Renews was described as being good for agriculture and that the surrounding forests and rivers teemed with wildlife, fish, berries and wild fruit (Cell 1982:209-210). Although commercial agriculture was probably not in the best interests of the planter, most of their summer time being absorbed with the fishery, individual kitchen gardens produced root vegetables as well as herbs (Pope 1992:76). The analysis of pollen from four soil samples taken from the seventeenth-century strata indicate the presence of European cereal pollen, particularly rye (secale). Carrot (apiaceae) pollen and sorrel-type (Rumex acetosella/acetosa- type) pollens were also present. This would indicate that grains, root crops and herbs were being grown at or near the site (Appendix D). Planters in Ferryland's Avalon Colony, located a short distance from Renews, grew radishes, turnips, lettuce, cabbage, carrots and herbs in their gardens and wheat, barley, peas, oats and beans in cleared land around the settlement (Cell 1982:197-198). Whether produced, gathered or caught locally or imported from a distant land, food was stored, prepared and consumed at the site in Renews.

Ceramic vessels associated with food storage are well represented on-site (47% of all food related forms). The predominance of such vessels in the assemblage denotes the heavy reliance on certain types of food storage. As can be expected from a planter's home, far removed from the village markets of England, food storage played an important role in subsistence activities. Fifteen of nineteen storage vessels were used to ship and store butter. Setting aside the idea that these vessels could be re-used for other commodities, their initial function would have been butter storage. The relatively high percentage of butter pots versus other ceramic storage containers reflects the significance of that dairy product on the site. That butter was common should not be a surprise as it was used as the primary source of fat in the seventeenth-century English yeoman's diet. It was mainly used in cooking rather than as a spread as in modern times (Anderson 1971:208).

Another vessel form on the site was large-mouthed storage pots, four of which were discovered. These globular-shaped vessels were likely multi-purpose storage containers that could have been used for a variety of dry foodstuffs. With most bulk dry commodities, such as flour, malted barley, peas and beans being shipped and stored in sacks or staved containers (Cell 1984:65-67, 173-175, 246-249, Baxter 1884:177-181), storage pots of the type from Renews were probably used for intermediate storage of the items that a cook would need readily available for meal preparation. Staved containers of varying sizes (hogsheads, firkins and barrels for example) holding dry goods for long

term storage were kept outside in storage sheds, or in lofts inside the house (Anderson 1971:88). The size of the storage pots found could have conveniently been kept on a shelf or cupboard, out of the way, but also close at hand.

A third variety of ceramic storage container was also present in the form of a narrow-mouthed Spanish jar. Its Iberian origin and small aperture suggests that it once held a valuable commodity, cooking oil (olive oil). Cooking oil, on the other hand was often shipped and stored in sturdy ceramic jars with small mouths specifically designed to control the flow of the product. Wine was another product from the Iberian Peninsula, however, because of its bulk and the quantities of it consumed, it was shipped and stored in staved containers.

The processes involved with food preparation were well represented by seven pipkins (cooking pots). This Dutch-influenced vessel form was usually placed on or near hot coals in the hearth, having three stubby legs designed just for that purpose (Brears 1971:29). Pipkins were used for preparing sauces and occasionally, even small portions of meat and because of the latter function they were sometimes called "flesh pots". Fragments of lids were recovered for four of the seven pots. Meats, including fowl were more commonly slow-roasted in the hearth, although poaching was a popular method for preparing certain meats, especially fish (Anderson 1971:187-188, 215). Several of the Renews pipkins displayed evidence of burning and blackening on the exterior, testifying

to their use in the hearth coals. Meat broths, sauces and gravies were also likely prepared in these pipkins with the smooth glaze on the interior keeping the hot liquids from sticking to the coarse ceramic body. An iron handle recovered from the house collapse may be from a cooking pot, however, its positive identification is uncertain.

Five serving vessels were found: two jugs, a bottle and two dishes. One of the jugs, a Meridaware example with a vertical strap handle was probably used for decanting alcoholic beverages namely wine, beer or spirits. The small Totnes-type bottle likely had a similar function. The smaller of the two jugs, an attractive English Tudor Green specimen with a capacity of not more than one-third of a litre, was likely used for hot sauces. Burnt residue on the interior and exterior of this vessel indicated it was occasionally placed directly in the hearth or a chafing dish to warm its contents. The modest size of this jug suggests it was used to hold a delicate condiment, to be consumed only in small portions.

The two dishes represented in the collection may have actually been societal pieces rather than food service vessels. One was a sgraffito-decorated North Devon dish which may have measured some 30 cm in diametre, while the second was an Iberian tin-glazed dish or plate of an unknown size, decorated with brown and magenta over-glaze paint. Both were relative high quality, compared to the other plain coarse earthenwares, suggesting that may have been more for display than for actual presentation or consumption of food

(Figures 60 and 61).

Meals in the seventeenth-century yeoman household were normally consumed from pewter plates or shallow wooden dishes, called trenchers (Anderson 1971:237-238). Although their comparative fragility made them susceptible to breakage, earthenware dishes were also likely used as they had been at Richard Trelawny's Richmond Island plantation in Maine in 1640, (Baxter 1884:197). Small ceramic bowl-shaped porringers were also used for individual portions of liquid or semi-liquid foods such as pottage (thick stew) or porridge (Anderson 1971:239, 248). Another nutritious semi-liquid beverage consumed by fishermen in seventeenth-century Maine was milk boiled with flour (Baxter 1884:168). Several porringers were found at Renews. Although a number of seventeenth-century Dutch paintings portray adults spoon-feeding children from single-handled porringers (Janowitz and Affleck 1998), it is tenuous to assume that children were present on the site as no other juvenile-related artifacts were recovered. Two of the porringers from Renews were made in North Devon while the third specimen was of Dutch manufacture. These bowl-like vessels conjure up images of thick stews (pottage) or porridge being eaten around the hearth on a cold night or a foggy morning.

Cups were second only to butter pots as a ceramic form on the site. Ten cups were found (20 % of all ceramic vessels), suggesting that they were a common tableware form. They also represent leisure activities as well as foodways, but this will be elaborated upon

below. By the mid-seventeenth century, individual ceramic drinking cups were well ensconced into the yeoman's culinary habits, having been introduced a century earlier through increased trade and immigration from the Continent, especially the Netherlands (Brears 1971:13, 27). Several different cup forms were found, the most common being a globular body with a straight rim equal to one-half the height of the body. The stem from a pewter goblet constitutes a eleventh drinking vessel. Pewter tableware and earthenware proliferated in the English commoner's home beginning in the sixteenth century, but it still shared the table with vessels and trenchers (plates) made from wood (Anderson 1971:238). The high incidence of ceramic drinking vessels from Renews fits well with sites of a similar age and culture excavated in New England (Deetz 1972:29)

There was a notable absence of other dairy-related ceramic forms on the site. One of the processes in making butter was allowing fresh cow's milk to sit and clot in large open ceramic milk pans in a cool part of the house, preferably in an room set aside for just that purpose. The absence of milk pans from this site, together with the preponderance of butter storage containers suggests that dairying was not an activity practiced at this site which is unusual considering that dairying was a regular activity at many North Devon homes (Grant 1983:54). Fragments from numerous milk pans were recovered from seventeenth-century deposits at the seventeenth-century Colony of Avalon in Ferryland where a cowhouse or byre was among the buildings uncovered along the waterfront (Gaulton 1998:16-17). As there is no evidence of dairying at the Renews site, the butter

must have been acquired by other means. Cattle were present in small numbers in Newfoundland out harbors during the seventeenth century (Pope 1992:78) and they were documented in Renews in both the 1675 and 1677 census (9 and 14 head respectively) (C.O. 1/35 [17 ii] 150 and C.O. 1/41 [62 iv, vi, vii] 158). Not every planter in Renews had a cow, but it is likely that there was a supply of fresh milk to go around. Of the 14 head of cattle in the harbor in 1677, 13 were owned by planter Richard Pooley, therefore the most likely candidate for dairy producer in the harbor. A similar situation at Renews in an earlier decade, where one planter supplied the community, would explain the absence of diary-related milk pans on the site. Whether imported on English merchant ships, obtained from the neighbor's plantation or another harbor, the butter pots from the archaeological record indicates that this commodity dominated the Renews planter's pantry and played a significant role in the planter's diet.

4.3 Health-related Activities

The seventeenth-century planter's concern for health and hygiene was recognized through the discovery of three galley pots (used for medicinal products) and three glass pharmaceutical vessels. The diminutive size of the galley pots (maximum of 5 cm in height) and glass vessels (estimated at less than 100 ml capacity) indicates that the contents were valuable commodities to be used sparingly. Although there was likely some form of health care available during the fishing season when trained medical personnel accompanied fishing crews from England, as Edward Cutt and James Yonge

did in 1663 (Poynter 1963:56; see also section 1.5 Historical Background above), the planter also had to be prepared for the rest of the year when no such assistance existed in the harbour. Homemade folk medicines derived from natural plants were common (Hawke 1988:86) and were probably supplemented with salves, ointments and precious oils dispensed from tiny apothecary vessels. When surgeon James Yonge healed fishermen of a vomiting (caused by eating too much herring) by concocting a cure from a number of ingredients including a drop of chymical [sic] oil of wormwood (Poynter 1963:59), he may have kept that precious oil in a tiny vial or bottle such as those recovered from the archaeological site.

4.4 Leisure Activities

Alcohol and tobacco consumption have been and still are recognized as recreational or leisure activities. Seventeenth-century Renews was no exception as the quantities of alcohol bottle fragments and tobacco pipe sherds in the artifact assemblage clearly indicate. Alcohol use among the seventeenth-century English fishermen in Newfoundland was apparently prolific and was often commented upon by those writing about the fishery (Pope 1992:365-366). Although brewing beer or ale was common throughout rural England and New England and it was an important dietary staple (Anderson 1971:89, Baxter 1884:25), it was the excess of drink that caught the ire of some and contributed to an anti-settlement lobby in parts of England (Pope 1992:81). The lists of goods imported into Newfoundland in the seventeenth century usually

included beer, cider and other alcoholic spirits or the ingredients to brew beer (Cell 1982:65, 173 and 246). These lists indicate that beer, wines and certain distilled alcohol such as aquavite were commonly shipped to Newfoundland in staved containers of many sizes. Case bottles were also used to transport such liquors as gin and brandy to New England (Faulkner and Faulkner 1987:232) and likely also Newfoundland.

The discovery of sherds from at least two case bottles on the site indicates the presence of more refined, distilled alcohol on site. Enough of one of these bottles was found to suggest it had a capacity of 700 ml. The ceramic serving and drinking vessels similarly point to alcohol consumption within the house and their relative abundance suggests that it was not just the occupants who were partaking. Together with the Totnes-type bottle and the Merida jug, cups and goblet, the serving and consumption forms make up 23% of the non-glass vessel count from the site. Peter Pope dedicates a chapter of his doctoral dissertation to the demand for alcohol and tobacco in the lives of the seventeenth-century South Avalon planter (Pope 1992). He uncovered documentation indicating that many Newfoundland planters provided the migratory fishermen with alcohol and tobacco in their own homes, essentially turning the home into a tippling house (Pope 1992:81). A similar picture is presented in early colonial Jamestown Virginia where a mid-seventeenth-century visitor to that settlement noted that each of the dozen-or-so families living there operated ordinaries (tippling houses) (Brown and Horning 1998). The significant percentage of drinking-related vessels from Renews suggests that this house

may have been a tippling houses.

Another class of artifact from the site, the tobacco pipe, corroborates this theory. Evidence exists to suggest that significant quantities of tobacco were being consumed inside the house, particularly near the hearth. Over 800 clay pipe fragments were recovered from the seventeenth-century deposits. This number excludes nearly 1,000 fragments from the house collapse stratum, many of which may have been deposited during the house occupation but, through a variety of natural and cultural forces, became mixed with later deposits. The tobacco pipe fragments were plotted on a site map using the Surfer software program with some revealing results (Figure 83). Most of the pipe fragments were found in either the hearth area or near the doorway, indicating the focus of the smoking activity was near the fire or just outside the front door. The area immediately outside the door may have also been a workplace as a number of the pieces of worked lead also came from that area.

4.5 Occupational Activities

Execution of the cod fishery was the driving factor for settlement in Newfoundland during the seventeenth century. Participation in this industry meant long hours of hard work during the entire fishing season which ran from June to August for the migratory fishery and into fall months for the planters (Pope 1992:68-70). During the months between the fishing season, the permanent residents kept themselves busy preparing for

the next season by harvesting and milling wood (Poynter 1963:60), constructing or repairing boats, oars, stages, train oil vats (for rendering cod livers into oil) and other related structures (Pope 1992:74). Subsistence hunting and gathering also occurred in the fall and winter months and small scale fur trapping was carried out to supplement the income raised from the fishery (Pope 1992:82-83).

Each of the industries carried out by the planters in Newfoundland required tools and equipment both of a specialized and generalized nature. Codfish were caught on hooks, sometimes attached singularly or in groupings of 2-3 per line and baited with caplin or pieces of mackerel, herring or squid. Back at the shore station, the catch was thrown up onto the working platform (stage) with a pronged staff, where each fish was headed and split down the center. The head, backbone and guts were discarded back into the sea and the cod livers were saved left to render into "train oil" in large vats. The train oil would be drawn off and stored in barrels for shipment back to Europe where it would be sold for tanning leather and lamp oil (Smallwood 1991:470). Once gutted and split, the codfish was washed and sprinkled with salt and dried on flakes (wooden frames covered in boughs) or on the rocky beaches until cured whereupon they would be pressed into stacks and stored for shipment to Europe or the West Indies.

During the seventeenth century, the equipment used in the cod fishery was specialized, but not particularly complicated. A variety of tools and equipment was employed in the

industry. Nets and jiggers were used to catch the bait fish, iron fish hooks attached to sturdy lines were used to catch the cod fish and long poles with 1-2 prongs were used to offload the catch. Sharp knives and cleavers would be used in chopping and splitting the fish and wooden barrels, tubs, barrows, ladles would be used to wash, carry and salt the fish. Lead weights and floats were needed for the nets and fishing lines. Off-season activities required the usual lumbering and carpentry tools as well as firearms and animal traps for hunting and for trapping fur-bearers.

A number of artifacts recovered from the site reflect the occupational activities of the seventeenth-century planter, particularly the fishery. Those related to fishing included hooks, jiggers, net and possibly line weights, a netting needle and several chunks of organic resin believed to be spruce sap. The resin was likely used as a preservative coating for lines, nets, clothing and even sails (Murray 1968:62). The jiggers and weights were probably fabricated in or near the house as lead waste and sprue from shot casting were recovered from the occupation deposits in and around the house.

Lead ammunition, in the form of pellets, buckshot, pistol and musket balls is evidence of the hunting activities of the Renews planter. The range of ammunition indicates that both small and large game were pursued, including ducks, geese, pigeons, partridge, lynx, arctic hare, bear and caribou, all of which have been recorded as part of the planter's diet (Poynter 1963:60, Pope 1992:82). No identifiable trap parts were recognized, although

some of the pieces of miscellaneous ferrous strapping recovered from the seventeenth-century occupation stratum may represent such equipment.

A small number of metal tool fragments was also recovered from the seventeenth-century occupation and house collapse strata including several wrought iron handle-like objects with rectangular or oval cross sections (artifacts #'s 6077, 8006, 8009, 8013, 8167, 8227, 8229). Although these artifacts may represent knives or some other type of tool, positive identifications were not possible due to their incomplete and corroded condition.

4.6 Provenance

Artifact provenance was used in this study to make inferences on the supply network available to the seventeenth-century planter in Renews. By identifying an artifact's place of manufacture, even in the broadest sense, it is possible to unravel the supply line used to bring imported goods into the planter's home. The material evidence of the triangular trade between Newfoundland, southern Europe and England is evident, as is the connection between Renews and some of the other English colonists along the eastern seaboard of North America.

Ceramics are especially useful in provenance studies as their place of manufacture is often identifiable and manufacturer's marks on the pewter goblet and some of the tobacco pipe bowls were used to determine their origins. Numerous studies on ceramic

production have been published and thanks to these, even a novice is quickly able to distinguish North Devon pottery from examples from South Somerset or the Iberian peninsula. It is possible to determine the place of manufacture for glass and metal artifacts, however, those materials require chemical analysis which can be expensive and time-consuming and are outside the means of this study. By identifying the place of manufacture for the ceramic and pewter vessels and some of the clay pipes in the artifact assemblage, certain inferences can be made concerning the availability of goods and the range of the trade network in place in Renews.

Although perched on the shoreline of a distant land, the English West Country fisherman in Renews was connected by an ocean highway that brought people and cultures together, either through direct contact or through intermediary traders. Even passing ships, enroute to distant ports but stopping to replenish water or fuel supplies, could have provided opportunities for trade. The French explorer Jacques Cartier (1536) did just that when he put into Renews on one of his famed voyages (Cook 1993:89). As was mentioned in the section on the historic background of Renews, the annual fishing season brought numerous boats and hundreds of Englishmen into Renews each summer. Mostly, these men came from West Country ports, in particular Bideford and Barnstable, so it should be expected that most of the materials brought to Renews would be from West Country ports. The artifact assemblage bears this out, although at the same time indicates that there was contact with non-West Country English towns, as well as the Continent and

America.

Of the 50 ceramic vessels from the seventeenth-century context in Renews, 46 or 92 % have been identified as being of English manufacture, one delft vessel of either English or Dutch manufacture, three of Spanish or Iberian manufacture and a single pot from the Low Countries (Dutch). Of the English pieces, 41 were made in North Devon, two in South Somerset, one in the Totnes area of South Devon and one Border ware jug from either Surrey, Hampshire or Dorset.

As so many of the Renews vessels were from North Devon, this variety of pottery warrants further elaboration. A more detailed description of North Devon pottery can be found in Alison Grant's *"North Devon Pottery: The Seventeenth Century"* (1983) and for a Newfoundland perspective on the same, Peter Pope's M.A. thesis (1986) should be consulted as he details the types of North Devon pottery discovered at Ferryland in the 1980s. A brief synopsis of this type of pottery will be presented to familiarize readers with the most dominant ceramic wares from Renews.

Coarse earthenwares had been manufactured in and around the North Devon towns of Bideford and Barnstaple since medieval times. Technological developments in the sixteenth century, coupled with an established maritime link with the Continent and North America enabled the production and proliferation of North Devon pottery

throughout colonial North America in the seventeenth century (Grant 1983:1, 12). A typical (but not ubiquitous) feature of seventeenth-century North Devon wares is the stratified color within the bodies of most vessels. This telltale characteristic was partially due to the practice of stacking the pots upside down in the kiln, thus causing a lack of oxygen in the pot interiors. What followed was an oxygen-poor (reduced) environment inside the vessels, resulting in the incomplete oxidation of the clay. The fired vessels are hard with an orange, red, or brown exterior and a grey interior (Grant 1983:51-52). It would appear that an exception to this is the smaller, finely thrown vessels from Renews, particularly the drinking cups. Each of the cups was completely oxidized and lacked the grey interior. Most of the North Devon wares from Renews were glazed on the interior with many vessels displaying trails of glaze down their exteriors. The North Devon pottery forms from Renews consisted of (in order of frequency) storage pots (both slender and globular-shaped), drinking cups, cooking pots, porringers, a galley pot and a sgrafitto-decorated plate.

Two other English vessels were manufactured in Somerset county, likely in Donyatt, another West Country center for seventeenth-century ceramic production (Coleman-Smith and Pearson 1988:xvii). The South Somerset galley pot and drinking cup were well-made, each with just an interior amber, or brown glaze. The only other vessel of certain English manufacture was a small jug, which was possibly used for sauces. It was one of variety of white-bodied earthenwares made in Surrey, Hampshire, Farnham and

perhaps south-eastern Dorset (Brears 1971:23-24, Pearce 1992, Pope 1986:107-108).

The single Totnes-type bottle is of a variety that has not been commonly recognized on North American sites (Allan and Pope 1990). The south Devonshire town of Totnes is on the river Dart, just a short distance upstream from the port of Dartmouth. Dartmouth has a seventeenth-century connection with the harbours along the east coast of Newfoundland, including Renews (C.O.1/47:113; C.O.1/44:110). James Yonge records the Dorcas out of Dartmouth fishing in Renews in 1663 (Poynter 1963:55). Therefore, it is reasonable to assume that a bottle from Totnes, perhaps filled with distilled spirits, could have found its way into a house in Renews via a fisherman from the Dartmouth area, possibly even one of the Dorcas' crew.

The Dutch green and yellow porringer offers an informative glimpse into the commerce of seventeenth-century Renews. Dutch ships were involved in the Newfoundland fishery as early as 1589 and men from that country continued their mutually beneficial trade relationship with the English West Country fishermen well into the next century. The south Avalon harbours were of particular interest to the Dutch and they sent sack ships there to transport fish back to England and the Continent until around 1670 (Pope 1991:129-135, 400). This porringer may have found its way onto the site from one of the Dutch cargo ships.

The pewter goblet stem was a rare find as it had a maker's mark moulded in relief on the foot beneath the stem (Figures 71a and 71b). This mark was comprised of two crests, one of fleur-des-lys and the second depicting the "chains of Navarre". Such heraldic devices indicates that the maker likely was French in origin, probably from the southern province of Navarre (Larousse 1984:7299). The fact that a French-made pewter goblet made its way into a North Devon fisherman's house is indicative of the ties between North Devon and France. Despite the frequent conflicts between England and France, seventeenth-century English planters along the south Avalon often interacted with French fishermen and settlers operating in the nearby harbours of Trepassey and Placentia and French servants were occasionally employed in Renews (Pope 1992:89-90).

In addition to being the most important medium for dating the cultural deposits on the site, the tobacco pipe bowls were a good indication of the availability of goods and materials in Renews. A variety of bowl styles is present, most of which were manufactured in England, particularly Bristol, Exeter, Barnstaple and London. Some of the styles have been attributed to either London or Dutch manufacture and one was made in the British colonies in America. The latter specimen was very distinct from the others as it was made from terra cotta and buff coloured clay marbled together into an agate body and decorated with an elaborate rouletting on the rim and stamped with petalled rosettes. The exact place of origin for these pipes has yet to be determined, although the terra cotta clay used in its manufacture suggests a Chesapeake Bay origin (S. Hurry pers.

com. 1995). Tobacco from the Chesapeake Bay area was regularly imported to Newfoundland throughout the seventeenth century (Pope 1992:403-405) and what better evidence of this trade than a pipe made in the tobacco heartland appearing outside the door of a planter's house in Renews.

The provenancing of the artifacts from the seventeenth-century occupation in Renews provides the physical confirmation of what many historians have documented for generations. The importance of the home market and probable kinship ties is abundantly evident by the North Devon origin for most of the pottery, which clearly indicates the reliance on the home market for both food stuffs, in the case of the butter pots, and a supply of utilitarian ceramic vessels. The small number of wares from other English towns and ports, such as Donyatt, Totnes, Exeter, Bristol and London speaks of a complementary supply for material items such as drinking cups, pharmaceuticals (transported in the South Somerset and tin-glazed galley pots) and clay pipes. The Iberian-made cooking oil storage jar and serving jug appropriately represent two of the important commodities that salt fish from Renews was traded for in Spain or Portugal, namely olive oil and wine. And lastly, the exotic pewter goblet from Navarre, together with the Spanish majolica plate and Dutch porringer illustrate the ability of the Renews planter to garnish his home with Continental trappings.

Chapter V

The Conclusions

5.1 The Conclusions

As one of the principal harbours along Newfoundland's historic Avalon Peninsula, Renews has a long history of human occupation and resource exploitation dating back to the beginning of the sixteenth century. Documentary sources relating to French fishing activities in this harbour can be traced back to 1506. English fishing interests had likely begun in the fourth quarter of the sixteenth century and continued uninterrupted for several hundred years. Although organized attempts at colonization began in 1617/18, it was the middle class folk who spurred settlement by unceremoniously overwintering there instead of returning back to England in the fall of the year. Evidence of such settlement was discovered on The Mount, a geographic landmark on the north shore of the harbour. Obscured for centuries, this site was discovered during a survey of eighteenth-century gun batteries located nearby. There were no archaeological parallels as never before had a site of this sort been meticulously excavated and documented. Since its discovery, several more seventeenth-century planters homes have been unearthed on the Avalon Peninsula, at Ferryland and Cupids. These will, no doubt, impart even more knowledge about this fascinating period of history and may reveal certain archaeological patterns not yet known about seventeenth-century Newfoundland.

The archaeological evidence of a seventeenth-century English planter's occupation in Renews provides an in depth view into early colonial life in Newfoundland and by association, North America. Hundreds of years have passed since his house collapsed and folded back into the natural surrounding. Subsequent visitors and occupants of the site in later centuries probably had no idea of the existence of the foundations of the simple one-room dwelling and the thousands of bits of broken pottery, clay pipes and nails lying just one a shovel blade's depth beneath the sod. At the time of its discovery, in July 1993, the site was no more than a 10 m by 10 m section of a grassy meadow overlooking the picturesque Renews harbour. Painstaking excavation, lasting some 13 weeks over two summers, resulted in the reconstruction of a way of life previously unrecorded in North America, north of Massachusetts.

The datable artifacts from the cultural deposits indicate that a major occupation occurred at this site around the middle of the seventeenth century. Marked tobacco pipes from the 1650s and 1660s neatly bracket this occupation which appears to have been supplanted by a pattern of modest recreational site use over the next century or so. The next phase of habitation to leave archaeological remains of any consequence did not occur until 1779, when upwards to 11 men from the Royal Artillery spent less than a year barracked virtually on top of the earlier house ruins. Two gun batteries, built nearby, defended the harbour from American privateers during the conflicts Britain was experiencing with her former colonies in the United States. The nineteenth century witnessed a growth in the

population in Renews, but fortunately for the archaeological site, the ensuing development had little impact on the seventeenth-century occupation.

One of the highlights from the Renews archaeological project was the discovery of the structural remnants of a small, but probably well-built house. Its basic, 14' by 20' single-cell, configuration with a massive hearth on the gable end furthest from the door indicates the ability of the occupants to sacrifice personal comfort for economy of labour. Heating a larger home would surely require additional resources and even constructing a more complicated structure may have been beyond the occupant's capability. Protected from the northeasterly winds by a two to three metre high rocky outcrop, the house was tucked into a natural depression. The sheltered location, however, had drawbacks, for when the weather became too wet and rainwater (or melting snow in spring) channeled through fissures in the bedrock and ran straight through the center of the hearth. Rather than move the house to another location, the occupants chose to solve the problem by relocating the heat source to one corner of the hearth and raising the floor.

Two earthen floors were discovered, separated by a beach cobble subfloor/drainage system with a central "V"-shaped central drain constructed from long flat stone slabs. Clay for the second floor appears to have been excavated from a pit located several metres from the doorway. The new heat source (measuring 75 cm by 85 cm) was built from flat stones on a gravel platform, 10 cm above the old hearth floor. As the old floor

of the hearth area was found to be considerably lower than both the fire box and the second earthen floor, this made for speculation that part of the newly modified hearth area may have been floored with wood. Wrought nails, together with larger than normal potsherds, glass and pipe stems were recovered from the hearth area, offering support for a wooden floor in the area. A silver coin dating to the reign of Charles I was also discovered in the hearth area, suggesting that valuables may have been hidden beneath the floor boards. Conversely, it may have just as easily fallen through a crack in the floor boards.

If windows existed in the house walls, and they probably did, they were not covered with glass as no sign of pane glass was discovered. Post molds in the south west corner of the foundation and in the center of the floor marked the entrance to the house and a center supporting post for the roof. Stratigraphic, architectural and documentary evidence suggests that the house was roofed with sods, likely covering a wooden frame, sheathed with spruce or birch rinds. A contemporary account of migratory fishermen's houses in Renews describes just this type of roof covering. A substantial organic deposit, up to 50 cm thick and containing hundreds of wrought nails and large flat stone slabs, is believed to represent the house collapse, a collapse so massive that it spread some two to three metres out from the house foundation. This activity conveniently sealed the seventeenth-century occupation deposits and protected it from later activities on the site.

A rich midden deposit, located just outside the doorway, contained thousands of artifacts of the sort that would indicate that this site was occupied year-round. A pewter goblet together with expensive drinking and serving vessels with incised sgraffito and hand-painted, tin-glazed decoration confirm not only the permanence of the occupation, but also the middling economic status of the occupants. It is unlikely that migratory fishermen, on a fishing voyage lasting just four to five months would bring their fine dishes and tableware across the Atlantic Ocean. Glass and ceramic vessels which once held medicinal products also point to a year-round occupation. Migratory fishing crews were often accompanied by medical personnel whose role it was to care for the health of the fishermen. Although a thoughtful fisherman may have also carried his own personal supply of medicinal concoctions, the overwintering planters had to be able to cure themselves throughout the rest of the year when there were no trained medical attendants..

Insightful observations of seventeenth-century foodways were demonstrated by the collection of 47 ceramic vessels associated with the interrelated processes of food preparation, presentation and consumption. Many of the vessels described by Jay Anderson (1971) in his work on seventeenth-century yeoman foodways were present at Renews, serving witness to the adherence to traditional culinary practices far away from the homeland.

The ceramic assemblage signifies a household that was prepared for the isolation of the long Newfoundland winter when the harbour emptied of the migratory crews and shipping dwindled to nothing. Storage vessels were well represented, particularly those specifically designed for butter storage. Planters had to ensure that their diet included this fat-rich dairy product to supplement the bland staples of cured beef, fish, bread and peas. Basic root crops and herbs grown in small kitchen gardens provided the planter with limited agricultural produce and some flavoring for the pot. Cooking vessels also figured predominantly in the presence of seven three-legged pipkins, in two sizes. Delicate sauces prepared in the smaller variety of pipkin may have been served up in the small Border ware jug found on the site. Fragments from three porringers conjure up images of warm and sticky porridge or a mushy pottage. Ceramic vessels were not thought to play a significant role in food preparation and consumption in the seventeenth century, however the Renews assemblage could dispute this theory. Over one-half of the foodways-related vessels were directly associated with either preparation, as in the pipkins, or presentation, as with the jug and porringers and dishes.

Dozens of intact clay pipe bowls together with sherds from case bottles were lifted from the ashes of the hearth area. Artifacts such as these are commonly associated with leisure activities and suggest that the planter's house also served as a tippling house or ordinary, where migratory fishermen would spend some of their wages escaping the harsh tedium of the busy fishing season. Historians have documented exactly this type of occupation in

seventeenth-century Newfoundland as well as other British colonies along North America's eastern seaboard. Except that planters have been recorded as selling alcohol and tobacco to the migratory fishermen, the pipe, case bottle and drinking cup sherds from the collection would be considered as leisure items, instead of tools from the planter's supplementary recreational trade.

Other tools, relating to the fishing industry, were recovered, including fish hooks, lead jiggers and weights for both nets and hand lines. Another tool of a medieval sort was found on the first earthen floor of the house. This pencil-thin, 30 cm long needle with a rectangular eye on one end had been manufactured from copper alloy and is reminiscent of the tools used during the middle ages to make fishing nets and woman's hair nets. The eye on the Renews artifact is slightly modified from the earlier netting needles. Not surprisingly, there was evidence of equipment manufacturing on the site. Melted lead waste, discovered near the front door of the house, is indicative of this sort of metal working. The jiggers and net/line weights were all made from this pliable metal which, due to its low melting point, can easily be shaped and molded into various tools or implements. Some of the heavily corroded iron objects recovered from the seventeenth-century occupation deposits may have also been pieces of tool handles, hardware or possibly parts of animal traps.

Small and large game hunting was likely an activity practiced by the planter during the

fall, winter and spring months. Subsistence hunting was recorded in Renews in the mid-seventeenth century, with the abundance of wildlife in the region being something that an English yeoman may have found foreign. Hunting, particularly for large game would have been a pastime that the yeoman planter may not have enjoyed back in England as it was considered the realm of the gentry class. However, in Newfoundland, as in all of the New World, it was a necessary means of supplementing the traditional diet. Lead projectiles ranging from tiny pellets to buckshot and musket and pistol balls were present throughout the occupation deposits. Sprue from the casting of buckshot was also found, adding to the list of tools and equipment the planter was able to manufacture. A handful of calcined and splintered mammal bones fragments was also found, although no species identification was possible.

Lastly, the artifact collection tells of a world that was not as homogeneous as one might expect for a small harbour some 2000 kilometres from Europe and isolated for over one-half the year. Ceramic vessels, pewter tableware and a clay tobacco pipe from Spain, Holland and the Chesapeake Bay area of Tidewater Virginia and Maryland tell of the wide trade network available to the Renews planter. As salted cod fish, caught in the waters off Renews, was an important commodity in the trans-Atlantic trade, it is not surprising that goods and produce from the countries involved in this trade should turn up in the home of the person who was no less a partner in that ocean-wide economy. The planter's role in this trade network enabled him and his family to partake in some of the

finer elements of seventeenth-century as could be seen by the quality of some of his ceramics and pewter table wares.

The Renews planter's involvement in the Newfoundland fishery may not have been a lifelong commitment, however, he or she stayed long enough to improve their lot in life before moving onto other ventures, be they on to another part of the English Shore, New England or back home in Devon. Fortunately for those who are students of Newfoundland history, this mid-seventeenth century planter from North Devon chose to stay on The Mount long enough to leave his or her mark in the ground. The archaeological record from this decade-or-so habitation has been documented and will now stand as testimony to the early period of colonial life on Newfoundland's rocky shores.

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Scott, Peter	Dept. of Biology Memorial University of Newfoundland. Authority on the flora of Newfoundland, past and present.

Appendix A

Figures

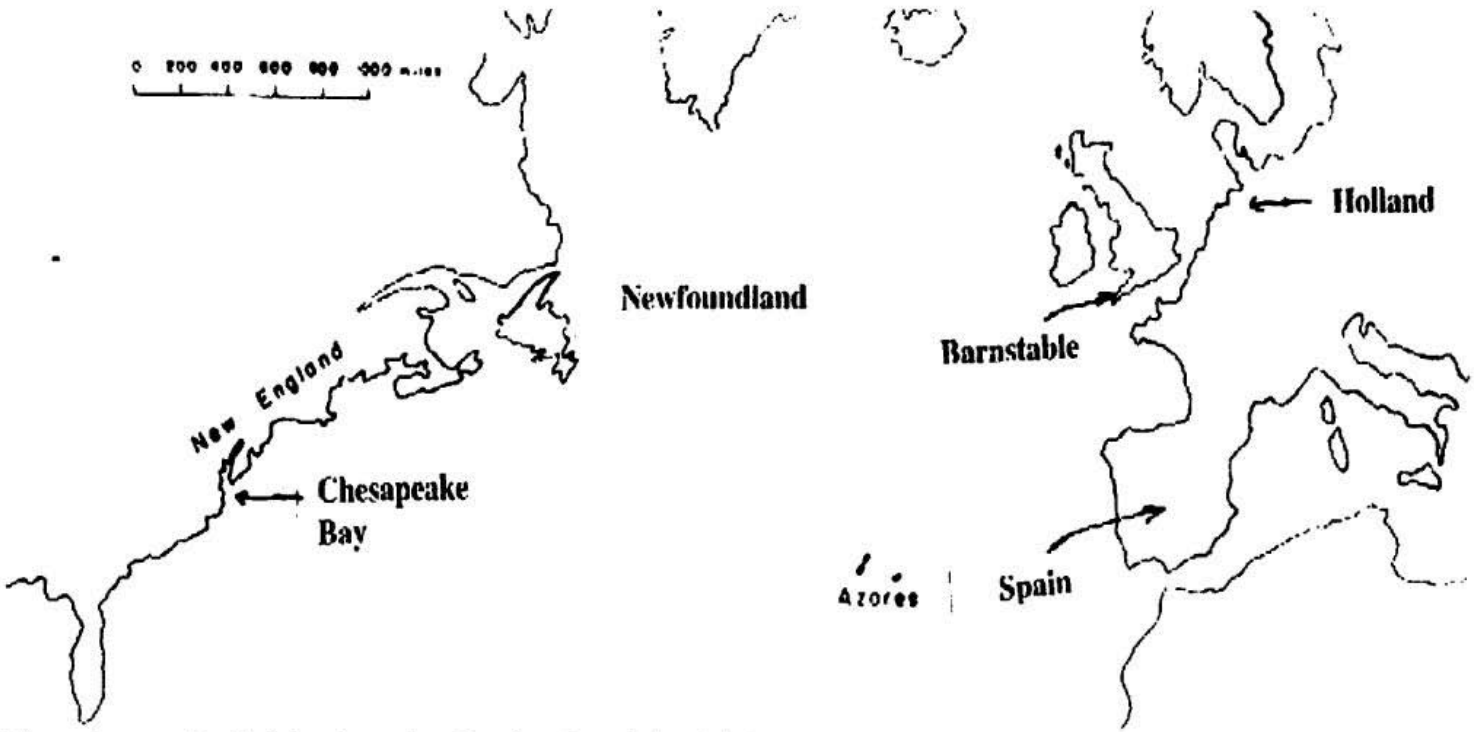

Figure 1a North Atlantic region showing the relationship between Newfoundland, northern Europe and New England. Source: Matthews 1973.

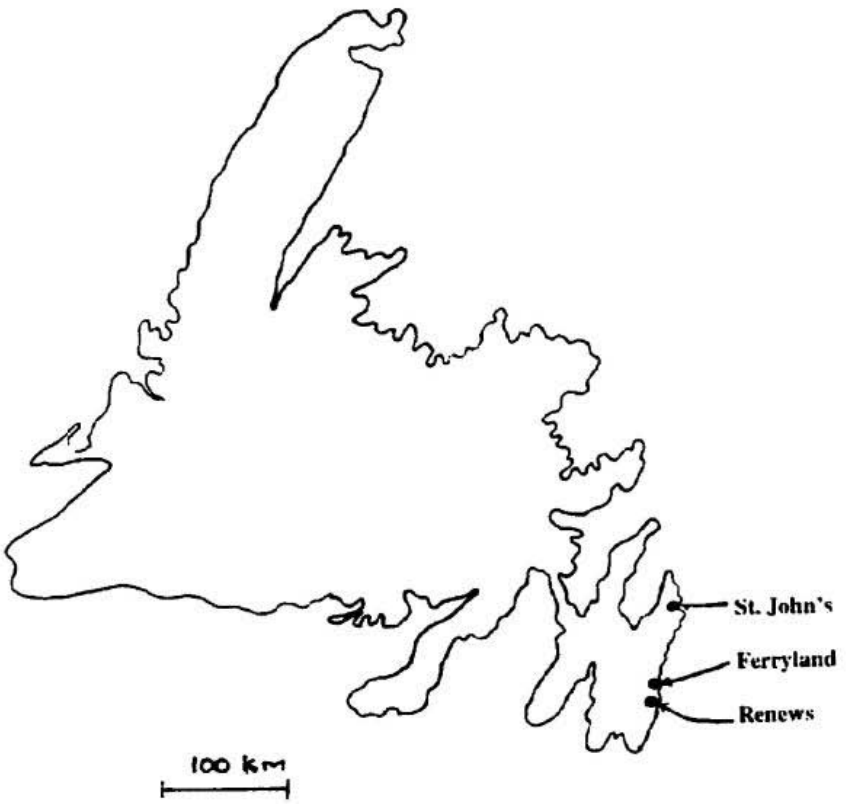

Figure 1b Map of Newfoundland showing the locations of St. John's, Ferryland and Renews.

Figure 2 Air photograph of Renews. The Mount is to the right of the community wharf at the center of the upper shore of the harbour.

Figure 3 Detail of air photograph of The Mount. The arrow points to the seventeenth-century archaeological site.

Figure 4 Site location at the base of the bedrock outcrop at center of photograph. Facing east.

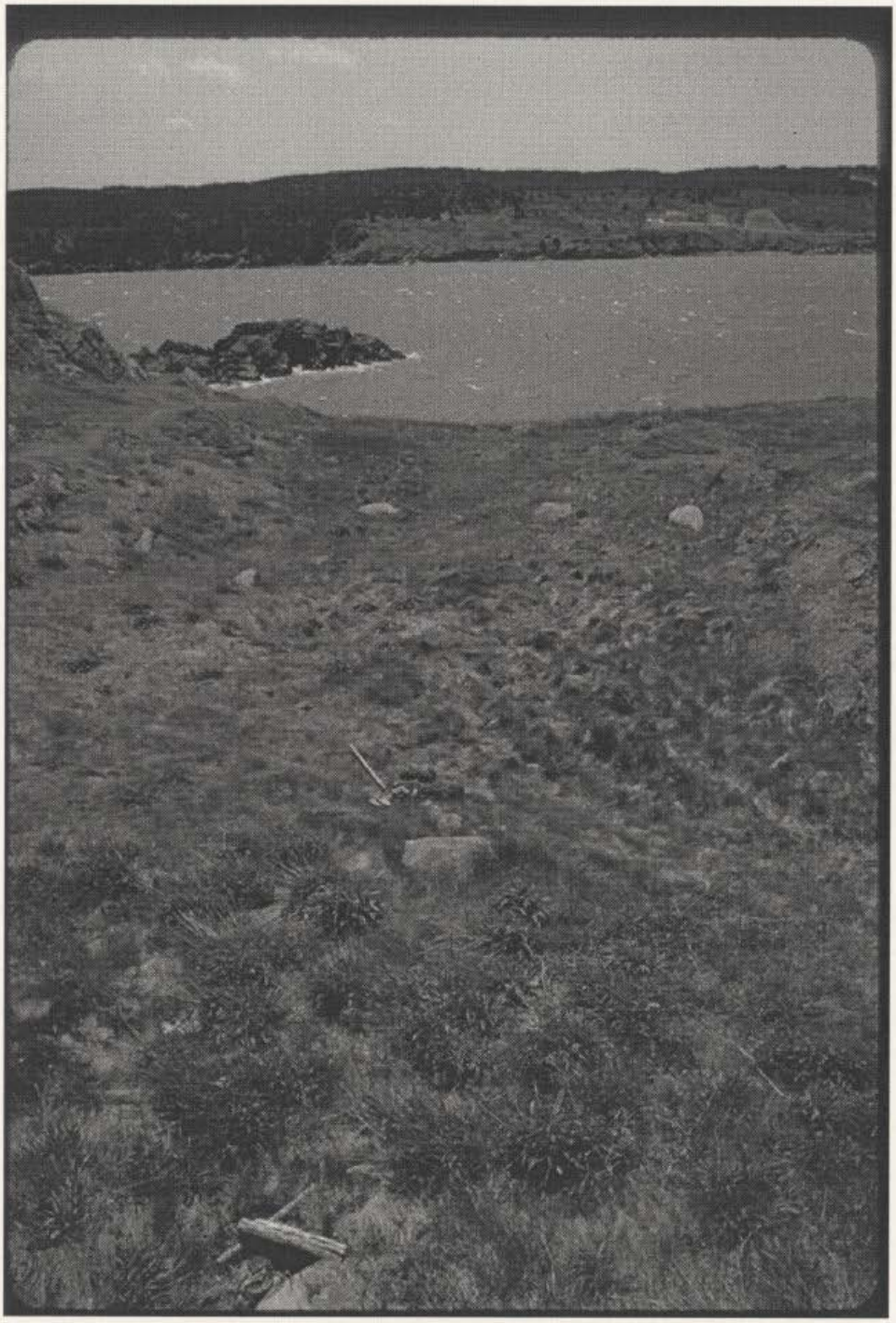

Figure 5 Site location facing west. The house ruins were located at the bottom of the photograph.

Figure 6 Renews harbour [Renooze] as drawn by James Yonge in 1663. The Mount is the land form protruding out from the north shoreline. The house shown next to The Mount (labelled Tho Faulcon) may be the subject of this thesis.

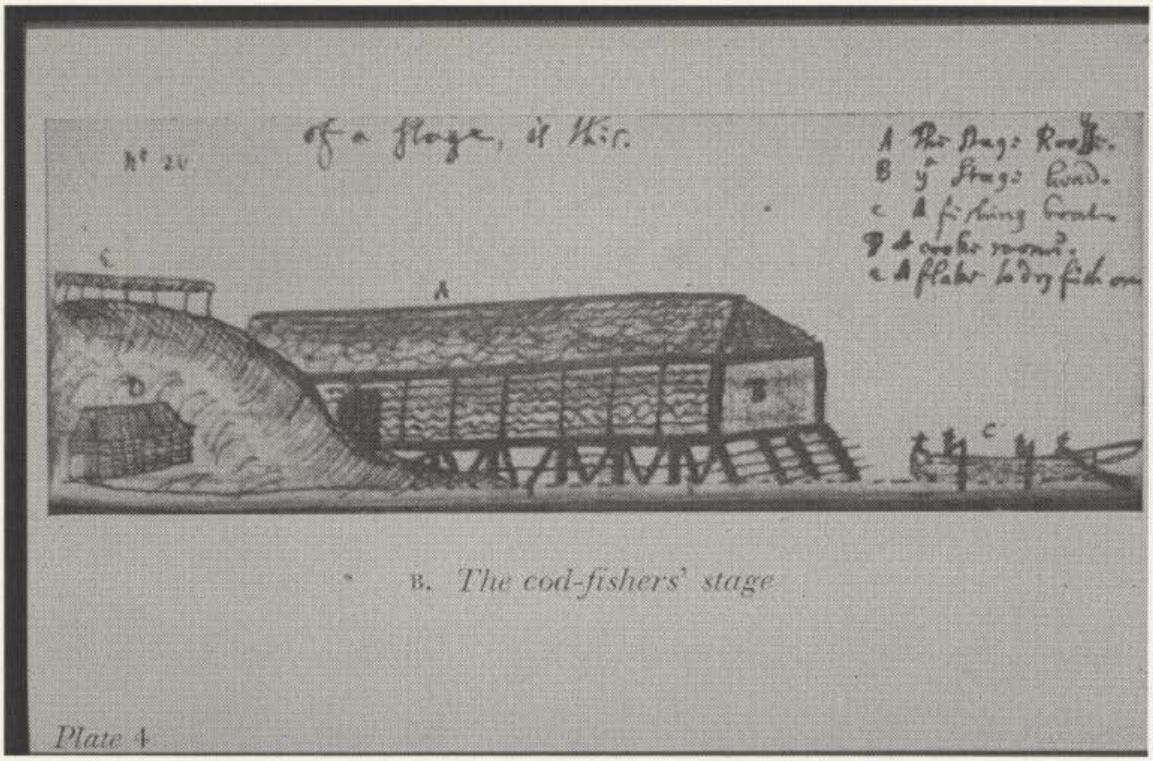

Figure 7 James Yonge's sketch of a fishing stage in Newfoundland, possibly Renews. Yonge spent the 1663 fishing season in Renews. Source: Poynter 1962. Photo courtesy of Memorial University of Newfoundland.

Figure 8a Peter Stephen (Stevens) maker's mark.

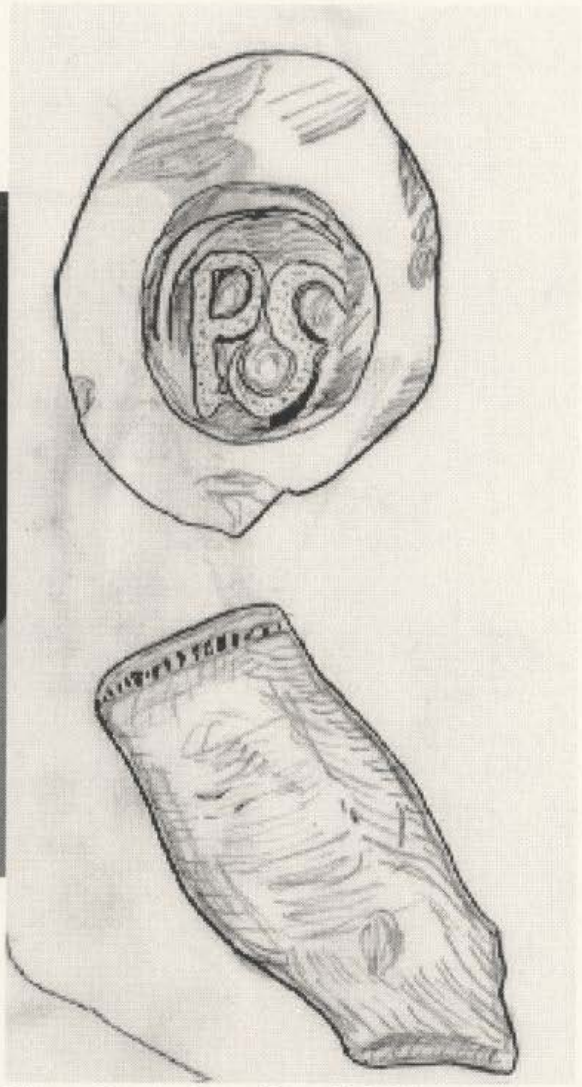

Figure 8b Drawing of "PS" maker's mark (top) and the pipe bowl profile (bottom).

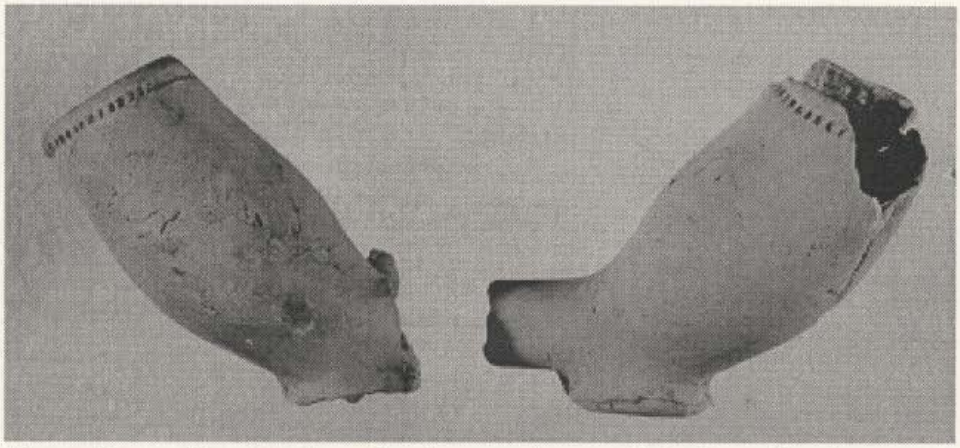

Figure 9 Barnstable-style tobacco pipes made by Peter Stephens probably between ca. 1660 and 1668.

Figure 10a Nine spoke maker's mark (Barnstable?).

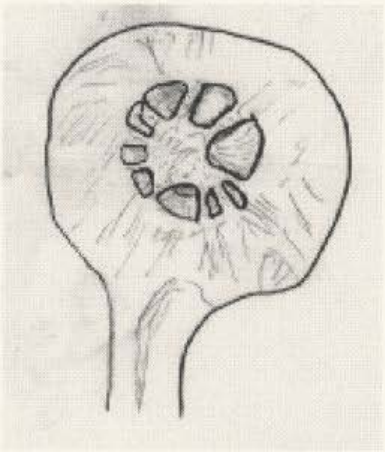

Figure 10b Nine spoke maker's mark (Barnstable?).

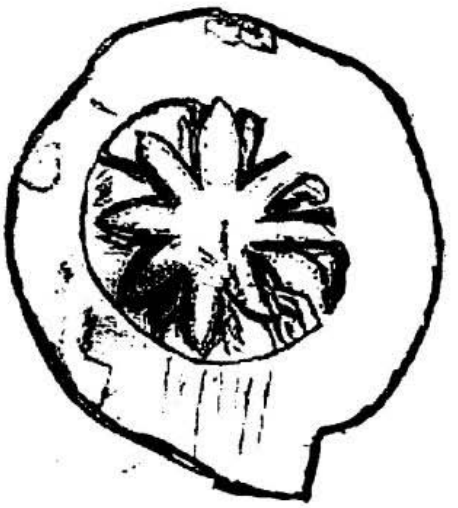

Figure 11a Exeter spoked wheel maker's mark.

Figure 11b Profile of tobacco pipe bearing the Exeter spoked wheel maker's mark.

Figure 12a

Dutch "rose" maker's mark.

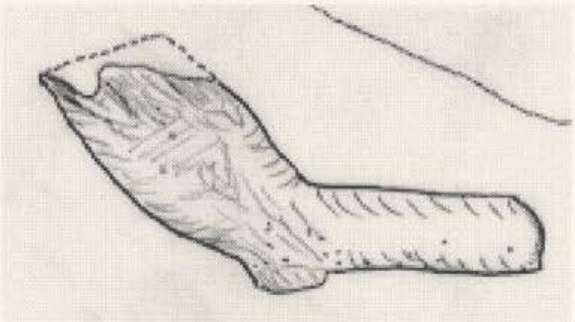

Figure 12b Profile of Dutch pipe with "rose" maker's mark on its heel.

Figure 13a Terra cotta pipe from Event 4.

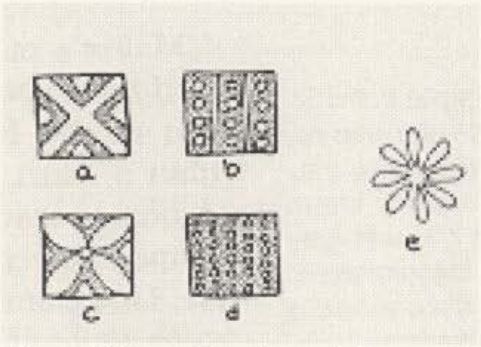

Figure 13b Drawing of dies used to stamp the terra cota pipe. Source: Henry 1979.

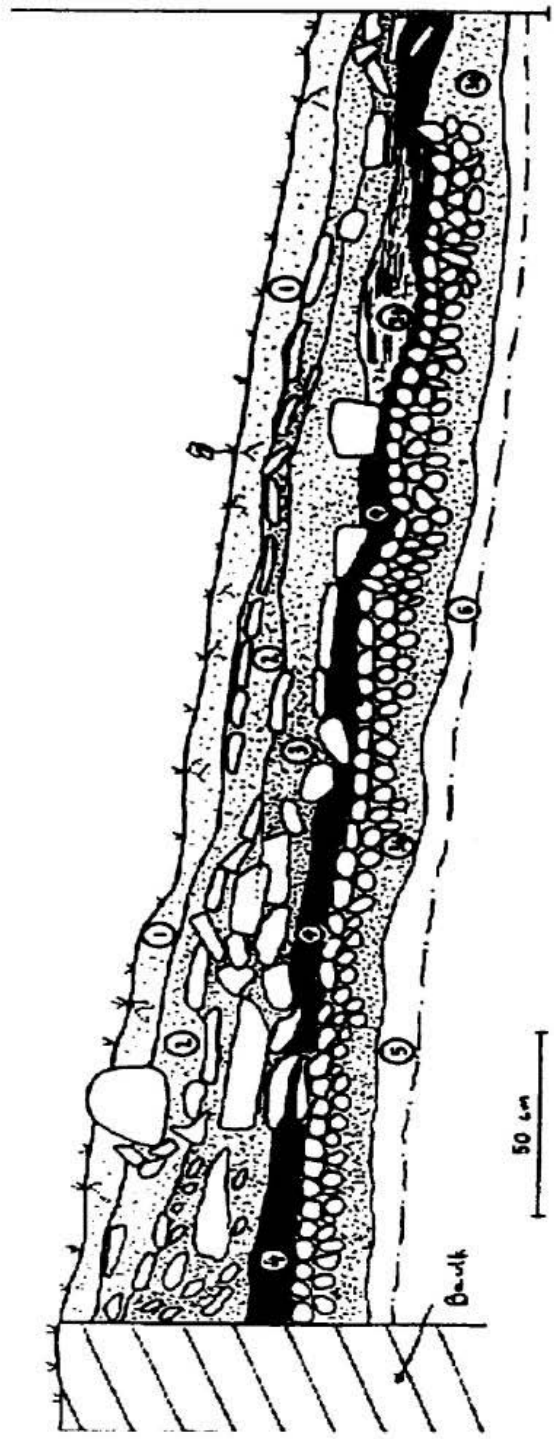

Figure 14 East west profile through the house .

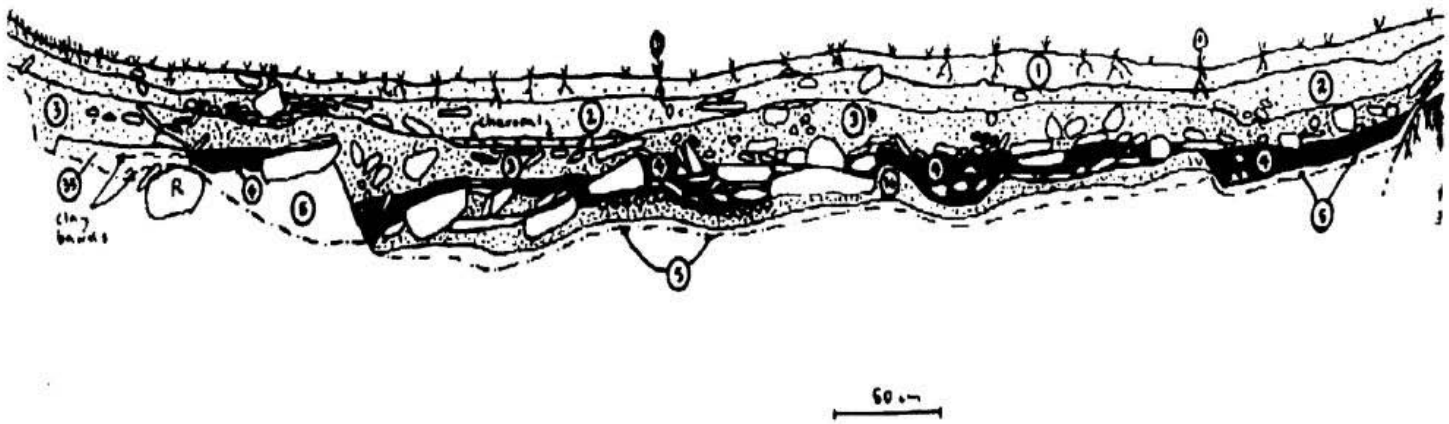

Figure 15 North - south profile through the house.

Figure 16 Eighteenth-century Westerwald tankard sherds in Event 2.

Figure 17 Plan view of flat stones at the top of Event 3.

Figure 18 Clay lenses (Event 34) beneath house collapse deposit (Event 3) inside the house.

Figure 19 Borrow pit (Feature 3) in bottom right corner of excavation. Facing south.

Figure 20 Shale bedrock exposed during the excavation. Note the cleavage pattern of the rock.

Figure 21 Portion of the southwest corner of the house foundation illustrating some of the flat rocks typical of those used in the foundation construction.

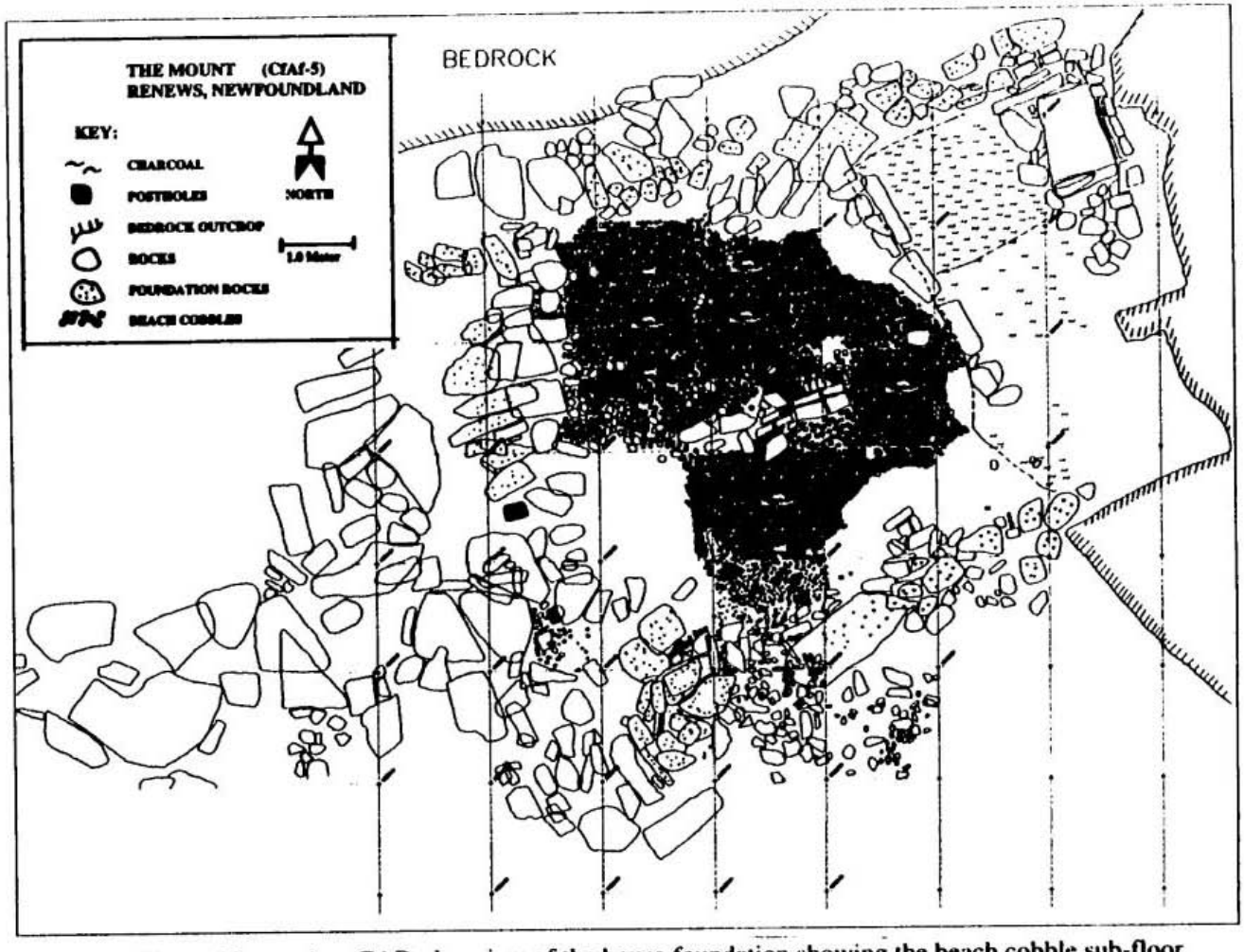

Figure 22a AutoCAD plan view of the house foundation showing the beach cobble sub-floor (Event 4 Feature 1) inside the house foundation. (Drawing by S. Macdonell)

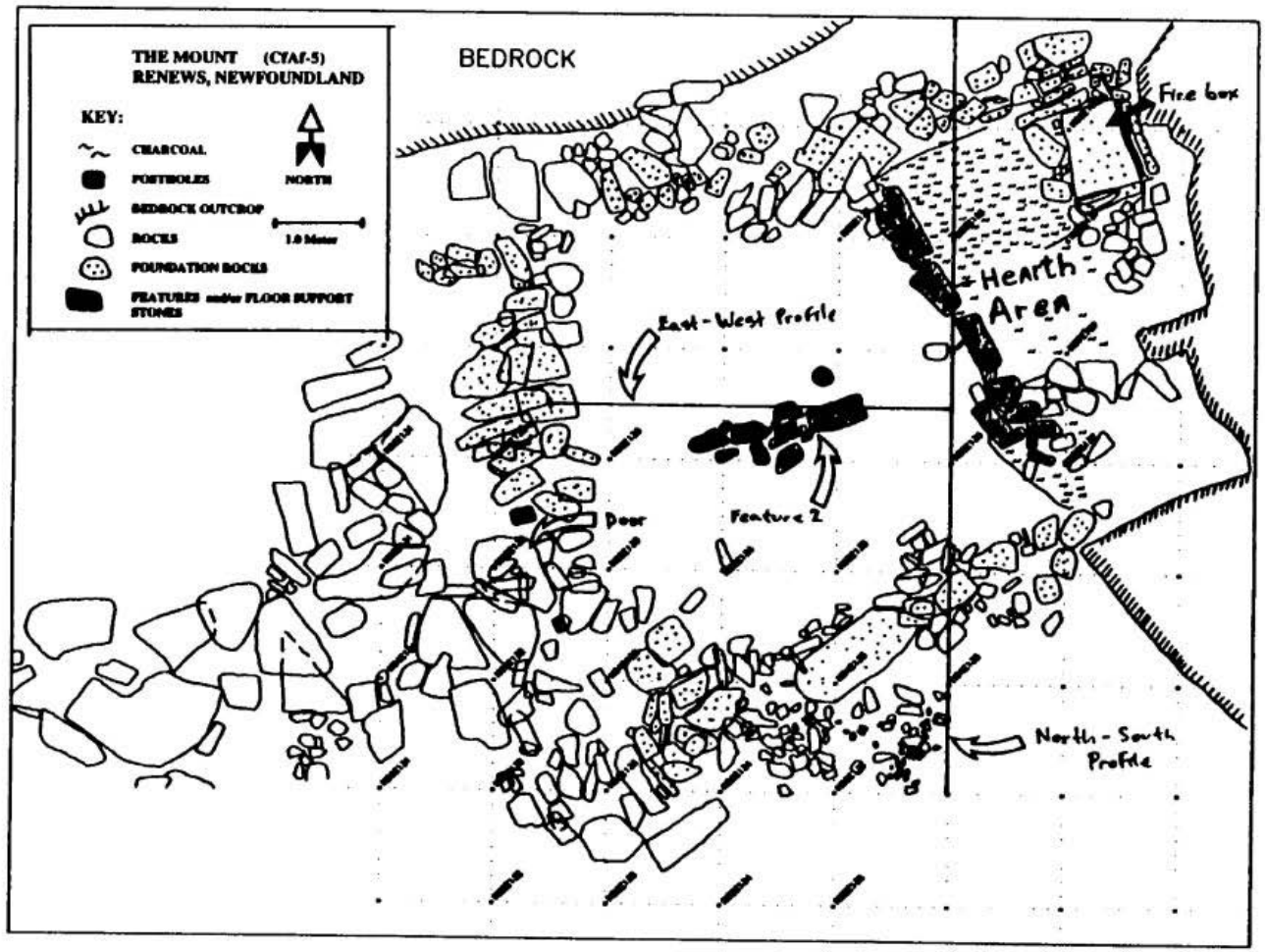

Figure 22b AutoCAD plan view of the house foundation showing the profile locations and various structural elements. (Drawing by S. Macdonell)

Figure 23 View of the beach cobble sub-floor (Event 4, Feature 1) in the house interior. Facing south.

Figure 24 Detail of the beach cobble sub-floor (Event 4, Feature 1). Facing south. Note flat stones in the house collapse deposit in the baulk profile.

Figure 25 Plan view of the house interior, facing west. Note the "V"-shaped drain (Event 4, Feature 2) to the left of the center of the house interior.

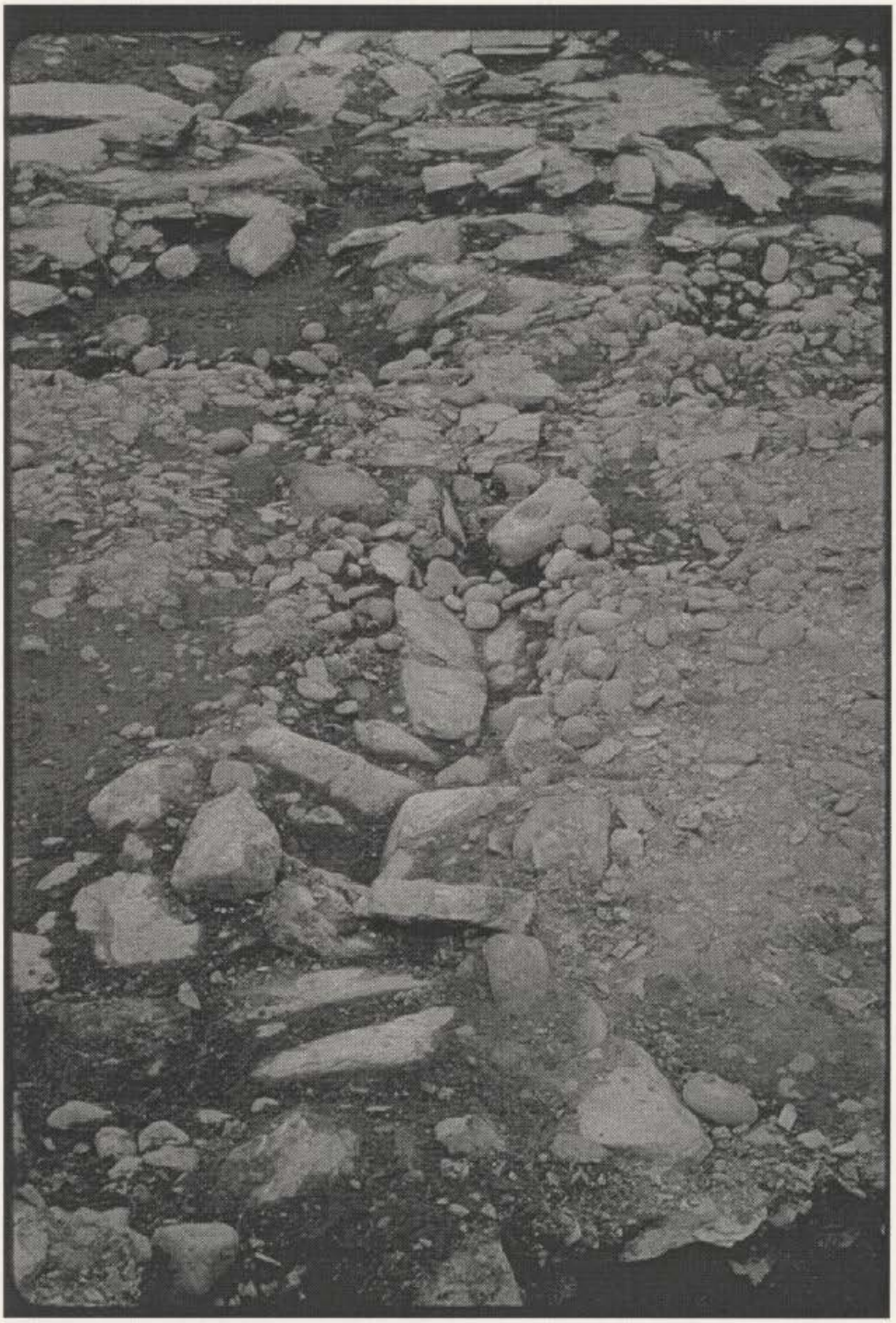

Figure 26 Detail of the "V"-shaped drain (Event 4, Feature 2), facing west.

Figure 27 Large stones in situ beneath the second earthen floor (Event 36). Note the "V"-shaped drain (Event 4, Feature 2) to the left of the large stones at the center of photograph.

Figure 28 House site underwater, illustrating the need for a drain inside the house. Facing west.

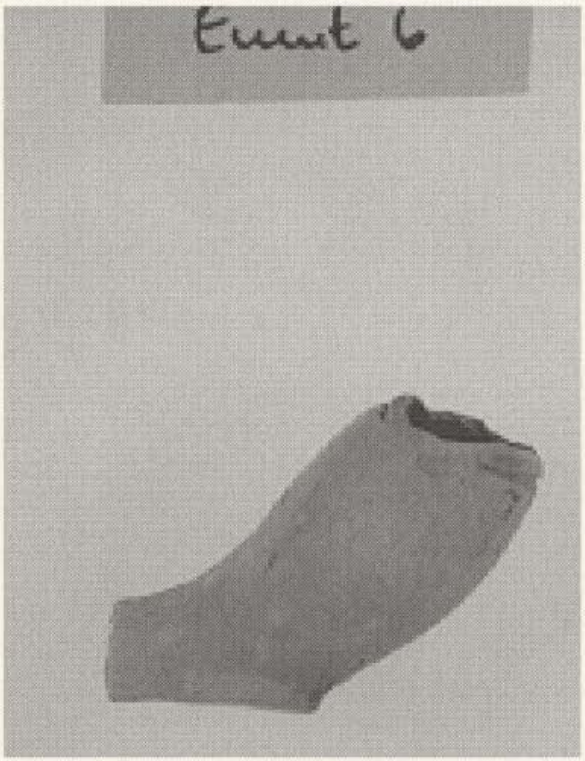

Figure 29 1660-1680 style clay pipe bowl found at the bottom of the borrow pit (Even6).

Figure 30 Pre-excavation view of the hearth area (bottom of the photograph in front of the bedrock). Facing west.

Figure 31 Hearth area (against bedrock) with the sods removed.

Figure 32 Large stones from the chimney collapse covering the hearth area. Facing west

Figure 33 Hearth area exposed following the removal of the chimney collapse. Note blackened soil surface of the hearth. Facing west.

Figure 34 Hearth area facing east.

Figure 35 Detail of fire box in the northeast corner of the hearth area. Facing east.

Figure 36 View of the fire box showing the gravel base above the surface of the hearth area. Facing east.

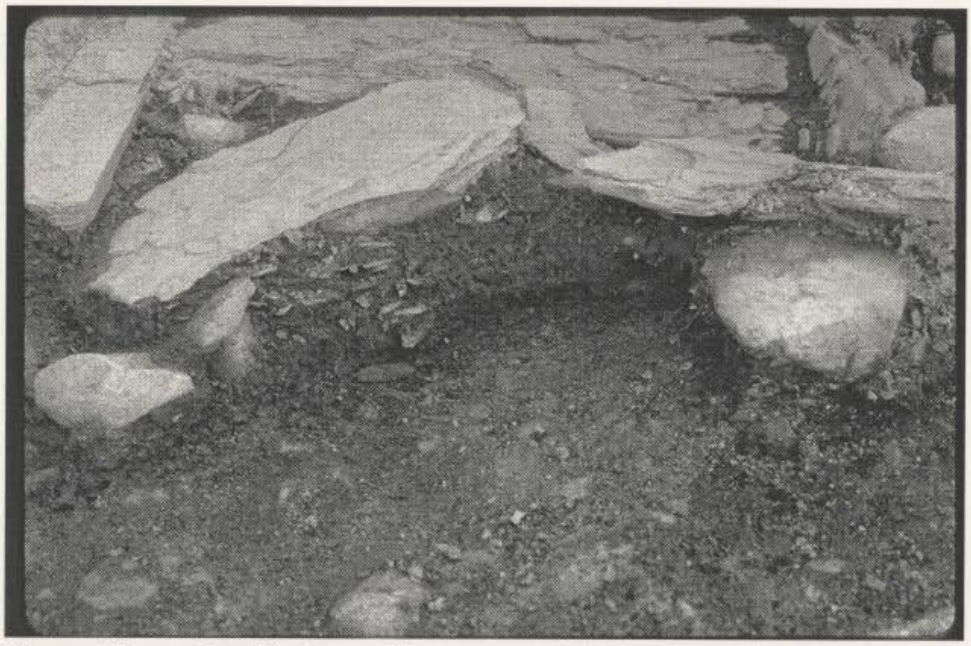

Figure 37 Detail of gravel base supporting the fire box.

Figure 38 Detail of stone floor of fire box showing fire-reddening.

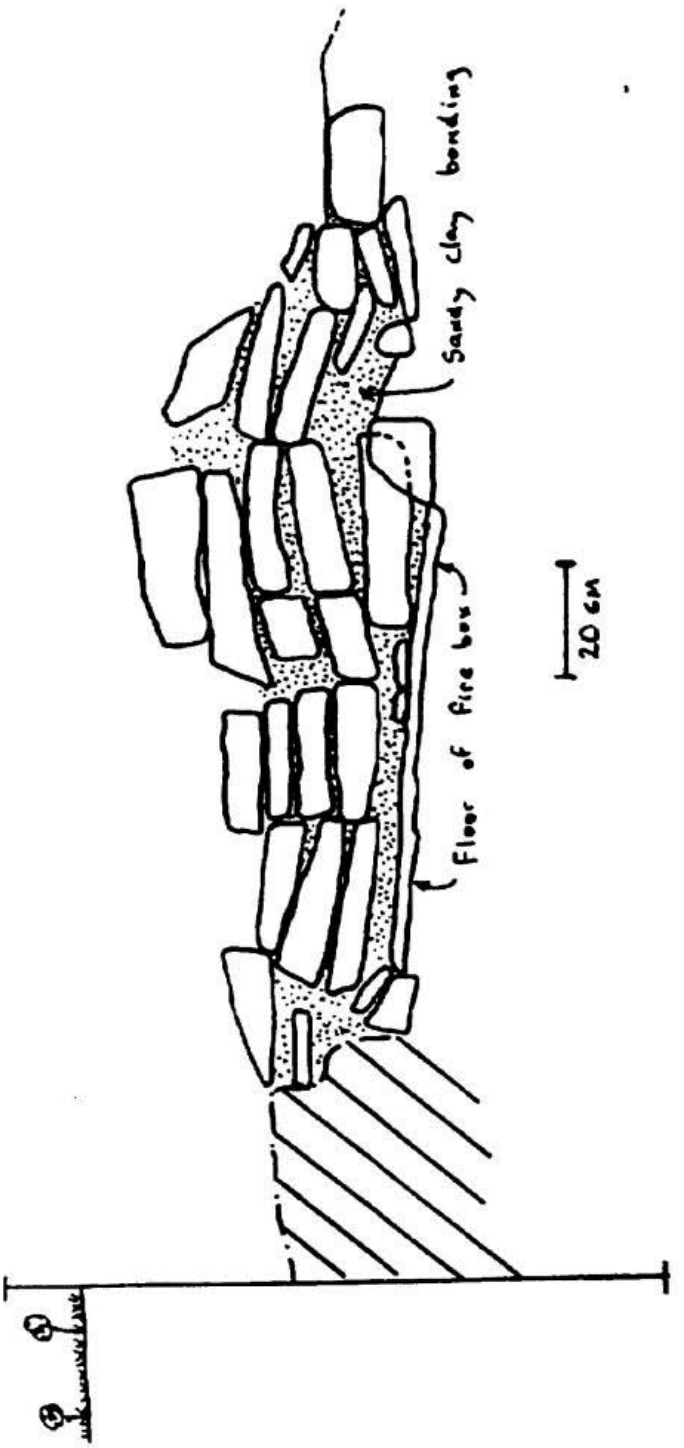

Figure 39 Profile drawing of the stone coursing at the back of the fire box.

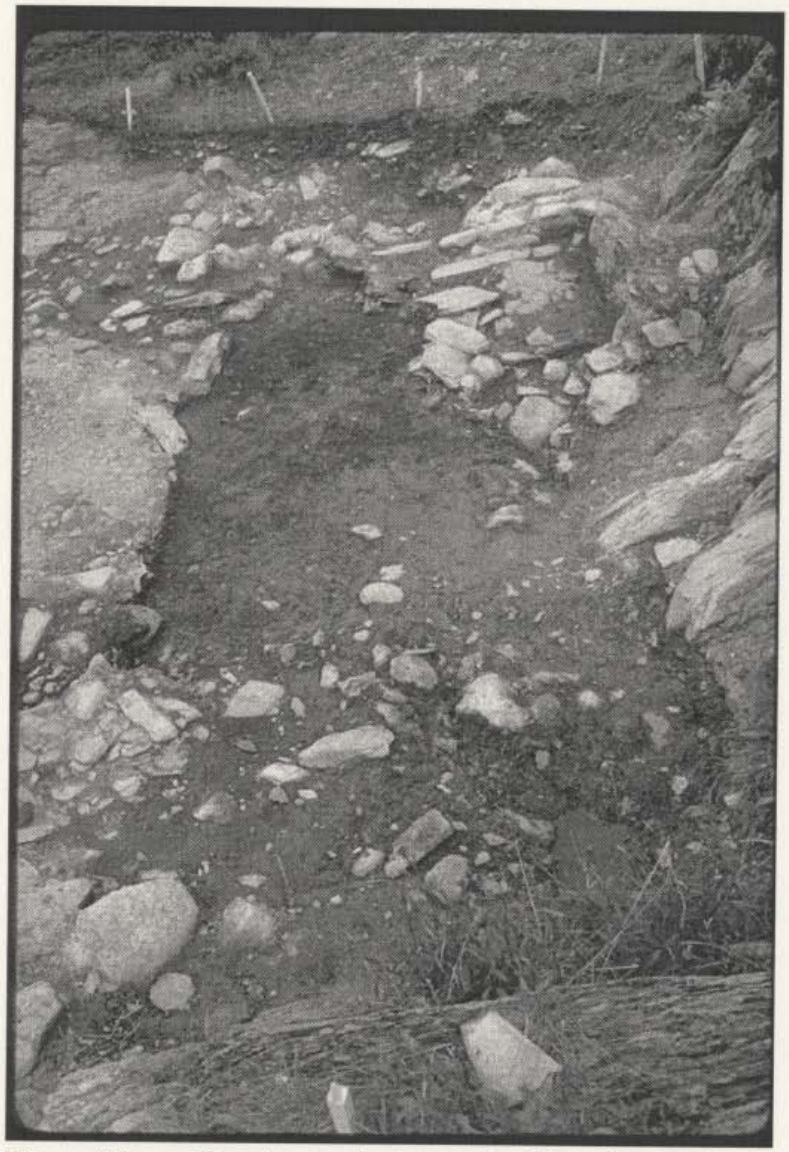

Figure 40 Hearth area facing north. Note the depth of the hearth floor compared to the top of the beach cobbles to the west (left) of the hearth.

Figure 41 John Wicks excavating an array of seventeenth-century artifacts directly in front of the fire box (Event 4).

Figure 42 Detail of seventeenth-century artifacts *in situ* in front of fire box (Event 4). Note the density, variety and condition of the artifacts.

Figure 43 View through the center of the house during the excavation of the house collapse (Event 3). Note the magnitude of flat stones. Facing north.

Figure 44 View through the center of the house during the removal of one of the baulks. Note the large stones from the house collapse deposit (Event 3) resting directly over the beach cobble drainage feature (Event 4, Feature 1). Facing east.

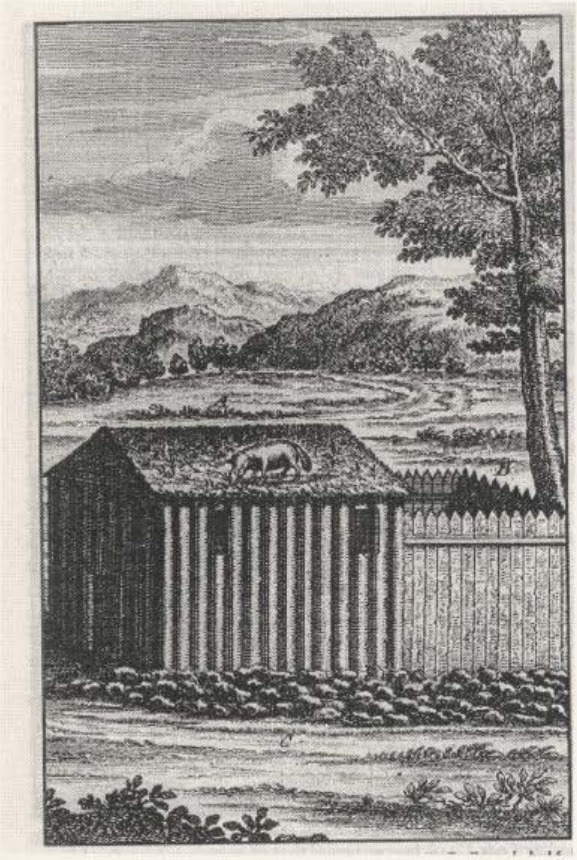

Figure 45a Sheep grazing on a seventeenth-century sod roof in Placentia, Newfoundland, *circa* 1696. Source: de Potherie 1722.

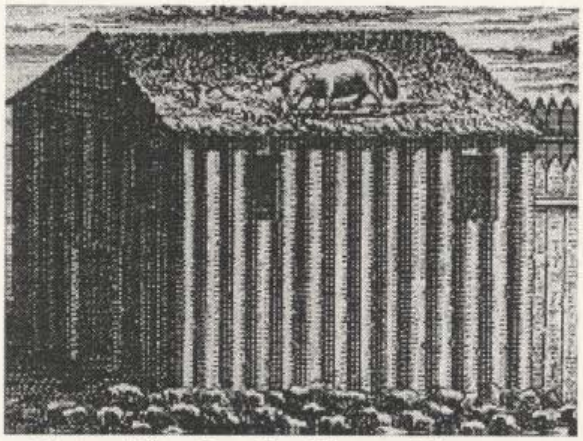

Figure 45b Detail of Figure 45a.

Figure 46 Sod roof on a house in Donegal, Ireland *circa* 1890. Note the large stones holding the sods on the roof in place. Source: Gailey 1984.

Figure 47 Sherds from North Devon butter pots from Renews.

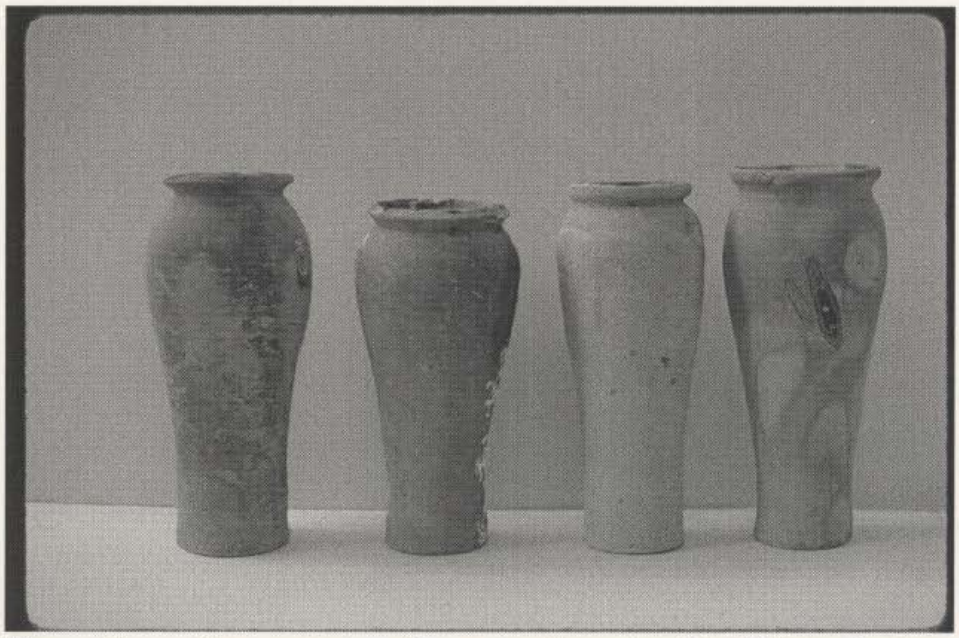

Figure 48 Four examples of seventeenth-century North Devon butter pots similar to those found at Renews. Private collection.

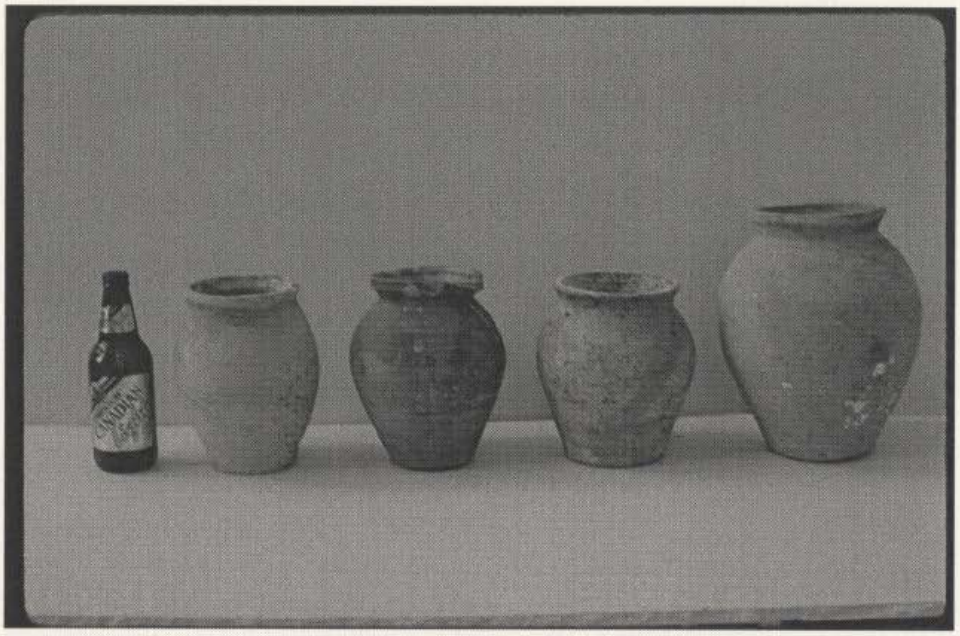

Figure 49 Seventeenth-century globular-shaped North Devon storage pots similar to ones found at Renews. Private collection.

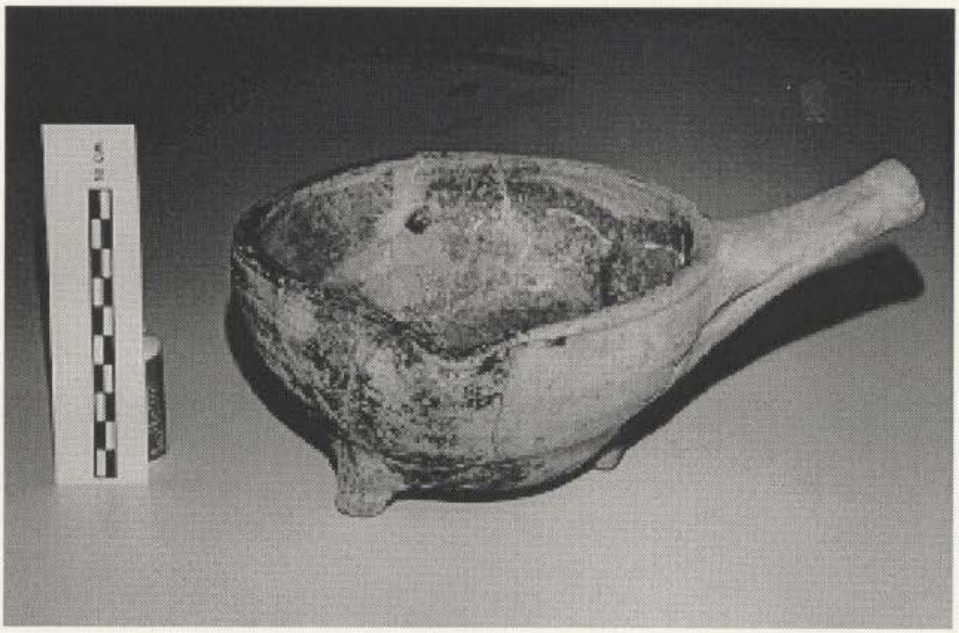

Figure 50 Restored seventeenth-century pipkin from Ferryland similar to the smaller variety of pipkins found at Renews..

Figure 51a Pipkin lid sherds *in situ* in Event 4.

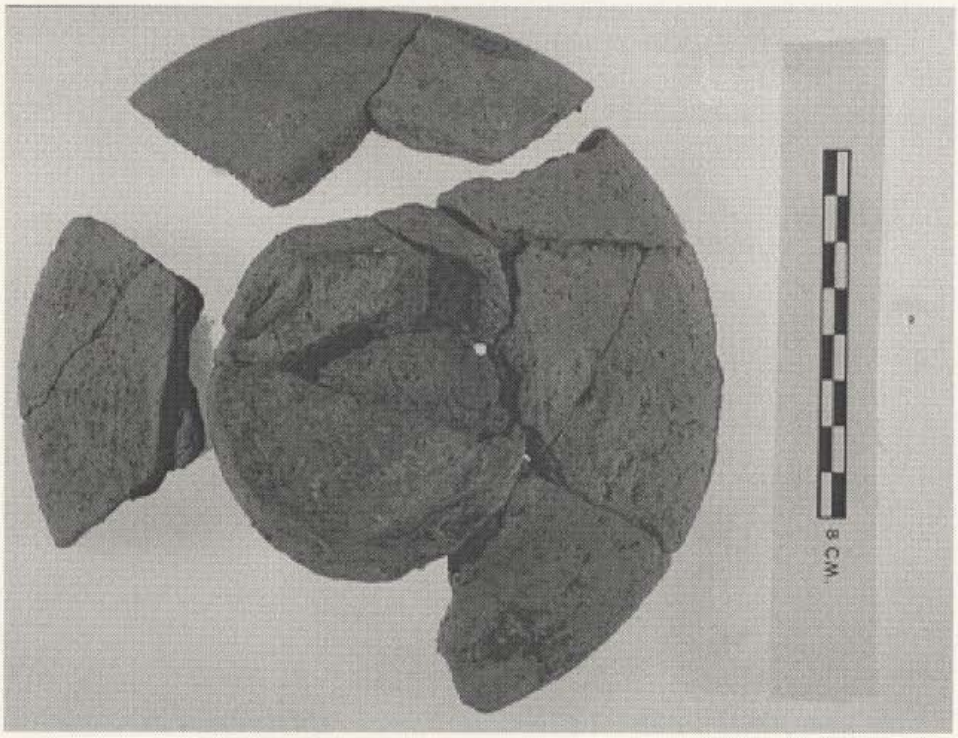

Figure 51b Partially restored pipkin lid from Renews.

Figure 52 North Devon drinking cup sherds.

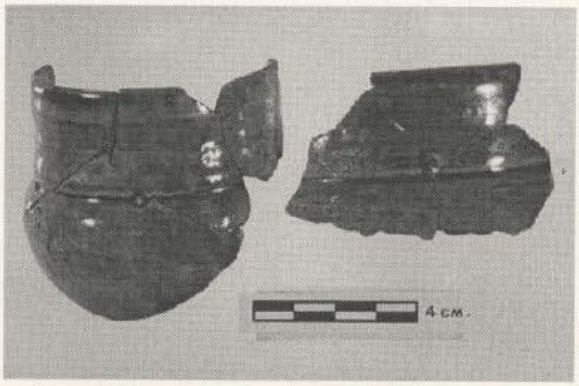

Figure 53 North Devon drinking cup rim sherds.

Figure 54 North Devon sgrafitto-decorated drinking cup.

Figure 55 North Devon porringer.

Figure 56 Merida ware jug.

Figure 57a Tudor Green jug, obverse.

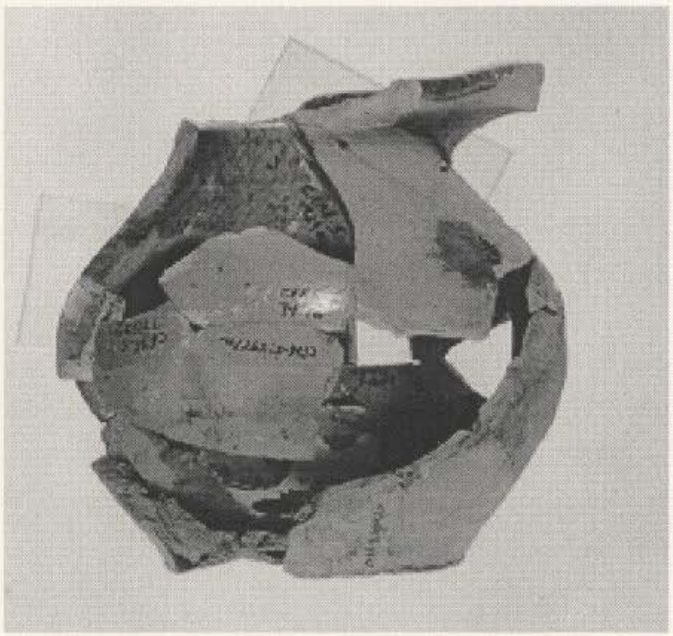

Figure 57b Tudor Green jug, reverse.

Figure 58a Totnes-type coarse earthenware bottle, obverse.

Figure 58b Totnes-type coarse earthenware bottle, reverse.

Figure 59 Restored seventeenth-century Bellermine bottle from Ferryland. Note the similar shape as the Totnes-type bottle from Renews.

Figure 60 Fragment of a North Devon sgrafitto-decoration dish.

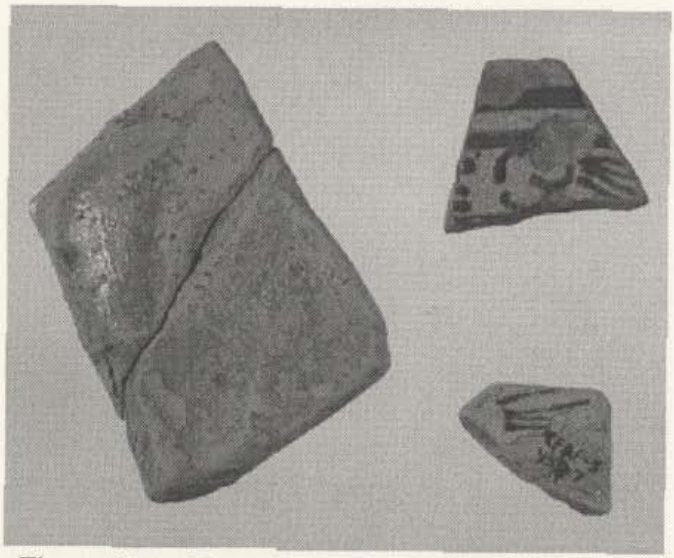

Figure 61 Fragments of an Iberian tin-glazed dish or plate.

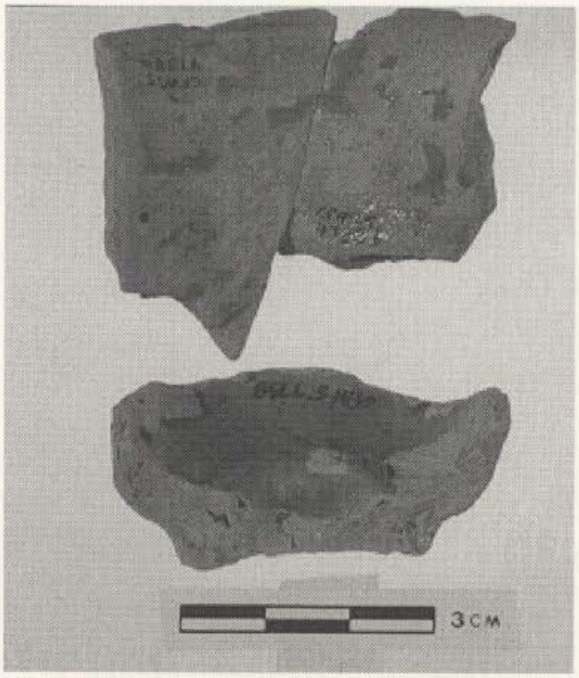

Figure 62a Interior view of a South Somerset galley pot.

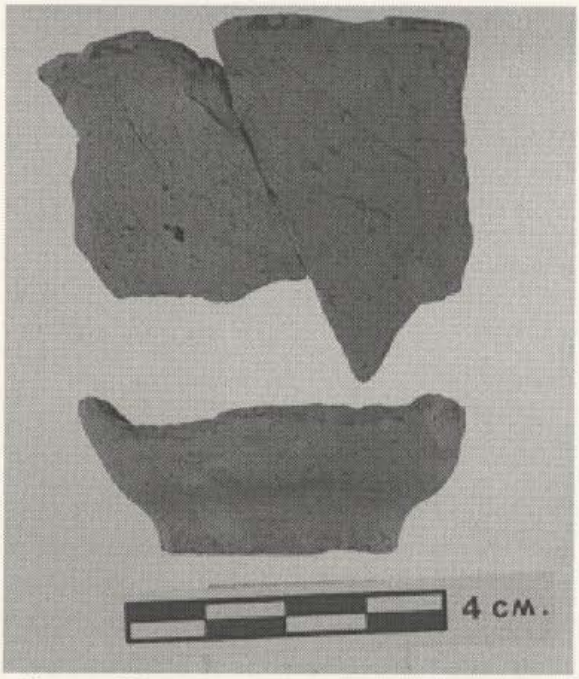

Figure 62b Exterior view of a South Somerset galley pot.

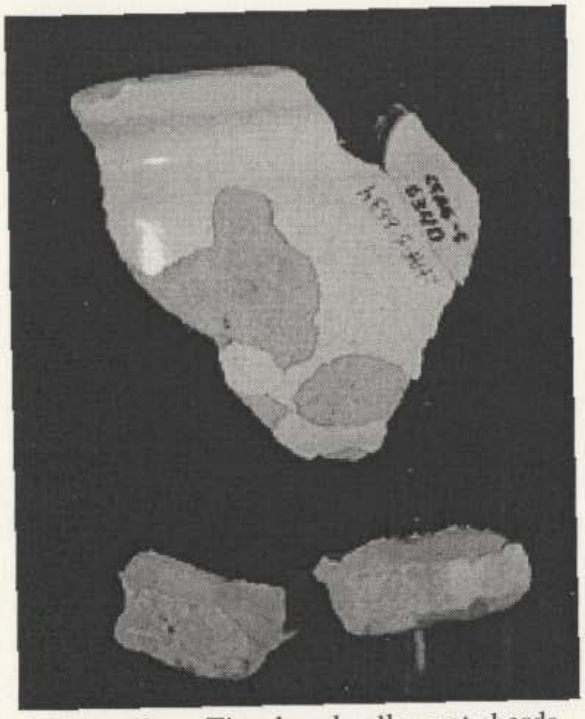

Figure 63 Tin-glazed galley pot sherds.

Figure 64 Partially restored North Devon galley pot.

Figure 65 Case bottle finishes.

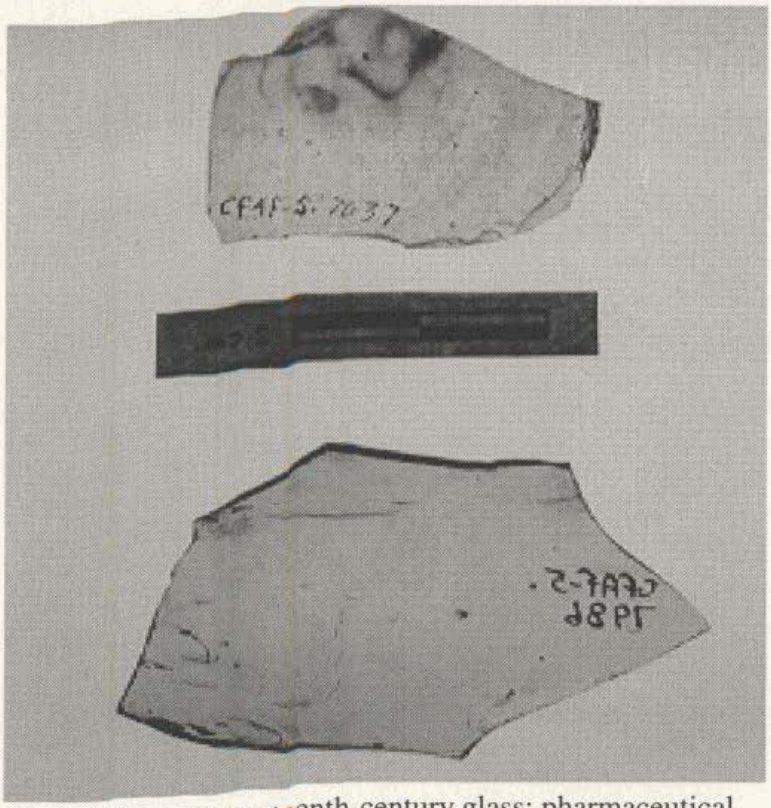

Figure 66 Seventeenth-century glass: pharmaceutical bottle base (top); case bottle body sherd (bottom). Scale is 2 cm.

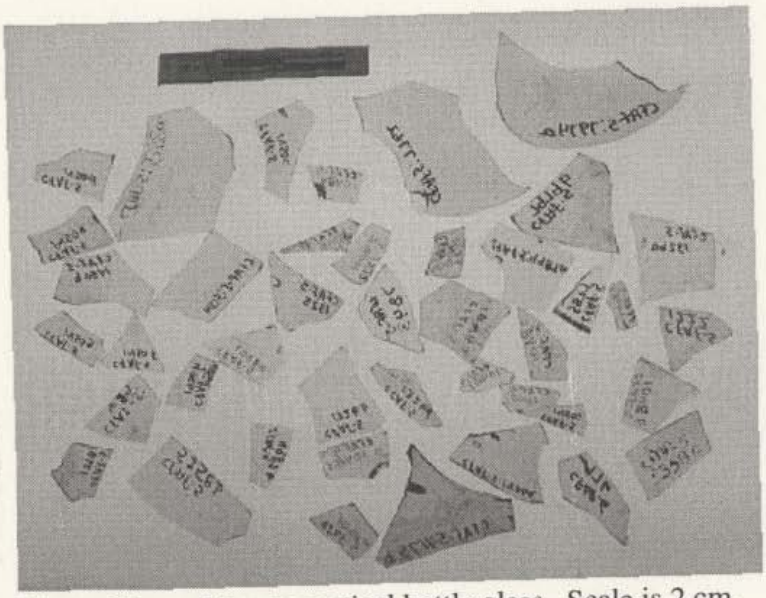

Figure 67 Pharmaceutical bottle glass. Scale is 2 cm.

Figure 68a Charles I half groat silver coin, obverse. Photo courtesy of the Canadian Conservation Institute.

Figure 68b Charles I half groat silver coin, reverse. Photo courtesy of the Canadian Conservation Institute.

Figure 69 Tower mint mark on Charles I half groat (above the king's crown). Photo courtesy of the Canadian Conservation Institute.

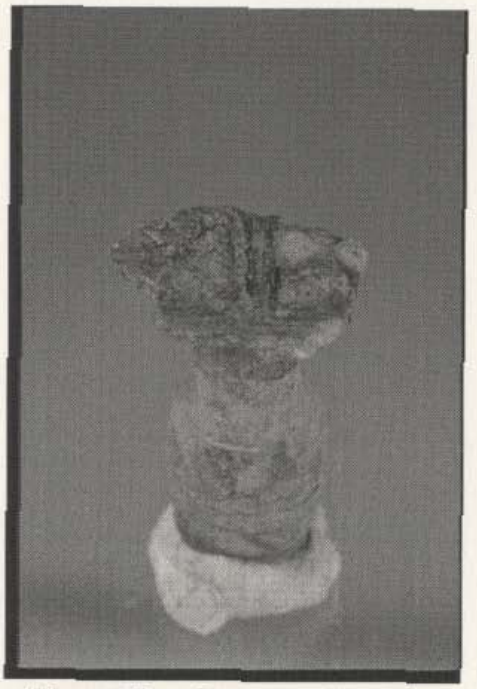

Figure 70a Pewter goblet stem.

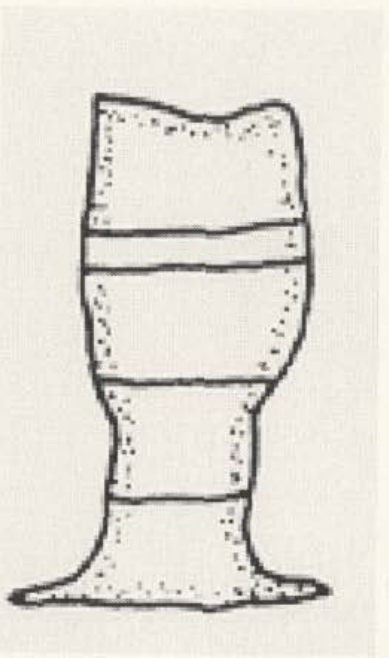

Figure 70b Profile of the Pewter goblet stem. Height: 4.8 cm.

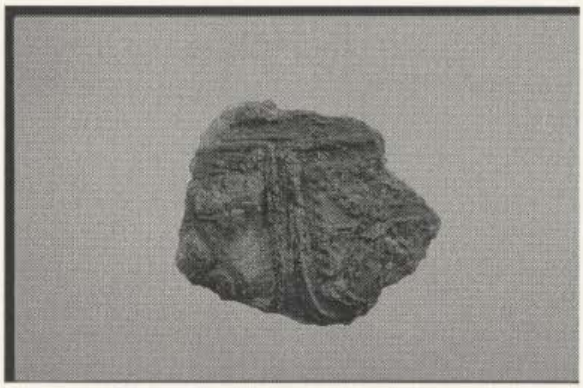

Figure 71a Detail of maker's mark on the foot of the pewter goblet stem. Photo courtesy of Memorial University of Newfoundland.

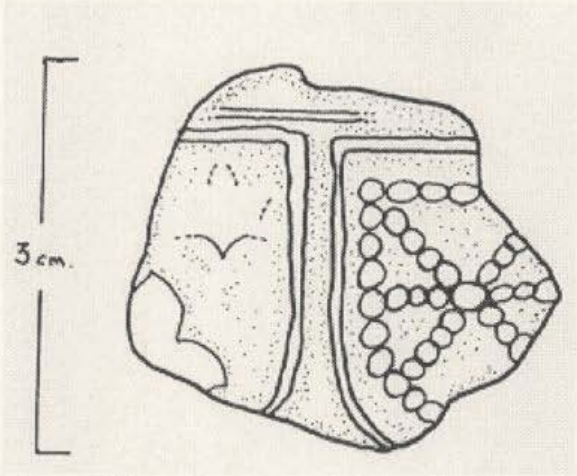

Figure 71b Drawing of the maker's mark on foot of the pewter goblet stem.

Figure 72 Decorative scroll work on the back of a slip-top spoon bowl.

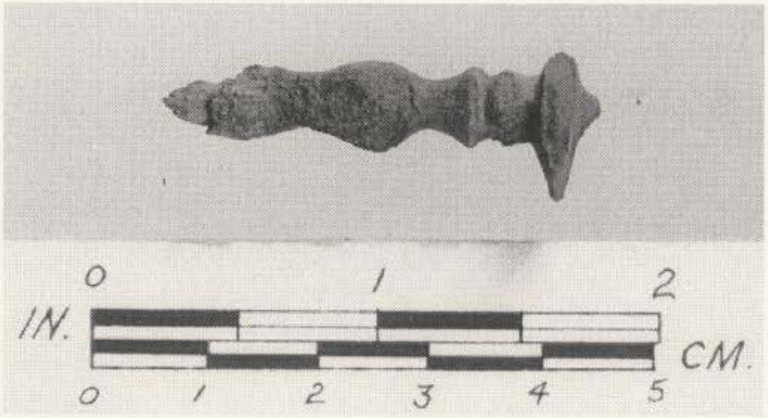

Figure 73 Knop-top latten spoon finial.

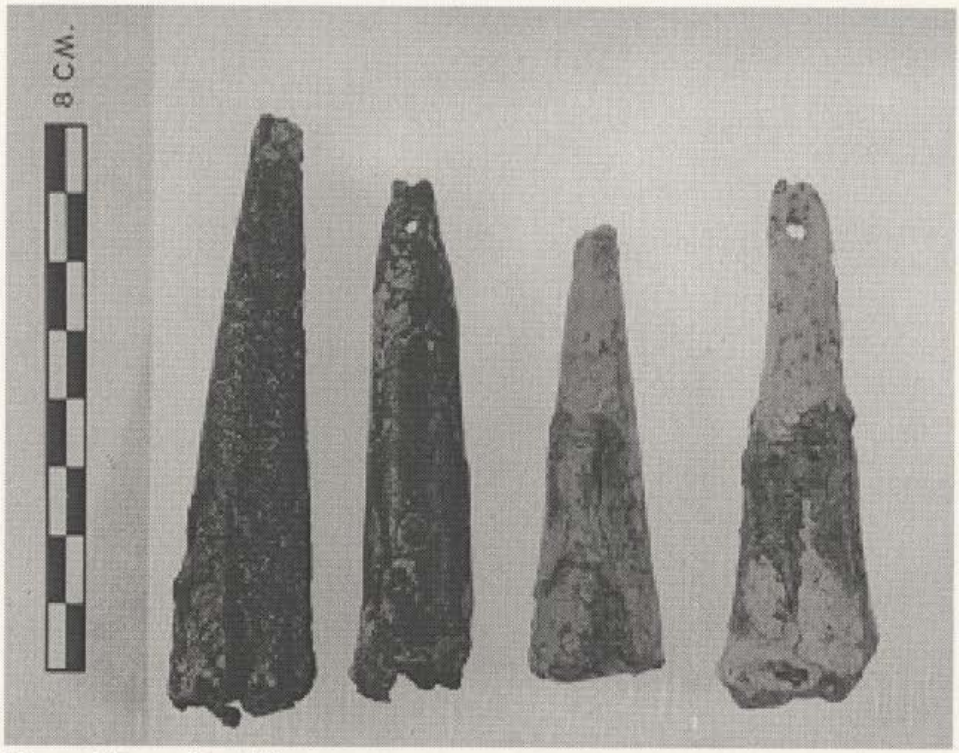

Figure 74 Lead jiggers.

Figure 75 Lead jiggers.

Figure 76 Lead jiggers found on the 1696 wreck of the HMS Saphire in Bay Bulls, Newfoundland. Photo courtesy of Parks Canada.

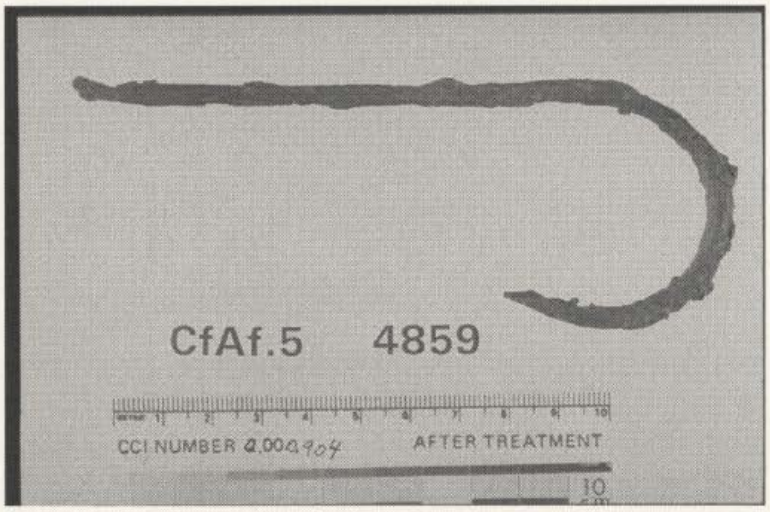

Figure 77 Iron fish hook, after conservation. Photo courtesy of Canadian Conservation Institute.

Figure 78a Netting needle *in situ* (Event 36).

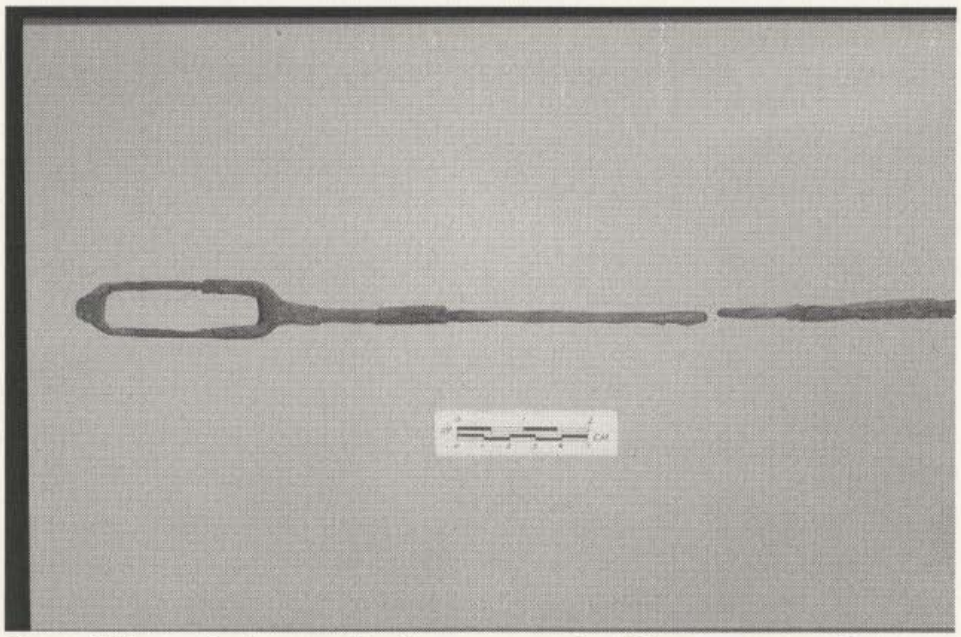

Figure 78b Netting needle after conservation. Photo courtesy of Memorial University of Newfoundland.

Figure 79a Lead net weight, side view.

Figure 79b Lead net weight, bottom view showing line holes on both ends.

Figure 80 Lead weights for fishing lines and/or nets.

Figure 81 Lead artifacts from Renews. Left to right: line/net weight (?), lead core, sprue.

Figure 82 18,900 pieces of lead shot from a single cache in Event 4. Average size of shot approximately 0.4 mm.

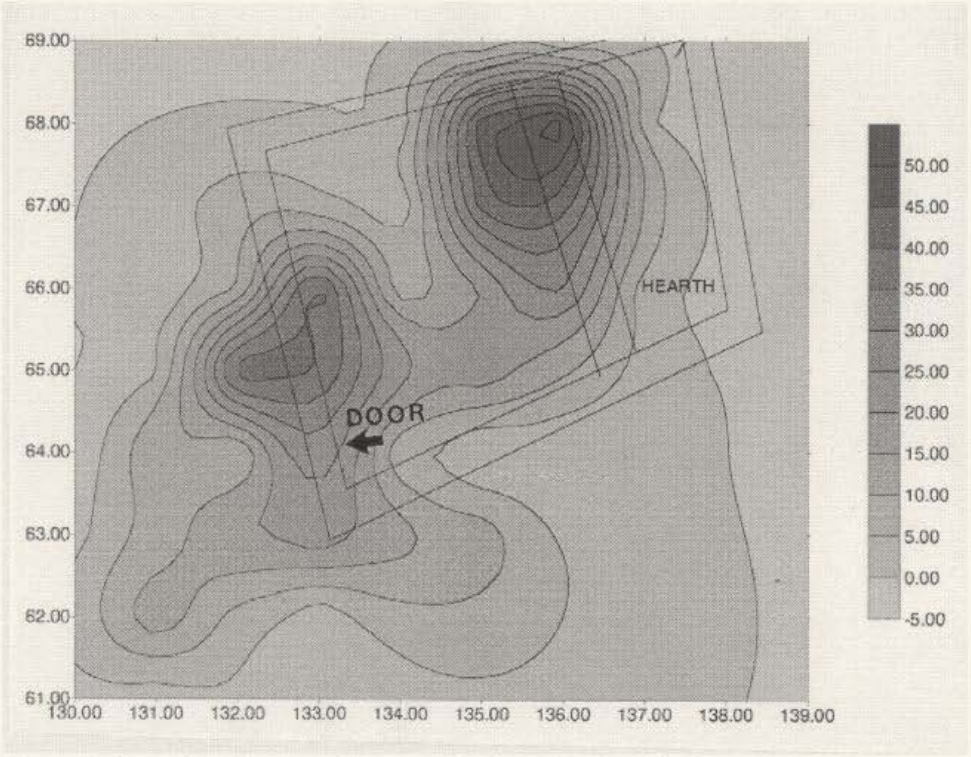

Figure 83 Surfer map showing the distribution of clay tobacco pipes inside and around the seventeenth-century house.

Appendix B

Pipe Bore Data From the Significant Cultural Deposits At Renews based upon the Harrington/Binford Formula: (Y = 1931.85 - 38.26 (X))

Pipe Bore Data

Events 1 & 2

Bore Diameter	*# of stem frags.*	*x /64th*	*Total*
4/64th	21	x 4	84
5/64th	128	x 5	620
6/65th	168	x 6	1008
7/64th	56	x 7	392
8/64th	3	x 8	24
9/64th	0	x 9	0
totals	366		2128/366 = 5.81

Harrington/Binford formula: 5.81 x 38.26 = 222
A.D.1932 - 222 = **A.D. 1710**

Event 3

Bore Diameter	*# of stem frags.*	*x /64th*	*Total*
4/64th	23	x 4	92
5/64th	114	x 5	570
6/64th	256	x 6	1536
7/64th	152	x 7	1064
8/64th	11	x 8	88
9/64th	23	x 9	207
totals	579		3357/579 = 6.14

Harrington/Binford formula: 6.14 x 38.26 = 235
A.D. 1932 - 235 = **A.D. 1697**

Event 4

Bore Diameter	*# of stem frags.*	*x /64th*	*Total*
5/64th	21	x 5	105
6/64th	75	x 6	450
7/64th	177	x 7	1239
8/64th	57	x 8	456
9/64th	58	x 9	522
totals	388		2772/388 = 7.14

Harrington/Binford formula: 7.14 x 38.26 = 273
A.D. 1932 - 273 = **A.D. 1659**

Appendix B (continued)

Event 36

Bore Diameter	*# of stem frags.*	*x /64th*	*Total*
5/64th	0	x 5	0
6/64th	1	x 6	6
7/64th	78	x 7	546
8/64th	35	x 8	280
9/64th	33	x 9	297
totals	147		1129/147 = 7.68

Harrington/Binford formula: 7.68 x 38.26 = 294

A.D. 1932 - 294 = **A. D. 1638**

Events 4 & 36

Bore Diameter	*# of stem frags.*	*x /64th*	*Total*
5/64th	21	x 5	105
6/64th	76	x 6	456
7/64th	255	x 7	1785
8/64th	92	x 8	736
9/64th	91	x 9	819
totals	535		3901/534 = 7.31

Harrington/Binford formula: 7.31 x 38.26 = 280

A.D. 1932 - 280 = **A. D. 1652**

Appendix C

The Stratigraphic Events

Stratigraphic Events:

Event 1 Organic sod development over the entire site, ranging in thickness from 5-10 cm.

Event 2 Eighteenth-century occupation stratum with some mixing from deeper deposits. Characterized by small flat stones (ranging from 10-20 cm square) in an organic soil matrix.

Event 3 Seventeenth-century house collapse deposit. Large flattish stones in an organic deposit.

Event 4 Seventeenth-century occupation stratum. This organic soil deposit included the second earthen floor inside the house and the midden deposit outside the house. Occasional lenses of cream-coloured sandy clay present in the floor deposit.

Event 5 Natural subsoil, ranging from reddish-brown gravel to greyish-white-to cream coloured sandy clay.

Appendix C (continued)

Stratigraphic Events:

Event 6 Fill deposit inside the borrow pit (Feature 3). Mainly redeposited greyish-white sandy clay with large and small stones.

Event 7 Interface designation representing the excavation of the borrow pit.

Event 8 Dark-brown/black soil deposit approximately 5.5 m X 2.5 m to the south of the seventeenth-century house. Artifacts associated with this deposit, including a number of Westerwald tankard sherds, suggest that this deposit relates to the eighteenth-century military occupation of the site in 1779/1780. One hundred and seventeen nails associated with this deposit suggests that in may be the location of a barrack-type structure. Reddened soils in the area suggest evidence of burning.

Event 9 Early eighteenth-century hearth feature in units N65 E130 and N65 E131. Dark black-to-brown organic soil with charcoal and wood fragments. Begins below Event 2 at 13-17 cm below the surface. Large rock in this feature displayed staining associated with burning. Artifacts associated with this feature include dark-green wine-type bottle glass, a ca. 1715-style

Appendix C **(continued)**

Stratigraphic Events:

Event 9 (cont.) wine glass stem, English white salt-glazed mug sherds and Westerwald sherds and pipe stems.

Event 10 Localized pit feature filled with green-grey sandy clay (re-deposited subsoil) beneath Event 2 in unit N65 E135. Above the seventeenth-century house collapse (Event 3). Contains a mixture of seventeenth- and eighteenth-century artifacts. Possibly a hearth or pit feature associated with the military occupation of the site in 1779/1780.

Events 11 to 33: Assigned to deposits uncovered during the 1993 survey on The Mount. Not related to the seventeenth-century house.

Event 34 Grey sandy clay deposit containing charcoal overlying the beach cobble sub-floor (Event 4, Feature 1). Maximum of 55 cm wide by 95 cm long in units N65 E132, N65 E133, N66 E132 and N65 E133. Interpreted as a part of the second earthen floor inside the house.

Appendix C **(continued)**

Stratigraphic Events:

Event 35 Mottled organic soil deposit with grey clay banding throughout. Beneath the seventeenth-century house collapse deposit in units N69 E132, N69 E133, N69 E134 and N59 E135. Interpreted as a stockpile of sods against the north wall of the house.

Event 36 Dark brown organic soil deposit beneath the beach cobble sub-floor drain feature (Event 4, Feature 1). Interpreted as the first earthen floor of the seventeenth-century house.

Event 37 Jumble of large flat stones with charcoal within Event 37.

Appendix D

Pollen Report by Gerald Kelso

Introduction

I met Dr. Gerald Kelso, an eminent expert on pollen analysis, when he was presenting a paper on pollen analysis on archaeological sites at the annual meeting for the Council of Northeast Historic Archaeology at Williamsburg, Virginia in October 1994. During a conversation with him at that conference he explained to me that the best possible situation (outside of permanently frozen sites) for good preservation of pollen was in sites that have a lot of rocky soil, particularly, if the rocks were flat. He went on to explain that flat rocks, or any other flat or hollow objects, even a clay pipe bowl, served to protect the fragile pollen grains from water percolation which would normally disintegrate the pollen over time.

I described the archaeological site in Renews to him and explained my theory on how some of the multitude of flat rocks from the seventeenth-century house collapse were used to hold down sods on the roof of the house. I further explained to him that the flat rocks covered an intact seventeenth-century occupation deposit. I asked him if he would be interested in testing some of the soils from the site and he graciously accepted. Four small soil samples, each filling a pill bottle, were sent to his laboratory in Golden Colorado. The analysis was conducted in February, 1995.

My involvement in this report is limited solely to the contribution of the soil samples for analysis. Dr. Kelso was responsible for the entire analysis and report writing. I included his cover letter and report, entitled "Exploratory Pollen Analysis of Matrices in and Around A 1660-1680 House at Renews, Newfoundland", in this thesis as I felt that it contributed to the environmental history of seventeenth-century Newfoundland. The following appendix contains Dr. Kelso's entire report.

Cultural Ecology Laboratories
17214 W. 15th Place
Golden, Colorado 80401
(303) 273-9670

Mr. Stephen Mills
P.O. Box 467
Maxville, Ontario
Canada KOC 1TO

Dear Steve:

The Renews report is enclosed. The results are not spectacular, but we do have evidence of British-style agriculture in the rye pollen, and some differences between the dooryard sample and the samples from the interior of the house. You can only get so much from four samples, but I think that the potential of cultural pollen analysis for Newfoundland is reasonably well demonstrated. The report would be better if I knew anything about the area.

The excellent quality of the pollen preservation holds promise for future investigations. We shall have to investigate pollen record formation processes in the area, with a particular emphasis on establishing pollen percolation rates. For this at least one horizon marker is required. Down here I have used the local appearance of the chestnut blight (rolling horizon from 1904 in NYC to 1950 in Mississippi) and dated local events (recorded abandonment, recorded soil disturbance, recorded land clearance, etc.). Pretty please be thinking about such possibilities. The marker should be something that would affect the vegetation, and it fairly well dated. It should also be recent enough that we are certain to recover it but old enough to have permitted sufficient percolation to smooth out the random input to the process. I have percolation rates from events in the late 1940s to mid-1950s but I would prefer markers from the early 20th century to the mid-19th century. The more horizon markers the better, of course.

Let me know if you have any questions.

Sincerely yours,

Gerald K. Kelso

Exploratory Pollen Analysis of Matrices in and Around A 1660-1680 House at Renews, Newfoundland

Gerald K. Kelso

Prepared for
Stephen Mills
Parks Canada, Archaeology

Cultural Ecology Laboratories
17214 W. 15th Place
Golden, Colorado 8040113 February 1995

Introduction

Theoretical Considerations

This paper reports pollen analysis of exploratory samples from a 1660-1680 house occupation at Renews, Newfoundland. Analytical methods applied in terrestrial deposits in eastern North America necessary differ from those applied to lake and marsh matrices, because the pollen spectra of temperate region soils and cultural deposits that are exposed to the elements are not permanent. Under normal circumstances pollen moves downward in deposits, disassociating it from the matrix with which it was originally deposited (Dimbleby 1985:5). As the pollen moves it is progressively destroyed by oxygen in the groundwater and by aerobic fungi (Tschudy 1969, Goldstein 1960). This limits the age of the palynological landscape and ethnobotanical data that can be recovered from natural soil deposits.

Pollen percolation rates in northeastern U.S. (Pennsylvania-Maine) historical deposits range from 1 cm in 3.32 years to 1 cm in 4.97 years. These average 1 cm in 4.2 years, and pollen appears to move faster in younger (more shallow) deposits (Kelso 1994a:487). One naturally percolated pollen sequence of ca. 375 years has been recovered (Kelso and Wall 1992), but the rest have been under 200 years long (Kelso 1994a; 1994b).

Special circumstances can intervene to preserve older pollen from percolation and degradation. Those recognized to date are: (1) soil compression in intensely utilized living sites, (2) matrix accumulation sufficiently rapid to outpace pollen percolation and exclude oxygen, (3) rapid deep burial in features or under earthworks, (4) the fungicidal effects and apparent impermeability of corrosion products around cuperous artifacts, and (5) sheltering of pollen under flat objects (van Zeist 1967; Schoenwetter 1962; King, Klipple and Duffield 1976; Dimbleby 1985; Kelso and Beaudry 1990).

Objectives.

The archaeological deposits in and around the 1660-1680 house at Renews, Newfoundland are relatively shallow. A brief British military occupation during the 4th quarter of the 18th century did not leave a significant overburden, and it is unlikely that soil compression from this episode was sufficient to prevent percolation. The 17th-century pollen in that portion of the matrix that is exposed to the elements has probably been destroyed and replaced by younger pollen. The matrix at Renews is, however, very stony. Experiments comparing the pollen under prehistoric and historical-era objects with the pollen in adjacent matrix indicates that flat or concave objects as small as 1.5 inches in diameter will protect pollen from percolation and degradation (Kelso and Stillson 1995; Kelso et. al. 1995). Many of the stones in the Renews site are flat, and could shelter 17th-century pollen. This pollen study was undertaken to determine if pollen is preserved under flat stones in the Renews site and, granted adequate pollen preservation, to prospect for pollen data reflecting plant use on

the site during the 17th-century occupation.

Methods

Sampling

The 17th-century occupation deposit at Renews was a distinctive gray black mottled organic sand containing numerous artifacts. It was largely confined to the interior of the house and the area immediately in front of the doorway. A pollen sample from the surface of the cobble floor inside the house (ps4) and comparative samples from the 1660-1680 occupation stratum above the floor (ps3), the roof collapse debris inside the house above the floor (ps2), and the 17th-century occupation deposits just outside the doorway (ps1) were selected for analysis (Table 1).

Laboratory methods and Data Presentation.

Pollen extraction followed Mehringer (1967), and residues were mounted in glycerol. The pollen was identified at 430x with problematical grains examined under oil immersion at 1000x. Four hundred pollen grains were tabulated for each sample. Pollen concentrations per gram of sample were computed, following Benninghoff's (1962) exotic pollen addition method, to permit recognition of site formation processes (Figure 3).

Pollen spectra calculated from two different sums are presented in the pollen diagram (Figure 3). The open line bars in the diagram are percentages computed from separate sums for arboreal and non-arboreal pollen types. This separation helps to differentiate regional (tree-dominated) and local (herb-dominated) pollen types to some extent, and it reduces the statistical distortions that the contributions of pollen types reflecting different phenomena induce in each other. It has the disadvantage of producing possibly misleadingly high percentages in some instances from small counts among the minor types. The solid colored portion of the diagrams registers relative frequencies based on the identifiable pollen of all types.

Pollen concentration figures were not computed for individual taxa, because these would not be meaningful in the absence of chronological control over sedimentation rate and might be mistaken for pollen influx data.

All pollen grains too corroded to be identified were tabulated to provide the pollen degradation element of the site formation process record (Figure 1). Unidentifiable pollen grains were included in the concentration figures but were not incorporated in any sum from which the frequencies of other types were computed. The terms "corroded", "degraded," and "deteriorated" are used interchangeably, in the generic sense, to refer to cumulative post-deposition damage of any kind other than tearing, rather than in reference to specific kinds of damage as employed by Cushing (1964) and Havinga (1967, 1984).

The most common English names applied to plants are employed in the text and diagrams. The Latin name of each taxon is given in

parentheses after the first mention of the plant, and a table of equivalent Latin and vernacular names is also provided (Table 2).

Results

Pollen Preservation.

Pollen preservation was excellent in the sampled Renews matrices. Pollen concentrations were notably higher than previously recorded for comparable archaeological deposits in the northeastern United States, and the quantities of pollen "too corroded to identify" in the Renews samples were quite low (Figure 1, upper right). This has implications for future research. Pollen concentrations in normal soil profiles from St. Mary's City, Maryland and Jamestown, Virginia have proven to be considerably lower than those from comparable sites in the Northeast and the quantities of pollen "too corroded to identify" in these sites are generally larger at comparable depths. Pollen preservation has proven to be relatively bad, even in modern surface samples, and the length of pollen record preserved in normal profiles from the Upper South seems to be about half of that in the northeastern states; 100 years or less, compared to ca. 200 years further north (Kelso and Miller 1993, Kelso, et. al., 1995; Kelso 1994c).

The Chesapeake data are significant to Newfoundland research because the differences between pollen preservation and movement in northern and southern sites in the United States may be byproducts of the absence of a season of frozen ground in the South. Where oxygen and groundwater can get at the pollen spectra year-around, both pollen percolation rates and pollen degradation will be faster. Conversely, pollen degradation and pollen percolation should be significantly slower in regions north of New England, where the ground thaws later and freezes earlier in the annual cycle. This means that in Canada it may be possible to recover pollen records from normal, exposed soil profiles that reach significantly further back in time than those of the Northeastern United States.

There may be a down-side to slower pollen percolation. Pollen percolation serves to separate the pollen records of successive groundcover events in natural soils and slowly aggrading cultural deposits by moving earlier pollen down and away from that deposited later. The clarity of the record is at least partially dependent on the sampling interval. Contiguous samples (i.e. no space between successive samples) are required (Dimbleby 1985:21). At an average pollen percolation rate of 1 cm in 4.2 years, a sampling interval of 3 cm has proven to be to wide to separate the fast-pace events of the 19th and 20th centuries (Kelso and Harrington 1989:Figure 3), but a 2 cm sampling interval has proven both sufficiently sensitive and economically acceptable in both rural and urban sites in the Northeastern United States. With slower percolation in Newfoundland, the records of events will overlap more and it may be necessary to adopt a smaller sampling interval, with a concomitant increase in the cost of analysis, to recover useful land-use

records.

Vegetation Record.

Grass (Gramineae) pollen constitutes ca. 60% of the Renews 1660-1680 occupation period pollen spectra that were calculated from the total pollen sum (solid bar histogram) and up to 83% of the spectra calculated from non-arboreal pollen only (hollow bar histogram). Sorrel-type (Rumex acetosella/acetosa-type), at up to 15% of the total sum, is the second most prominent type. Pine (Pinus), at 10% of the total sum in the exterior sample (ps 1), is the third best represented type, and it is followed by dandelion-type (Liguliflorae), white spruce (Picea glauca-type), hazel (Corylus), and alder (Alnus), at ca. 7%. At least two of the relatively prominent types, dandelion-type and sorrel-type, are of European origin.

Herb pollen starts out at a lower altitude than tree pollen. Wind velocities are lower in this near-ground zone, and the chance of pollen loss from the wind stream through impact with vegetation is higher. Herb pollen does not, as a consequence, travel as far as tree pollen and tends to dominate locally produced pollen spectra on open spaces (Janssen 1973:33). Grass pollen, moreover, is a good indicator of relative soil stability, because the perreniating organs of grasses are destroyed by plowing and other extensive soil disturbances (Behre 1983:227). Herb pollen, dominated by grass, is clearly more important than tree pollen in the Renews spectra, indicating that the area around the site was relatively open and soils were relatively stable during deposition of the 17th century matrices. The extent to which this varies from the natural, pre-contact condition of the locality or the normal situation during the historical era cannot be determined from the pollen data without a comparative soil profile.

The historical era spectra in a pollen sequence from a pond on Cape Breton Island (Livingstone and Livingstone 1958:Figure 1) have larger percentages of grass, ragweed-type (Ambrosia-type), and dock/sorrel-type pollen, than the prehistoric counts. This raises the possibility that the domination of the Renews pollen spectra by grass pollen may be at least partially cultural in origin. This is certainly true of the exotics, such as sorrel-type and dandelion type, but most of the herbs are more characteristic of waste ground than of actively disturbed soils, and it is probable that the groundcover around the Renews structure was relatively continuous.

Pollen sample 1 from outside the house contained 28% arboreal (tree) pollen while the interior samples 2, 3, and 4 had 11.25%, 16.3%, and 9%, respectively. This contrast between the exterior sample and the interior samples is large enough to be significant. There are also differences in the dandelion-type, goldenrod-type, sorrel-type, red baneberry (Actaea-type Ranunculaceae), and heath family (Ericaceae) counts of the exterior and interior samples that appear to be systematic. Possible explanations are: different seasons of deposition, different activities inside the house than outside, different sources for the matrix, different exposure to the atmosphere, different sedimentation rates (more or less years

of pollen influx per gram of sample), or a difference in the density of groundcover in the dooryard and at the source of the matrix deposited inside the house. The available data are not, unfortunately, adequate to support any one hypothesis over the others.

The only ethnobotanical pollen in the site, European cereal-type, was recovered from the sample taken just outside the doorway ps 1). One grain of European cereal-type pollen tabulated during the 400 grain count. This pollen grain was 49 microns long (greatest dimension) and displayed the prolate (oblong) shape, the pollen location on the small end, and the heavy pore annulus that is typical of rye (Secale) pollen. Two more Eurasian cereal pollen grains were noted in a complete scan of the slide. One of these was even larger (54 microns) and was unquestionably rye pollen. The other was crumpled and, therefore, smaller (43 microns greatest diameter), but had a very rye-like pore. It is highly probable that all three pollen grains were from rye, rather than from wheat (Triticum), barley (Hordeum) or oats (Avena). Complete scans of the other three samples (ps 2, 3, and 4) produced no other European cereal-type pollen.

Wheat, barley, and oats are self-pollinated, and the pollen of these cereals is not released from the seed head until threshing. In surface samples in modern farms, such pollen is more likely to be encountered along transportation routes, where grain is lost in transport from field to storage than in the fields themselves (Vuorela, 1973:10). Rye, on the other hand, is wind-pollinated. It is widely dispersed, and the presence of rye pollen is the accepted horizon marker for the advent of Neolithic land clearance and agriculture in European lake and marsh sequences, even where there is no depression the arboreal pollen or increase in the weed pollen percentages (Edwards and Hirons 1985:71). The presence of rye pollen in pollen sample 1 attests to European style agriculture in the vicinity of Renews during the 1660-1680 occupation. The restriction of the type to the exterior sample suggests the rye was not derived from lost produce or agricultural waste, aond does not reflect economic acivity in the immediante vicinity of the structure. It was probably wind-transported from agricultural fields at some distance.

Ragweed is the premier agricultural weed of North America because it is more tolerant of the high temperature and moisture stress of the bare ground in plowed fields tan other taxa favoring disturbed soisl (Bazzaz 1974). Ragweed-type pollen is shed in large quantities and is widely dispersed (Reed and Hughes 1970:264). Increases in this kind of pollen are commonly used to mark the beginning of European agriculture in North American lake and marsh sequences (Davis 1965:395). Only three grains of ragweed-type pollen were noted at Renews: two in pollen sample 1 and two in pollen sample 2. Pollen sample 1 is the exterior sample, while sample 2 is roof debris that must have been partially exposed to the wind-borne pollen rain of the site area during the occupation. Had there been extensive disturbed ground in the vicinity of the site, more than three ragweed-type pollen grains

should have been recovered. It is probable that this pollen also originated in relatively distant disturbed fround, possibluy the agricultural fields yielding the rye pollen.

Discussion

Pollen preservation was much better in all four samples 1660-1680 occupation samples from Renews than has normally been observed in exposed 17th-century sites in more southerly portions of British North America. This may be attributable to sheltering of the pollen from oxygen and aerobic fungi and retardation of the pollen percolation process by the longer season of frozen ground in Newfoundland. This suggests that it may be possible to recover longer historical pollen sequences from Canadian cultural deposits and natural soils than those previously reported from the United States. Slower pollen percolation should, however, compress the soil pollen records, requiring a smaller sampling interval, if sensitivity to rapid cultural change is to be maintained.

The Renews pollen spectra appear to reflect an open landscape, but the extent to which this is natural or cultural cannot be determined from the few available data. The presence of pollen from Old World weeds in the spectra indicates some alteration of the local environment, but the domination of the counts by grass indicates stable soils at the sampling locus. The presence of rye pollen correlated with ragweed-type in the exterior pollen sample indicates European-type agriculture in the vicinity, probably at some distance from the site.

No ethnobotanical data were recovered from the interior of the structure, but differences between distributions of a number of pollen types in the exterior (sample 1) and the interior (samples 1, 2, and 3) spectra suggest that these spectra were formed by different processes. There appears to be good potential of for the recovery of significant cultural pollen data from historical matrices in Newfoundland.

Table 1. Renews, Newfoundland 1660-1680 Occupation Pollen Samples.

Pollen Sample 1. Under stone, outside doorway at 40 cm below ground surface (Event 4).

Pollen Sample 2. Under stone, roof collapse stratum, inside house, above floor at 20-21 cm below ground surface (Event 3). Possibly mixed 18th-century and 17th -century matrix.

Pollen Sample 3. Under stone, occupation stratum inside house above floor at 21-22 cm below ground surface (Event 4).

Pollen Sample 4. Under stone, immediately above cobble floor inside house at 32 cm below ground surface (Feature 2, Event 4).

Table 2. Latin and Vernacular Names.

Pine - *Pinus*
White Spruce type - *Picea glauca*-type
Oak - Quercus
Hazel - *Corylus*
Birch - *Betula*
Alder - *Alnus*
Poplar/Cottonwood-type - *Populus*
Red Maple - *Acer rubrum*

Pink Family - Caryophyllaceae

Barley - *Hordeum*
Dandelion-type - Liguliflorae
Ragweed-type - *Ambrosia*-type
Goldenrod - *Solidago*-type
Grass - Poaceae
Cerealia - European cereal-type
Rye - *Secale*
Nightshade-type - Solanaceae c.f. *Solanum*
Dock-type - *Rumex mexicanus*-type
Sorrel-type - *Rumex acetosella /acetosa*-type
Mustard Family - Brassicaceae
Evening Primrose Family - Onagraceae
Red Baneberry-type - *Actaea rubra*-type
Wild Columbine-type - *Aquilegia canadensis*-type
Buttercup Family - Ranunculaceae
Carrot Family - Apiaceae
Leadwort Family - Plumbaginaceae
Goosefoot Family/Amaranth-type - Chenopodiaceae/*Amaranthus*-type
Heath Family - Ericaceae
Oats - *Avena*
Wheat - *Triticum.*

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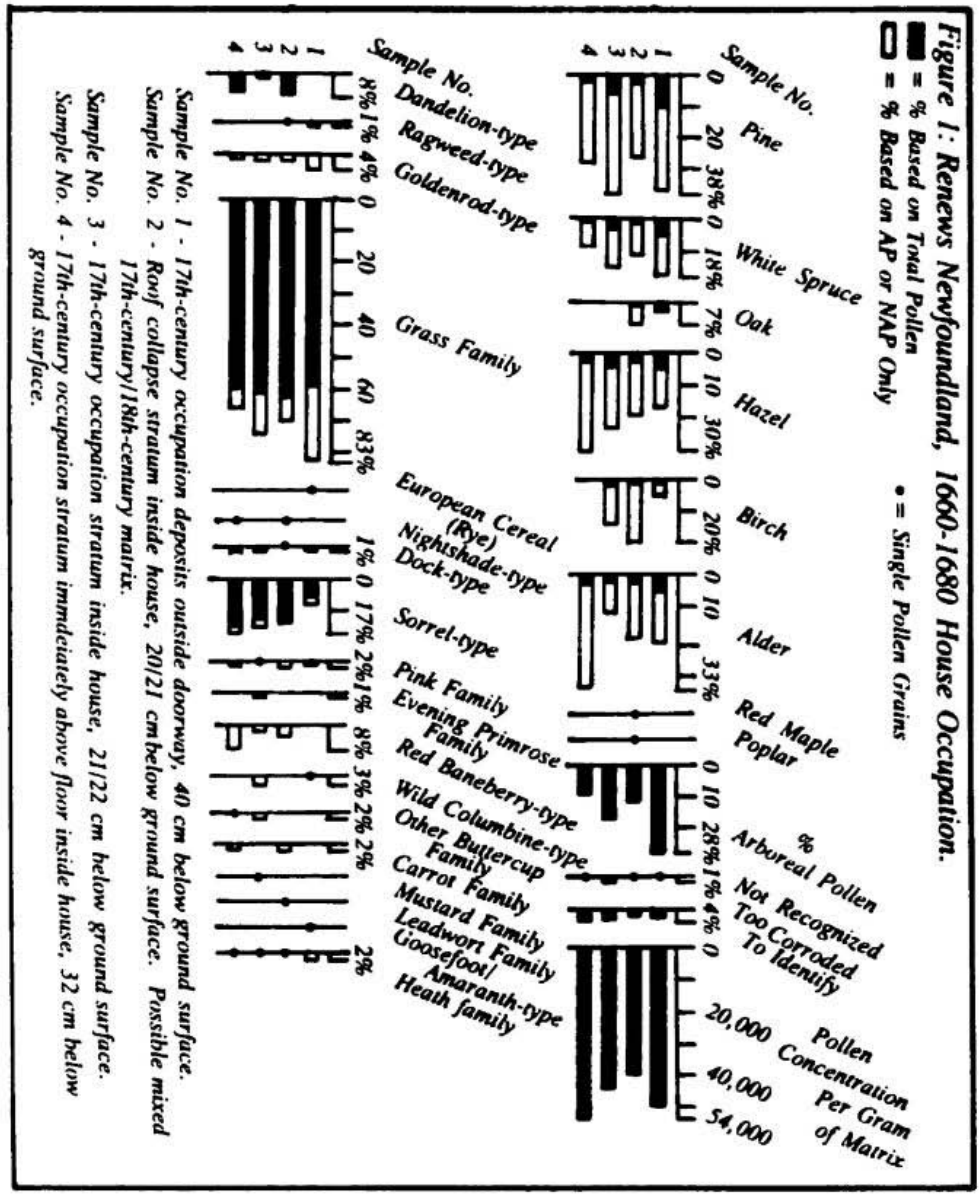

Figure 1: Renews Newfoundland, 1660-1680 House Occupation.

■ = % Based on Total Pollen
□ = % Based on AP or NAP Only
• = Single Pollen Grains

Sample No. 1 - 17th-century occupation deposits outside doorway, 40 cm below ground surface.
Sample No. 2 - Roof collapse stratum inside house, 20/21 cm below ground surface. Possible mixed 17th-century/18th-century matrix.
Sample No. 3 - 17th-century occupation stratum inside house, 21/22 cm below ground surface.
Sample No. 4 - 17th-century occupation stratum immdeiately above floor inside house, 32 cm below ground surface.