

INTRODUCTION

Site Location

Joseph Howland located his homesite on the west side of Howland Lane on Rocky Nook peninsula in Kingston, Massachusetts, approximately 27' above sea level on a west facing terrace above wetlands associated with the Jones River. Construction of a wall around the edges improved the spring to the southwest of the site. This spring may have served as the original source of drinking water for the occupants of both this and the John Howland homesite across the lane to the east. Visitors to the site today can find a second spring, referred to since at least the 1930s as Howland Spring, to the northeast of that site. This may have been the original spring for the John Howland homesite, the two may have been used concurrently, or the someone living or using the property in the late 18th or 19th century may have improved one or both of them.

Occupational History of the Site

Joseph Howland initially built on, and occupied, the property, probably in the 1660s soon after he and Elizabeth Southworth married. Joseph was born across Howland Lane at his parents homesite around 1640. He and Elizabeth, daughter of the Captain Thomas Southworth, a prominent Plymouth resident, married ca 1665. This report assumes, and this is backed up by the archaeological data, that Joseph and Elizabeth were the first occupants of the property on the west side of Howland Lane, and that they built the house here soon after their marriage in 1665. It was common in 17th century Plymouth Colony for newly married children to establish their own home, often in close proximity or even on their parent's land, upon marriage. Extended families, consisting of multiple growing families (husbands and wives who are still producing and rearing children) were rare in Colonial times. They did occur when the parents had become older and essentially acquiesced control of the house to a child (often times the oldest child) who has a growing family, with the parents retaining rights to continue to occupy the house and make use of its facilities.

Table 1 chronicles Joseph's life, the birth of his and Elizabeth's children, and his involvement in Plymouth town affairs. Joseph was very active in the colonial government, serving as a surveyor, a Lieutenant and later a Captain in the militia, and as a provisioner. Upon Joseph's death the property passed to his son James who, I feel, continued to live on the property with his family until he sold it to Benjamin Lothrop in 1735. Deetz felt that the abandoned house burned ca. 1700. The lack of burned artifacts at the site, with the exception of hand-wrought nails that had been burned, as well as a lack of a charcoal or burn layer in either of the cellar holes may indicate someone dismantled the building and burned scrap wood on site. Another possibility is that, after the original Howland house was abandoned in the 1680s, Joseph Howland's family burned the scrap wood, some of which still contained nails and spread the burned nails in the yard with the rest of the hearth waste.

Based on the artifacts recovered from the C-3 site, Benjamin Lothrop is believed to have lived at the Joseph Howland homesite and subsequently on the east side of the lane south of the original Howland house (at what I call the Dew Pond house- see the report on Wheeler's excavations at the C-3 site) until he moved from the property in 1746.

ARCHAEOLOGICAL INVESTIGATIONS AT THE SITE

Two programs of archaeological excavations are known to have occurred at the site, although illicit, but limited, pothunting occurred as well. Local residents and Howland descendants knew of the site prior to the start of Deetz's excavations. Deetz succeeded in locating the original chimney and two cellar holes associated with the house, but was unable to discern the footprint of the building itself. Deetz's work was followed a generation later by Derek Wheeler who focused his investigations, albeit accidentally, on the yard areas to the south and west of the house itself, providing us with an unprecedented glimpse into how Joseph organized that space around his house, while Deetz's work gave us a glimpse of the house itself.

Plimoth Plantation/ Dr. James Deetz Investigations

Plimoth Plantation's excavations, under the direction of Dr. James Deetz, began their investigation at the site in July of 1959 and they continued through August of that year. This was the second site excavated by Deetz since starting work as the Plimoth Plantation staff archaeologist in 1958 (the first being the Bartlett Site on a golf course near Plimoth Plantation). The Joseph Howland site has the distinction for being the only Plymouth Colony site that Deetz actually created something of a site report when he produced a two page summary in August, 1959. The report gave an overview of what had been accomplished at the site in approximately a month's worth of digging (Appendix A). He further elaborated on his preliminary conclusions in two articles written for the Howland Quarterly in 1960 (Appendix A).

Deetz's excavations at the Joseph Howland homesite began on July 30, 1959 and he finished the report by August 13 of the same year. In it, he presented a conclusion suggesting that two buildings once occupied the site, a view that he reaffirmed in his 2000 book *The Times of Their Lives*. The buildings, as he saw them, consisted of a main house represented by a 5' square hearth base at the east end and a 3' deep cellar hole 20' to the west. A jumble of stones that survived to not over a single course in height was interpreted as representing all that survived of the foundation. The chimney was constructed of brick and had a brick apron on three sides and stone paving inside of it. He estimated the entire structure measured 20' long (east to west) with an orientation perpendicular to Howland Lane. Deetz located what he believed was a second house to the northeast of the hearth, where he identified a 3' deep, artifact-rich, cellar hole. Deetz's conclusion was, the building was built ca. 1676, occupied for 30-40 years until ca. 1700, when it burned and collapsed while still occupied.

Among the artifact assemblage, Deetz noted that there were an abundance of gunflints, a button mold, sharpening stones, a scatter of Native artifacts, a stone copy of a 17th century tobacco pipe, four coins, lots of bones and shell, and the usual domestic artifacts.

Deetz further elaborated on his initial conclusions in two articles written for the Howland Quarterly in 1960. The following information is summarized from those articles. The archaeologists first visited the densely overgrown site in July of 1959 and noted that the house location was visible as an artifact strewn mound measuring about 20' in diameter. He found evidence of pot-hunting/looting, which took the form of two small pits dug into the mound, interpreted as the result of people looking for Native artifacts. Testing began with the excavation of trenches across the mound extending some distance to the north and south beyond it. Excavators reportedly screened all the soil through 1/4" hardware cloth screens. They found a dense deposit of artifacts extending to an

average depth of 10-12" below the surface, which placed it at the interface between the topsoil and the subsoil. Investigation continued in 5' squares excavated in 6" levels.

The mound composed of brick from the collapse of the chimney. The hearth base measured 12' north to south and 6' east to west, being composed of granite slabs, the largest of which was 2' long and 1' wide. A brick apron in front of the hearth, similar to what was found at the John Howland House, was found to exist on three sides of the chimney. The fourth side had either been removed or never. Excavation of the hearth base found it built on top of an older stone wall resting on beaten clay, which suggested that an earlier house had existed at the site. Archaeologists found that 4" of disturbed soil separated the wall and the hearth base. Beneath the hearth, Deetz found a pipe bowl with a shape and maker's mark indicating it was made before 1676.

Deetz conducted further excavations in 1960 and found that the house had been built on the same site as an earlier Native camp. He reportedly recovered a bone awl and hammerstone beneath colonial material in the west cellar and found that one cellar was filled with compacted refuse while the other had complete or near complete artifacts.

Returning in 1968, they focused work on the hearth area. At some point, excavators from Harvard, possible Deetz's graduate or undergraduate students, excavated at the site.

Unfortunately, none of the excavations that were carried out at the site have left any notes and only a few general photographs could be found documenting their work, making the analysis of the archaeological work at this site difficult. One map exists of the two early years of work (**Figure 1**). Aside from the very general comments regarding stratigraphy and the depths of excavations presented by Deetz in his Howland Quarterly articles, nothing else is known about the vertical depth of the excavation. Was the entire excavation area excavated into sterile subsoil? Did excavation stop at subsoil? Did it stop when it became clear that no evidence of foundations were to be found in that specific unit? Why were units placed where they were? Was there any logic to it, or were they just randomly and haphazardly placed due to the whim of the excavator?

Derek Wheeler's Excavations

Wheeler began work at the C-5 site in 2005 and spent the next eight years excavating for a week each year, for a total of 88 5 x 5' units being dug during that time (**Figure 2**). The field season each year consisted of clearing the underbrush from an area measuring approximately 40 x 40' square with 5' square units subsequently being laid out in the cleared area. Topsoil was removed and a portion of each block was excavated to sterile subsoil. The strategy was to identify areas where artifact densities were low, which could represent the original area excavated by Deetz, with areas of higher artifact concentrations outside of the low density areas (representing previously unexcavated areas). Unfortunately, most probably due to Deetz's inconsistent screening of soils, artifacts were found virtually everywhere. An area was excavated in 2007 and 2008 that appeared to represent clear evidence of previous excavation with evidence of what appeared to be a checkerboard of excavation units and unexcavated balks being found in the 15 x 15' block. Excavation was carried out to the subsoil, and a late 1960s Coke bottle was found resting on the subsoil surface, proving that the area had been excavated by Deetz in the late 1960s. Wheeler found only a few features, most relatively modern. Charcoal concentrations resulting from campfires and pits from someone pothunting at the site were found in squares 177, 184, 185, 186, and 190.

Wheeler encountered what appears to be a concentration of larger cobbles and stones that form a roughly north to south running line at the western edge of his excavation area. This concentration may represent a wall, but the fact that its alignment differs from that of the house, but parallels the road may indicate that it may either pre or post date the Joseph Howland house. If it had been constructed at the same time, there is a natural human tendency to lay things out parallel to each other in order to create organized space. It is possible that Deetz created this "wall" during his excavations and thus represents nothing more than discarded foundation stones. The fact that these stones were, on average, buried beneath only 3-5" of artifact rich topsoil, supports the hypothesis that it was the result of Deetz's excavation.

By combining the information recorded in the field notes and what was learned about the distributions and occurrences of modern artifacts when the collection was cataloged, I believe that many of the units that Wheeler excavated were located in areas where Deetz had previously dug (**Figure 3**). This figure shows where I think Deetz's excavations were in relation to Wheeler's. Wheeler felt he had concrete proof of Deetz's excavation area when he dug unit 147, where he excavated deeper than he had previously, and found 1960s Coke bottle glass resting on top of the intact subsoil. He also made note throughout the years of the excavation about when he thought he was in backfilled areas. I think what was throwing him off was the probability that Deetz did not screen all the soil that he excavated; as a result, Wheeler encountered areas that had an abundance of artifactual material that may have just been poorly screened, or completely unscreened soils that Deetz had dug up. Artifacts may have been collected as they were found during excavation, but screening may have been minimal, at least some years. What you generally find when excavating a historic site that has been abandoned for a number of years, is a sandwiched artifact distribution: a relatively sterile top layer that may be 4-6" deep, followed by an artifact rich layer created when the site was occupied, followed by a sterile layer representing the land before historic occupation, such as was found in Unit 142 (**Figure 4**). Any variation of this sequence indicates that something else was going on at the site- multiple occupations, natural disturbances like trees or woodchucks, previous legitimate or vandelous excavations, or filling and stripping episodes.

Several wall profiles were selected for this report that show areas of what appear to be disturbance and possibly backfilling (**Figure 5**). What Wheeler found was that while some areas appears to contain intact sandwiched sequences, many other areas contained many artifacts within the upper few inches, followed by lower numbers the deeper he went. This is indicative of disturbed soils, such as in **Figures 6, 7, 8, and 9**.

This may mean that any artifact distributions that may have occurred only represent areas of poorly screened backdirt and not actual 17th or 18th century refuse disposal patterns. During the dig, Wheeler had speculated that he had found, at squares 161 and 162, one of the cellars that Deetz had dug. Wheeler's excavations in this square only went down 2.5", so it is difficult to know exactly what he found. Looking at the 1959 photographs, this area appears to be too far south for one of Deetz's cellars and is probably outside of Deetz's excavation area all together. I believe that the 1950s and 60s excavation area was to the east and north of where Wheeler dug. Looking at he excavation records, I think that Wheeler actually encountered the western cellar that was excavated by Deetz, in Unit 192 (**Figure 10**) where, in the profile of the east wall, a noticeable drop, which I believe is the cellar hole, is present. It is possible that Deetz's excavations so impacted the site that even the walls of the cellar may have been disturbed. Only further excavation in this area could determine if this is the cellar.

UMass Boston conducted a Ground Penetrating Radar (GPR) survey of the property in 2014. The presence of areas of high resistance readings may show where the hearth and at least one of the cellar holes identified by Deetz were located (**Figure 11**). The area of highest resistance has a good probability of representing the hearth, while other areas of resistance to the northeast may represent one of the cellarholes and resistance to the west may be either foundation stones or stone dump piles from the excavation.

Overall, the more recent excavations were somewhat haphazard in the depth that they went to, due to time and labor force constraints, and the testing strategy. What would need to be done would be a complete excavation, right down to sterile subsoil, of at least a portion of what had been previously dug. Only the complete removal of everything that was or could be a cultural (17th or 20th century) layer would provide a clear picture of what is going on at the site and where Deetz carried out previous excavations. As a result, although Wheeler's teams excavated many squares, most failed to go deep enough to completely expose the clean subsoil and thus were not a sufficient depth to be able to identify soil stains that resulted from postholes or foundations of outbuildings. That being said, the most recent excavations resulted in the recovery of a substantial artifact collection, and did produce new information on the layout and use of the yard space.

Location of Deetz's Dig

Using one of Deetz's photographs from the 1959 dig (**Figure 12**), locating the telephone pole in the background and the cedar tree that the screen is leaning against (which is now gone but the stump of which remains) and comparing them with a modern photograph of the area taken from the same eye level, you can see that the excavation was much closer to the road than Wheeler had thought. When this information is combined with what Wheeler found during his excavation, I propose that the house that Deetz found was located to the north and east of Wheeler's excavation area, but that Wheeler did actually excavate some portions of the site that had been previously tested by Deetz (**Figure 3**).

A Note on Deetz's Collection

A total of 33,312 are present in the C-5/ Joseph Howland collection housed at Plimoth Plantation (n=33,186) and the Jabez Howland House (n=126). The locational information for almost a quarter of these (23.1%/ n=7663) is missing, making it impossible to determine where they were recovered from on the site. These pieces are either missing any locational information at all or the locational information does not match any of the meager locational information presently associated with the collection. It appears that the first two seasons of work were well recorded, but the locational information for the 1968 season did not correspond with most of the earlier information, with new unit designations being used with no corresponding information as to where they were positioned on the site. Deetz also apparently only sampled certain classes of material such as brick and mortar. The collection still is a valuable asset that can be used to provide useful information for the study of the 17th and early 18th centuries.

ARTIFACT ANALYSIS

A total of 83,229 artifacts were recovered during the years that Deetz and Wheeler excavated the site (**Table 2**) and Wheeler's artifact assemblage complements Deetz's in terms of materials recovered, quite well. Deetz recovered his assemblage from within and immediately around the house while Wheeler's represents a yard scatter/ midden deposit.

Prehistoric

Deetz and Wheeler excavations recovered 1927 pieces of prehistoric material (**Table 3**). It should be no surprise that Joseph Howland chose to build his house on the most favorable location on the west side of the lane, on roughly the exact same spot as where the Native people had chosen to settled millennia before. The presence of a spring to the southwest of the homesite may account for both occupations. This may have been the spring that everyone who lived in the general area had traditionally used, including John Jenney who may have been motivated to settle here because of it. Another spring is located to the northeast of the John Howland site, but this may be a layer watering pond created either by the Howlands to water their animals or by Watson, the farmer who eventually owned and farmed the property to the north.

Excavators found prehistoric material scattered in the immediate area of the house, especially in the north yard, and to the immediate south and west of the building. Chert, a fine grained stone found in New York State, was concentrated principally in the North Yard in an area measuring approximately 30' east to west by 50' north to south, and less so in the West and South yards (**Figure 13**). Quartz was sparsely scattered across the entire excavation area with a concentration in the Northwest Yard (**Figure 13**). Quartzite exhibited a distribution pattern similar to that of the chert (**Figure 13**). Archaeologists identified rhyolite concentrations in the North and South yards, extending slightly to the west and south, generally covering an area measuring 35' east to west and 65' north to south (**Figure 13**). It appears that the lithics were concentrated in the North Yard. This may represent either activity areas or areas where waste was deposited to keep the sharp flakes from being underfoot.

Identifiable prehistoric tools consisted of three Late Archaic (6000-3000 years ago) Small Stemmed spear points, seven Late Archaic Squibnocket Triangle points, one fragment of what is probably a Late Archaic point, on Transitional Archaic (3500-3200 years ago) Atlantic point, one Transitional Archaic Orient Fishtail point, one fragment of a Late Archaic broad bladed point, five Late Woodland to Plantation Period (1000-400 years ago) Levanna arrowheads, a pestle, an celt head, a fishing plummet and a fishing net weight, a sinew stone, several biface fragments, one utilized flake, and one hammerstone (**Figure 14**). The tools indicate that the people who occupied the site before the Howlands hunted, fished, and prepared plant foods at the site.

The types of stones that the prehistoric inhabitants used were the same types used across the lane at John Howland's homestead. This really is not that surprising, since the sites are just 250' from each other and the people living at both sites seem to have relied on quartz and rhyolite, stones that could be easily collected on the beaches of Rocky Nook. Two other stones types, the green chert and the Saugus Jasper, are more unique, but both were found at each site. This may indicate that the two locations were occupied, at least once, at the same time by the same group of people. Diagnostic artifacts, Late Woodland to Plantation Period Levanna arrow points, made of these materials found at the John Howland site, point to occupation and use of these materials during that period.

Another difference was in the quantity of material present, which was higher at the Joseph Howland homesite (1150 vs 1927 pieces), with the difference coming from the larger quantity of chert, quartzite, and rhyolite flakes at the Joseph Howland site.

When stone tools are made, the majority of the artifacts created during this process are waste flakes removed from the raw material in order to shape the stone into whatever tool is needed or desired. Each of the steps of this reduction produces flakes that bear different characteristics. This allows to gain an understanding as to what the people who made them were doing. Were they collecting the stones locally and reducing them from raw cobble to finished tool right there on site (which would leave behind a wide range of flake sizes) or were they obtaining the material from somewhere else, reducing it a bit there, and finishing it here (which would result in a lot of medium and smaller size flakes and few larger ones)? Were they just stopping by the site for a short period of time to resharpen tools (which would leave many small flakes and few or no larger ones)?

A comparison of the flake widths (**Table 4, Figure 15**) between the Joseph and John Howland sites shows that much more finishing of tools (as represented by Late Stage and Finishing flakes) was carried out at the John Howland homesite. It is possible that the initial reduction, which was louder and more energetic, was selectively separated from the main habitation areas, whereas the finishing was deemed a more appropriate activity for the area around which people were actually living. More finished tools, pottery, and fire-cracked rock were also found at the John Howland site. These are all artifacts associated with habitations versus work areas, which supports the idea that the Joseph Howland site may have been used, at least occasionally, as only a lithic work camp and not a habitation site.

Architectural

The majority of the architectural material consisted of brick fragments and hand wrought nails as shown in **Table 5**, which also highlights some of the differences between Wheeler's and Deetz excavations. First, Deetz did not save every piece of brick that he encountered, while Wheeler did. Second, because Deetz was excavating the house itself, he had a greater number and variety of architecturally related artifacts than Wheeler did (who was excavating the yard around the house).

Deetz stated that the largest concentration of brick came from the collapsed chimney mound in the center of the site. He reported that the hearths had what appeared to be a one brick wide "brick apron" on at least three of the sides and the average brick size he found was 8" long 4" wide and 2" thick. Two had footprints animals (one being a wolf and the other an unidentified animal) (**Figure 16**) while a third had the impression of a coarse fabric. The brick with the impression of the wolf or dog footprint remains in the collection but the others could not be located.

The brick fragments with measurable attributes are presented below:

Length:	21.5 cm/ 8.5"	N=1
Width:	9 cm/ 3.5"	N=1
	9.5 cm/ 3.7"	N=2
	10-10.5 cm/ 4"	N=12
Thickness:	4.2 cm/ 1.6"	N=1
	4.5 cm/ 1.8"	N=1
	4.7-4.8 cm/ 1.9"	N=3
	5-5.1 cm/ 2"	N=17
	5.2-5.4 cm/ 2.1 cm	N=9
	5.5-6 cm/ 2.2 "	N=14

Deetz's average brick size matches well with the brick attributes collected from the pieces recovered by Wheeler.

The lengths of the hand wrought nails recovered from the site were comparable between Deetz's and Wheeler's excavations (**Table 6**). This indicates that they all came from the same source. A total of 2762 (26%) of the 10,579 nails recovered were burned. Of the nails Deetz recovered, 31.9% were burned, but only 6.4% of those recovered by Wheeler were burned. This distribution- more burned nails in association with the house versus the yard- supports Deetz's conclusion that the original house burned in place.

The distribution of burned nails by size shows the majority were found by Deetz with a higher percentage of the shingle and the framing nails being found by Deetz while more of the plank nails, possibly those used for roof boards, were found in the yard by Wheeler. This distribution may reflect the way the house fell during or after being burned (**Figures 17 and 18**).

Unfortunately, while numerous lead window kames were found, which can bear the initials of the manufacturer and the date of manufacture, none of the 115 kames bore either.

Fuel- Charcoal

If we believe that the house burned, then it is surprising that very little charcoal (n=85) was recovered, or mentioned, by Deetz. Deetz did recover, or at least he collected, 28 pieces from the west cellar hole, and many pieces were found in the north yard. It is quite possible that he may have seen more but did not collect it. It is strange that he did not note any burning or ash layers being present in the cellars, which you would expect to be present if the house burned. But, it is possible that the entire house did not burn, but only the superstructure. Maybe the fire was put out or went out before it reached the floor or maybe the fire did enough damage to an old house to make whoever was living there to abandon instead of repair it. That the occupants abandoned and razed the house is proven by how the cellars were filled, as will be discussed further below.

Wheeler recovered substantially more charcoal (n=1109) but he also noted the presence of modern camp fires on the site. Charcoal concentrations that were the result of campfires and pits from someone pothunting at the site were found in squares 177, 184, 185, 186, and 190.

Charcoal from both excavations was also deposited as a result of the periodic cleaning and disposal of the hearth waste (charcoal and calcined bone) into the yards around the house.

Foodways

The foodways class encompasses the categories of artifacts related to the preparation, serving, and consumption of food, both solid and liquid.

Bone

Bone was abundant in both of the excavations, with slightly more being found by Wheeler (n=5084) than by Deetz (n=4361). Excavations recovered 9443 pieces of bone from both domestic and wild species (**Table 7**). Cattle, swine, horse, and sheep made up the domestic mammals. The minimum number of individuals represented for each domestic species was calculated during analysis by identifying the skeletal elements, their representative side, and the ages of each element and tooth. Analysis estimated that the bone collection represented at least 10 cattle, 18 swine, and 48 sheep. This total does not seem too large when it is known that the site was occupied for at least 70 years, but it has to be remembered that this is a minimum number, we will never know the true final number of animals that the occupants consumed at the site due to various processes that affected what bones actually survived the hundreds of years of disposal and burial at the site. It is known that dogs and rats lived at the site (as represented by the footprint of a dog preserved in one of the bricks, the chew marks caused by dogs on some of the bones, and the bones of rats found across the site) and it is known that the occupants of the site also burned some of the bones (as represented by the burned and calcined bones that were later thrown out in the yard). Both of these factors eliminated some of the elements and reduced others to unidentifiable splinters. It is also possible that the occupants sold some of their slaughtered animals, possibly retaining the heads and feet on the skins. This would cause a greater number of head and foot elements but would reduce the number of other skeletal parts that archaeologists would find later. Finally, there is also just simple weathering and the acidic nature of New England's soils that surely reduced some of the bones to stains or mere crumbs.

The age of slaughter profile for the cattle indicates that the occupants had a preference for animals that were in the prime of their life (older than 18 months but under 42 months) indicating that cattle were raised primarily for meat and milk. Analysis identified at least one young animal under 6 months old, and two over 42 months. These extremes represent the occasional calf (probably a bull calf) that was eaten as well as the consumption of older individuals (possibly oxen).

The 18 swine identified were predominantly males and females over 10 months old, with a slight majority (n=8) being under 20 months old while the remainder (n=7) were between 10 and 20 months old. The prime age of slaughter (the age when the best balance of fat and meat is present on the carcass) for swine for meat is 18 months. The abundance of animals over 20 months old may indicate a desire on the part of the family to raise the swine for fat (suet) versus meat or a desire to raise them equally for both. A few individuals under the age of 10 months, probably piglets (n=3) were present, perhaps representing special occasion meals.

Sheep were the predominate domestic species in the assemblage with a minimum of 48 individuals. The majority of these (n=33) were between the ages of one and two years old, too young to have been slaughtered after they no longer were bearing quality wool, but within the age range for animals raised for meat. The occupants slaughtered two individuals under the age of five months, a small portion of lamb in the household diet, and 13 were slaughtered over the age of two years, animals raised for wool and/ or mutton.

Common farmyard species were well represented at the homesite, and the ages at slaughter indicate the household raised cattle for meat, dairy and as work animals; they raised sheep for wool and meat; and they raised swine for meat and suet. The household attempted to get the most out of each species and carefully managed breeding and slaughter.

The distribution of domestic mammal skeletal elements showed a high occurrence of teeth, toes, and metacarpal/ metatarsal bones (the bones that make up the palm of our hands and the lower legs of these animals) (**Table 8**). The dominance of the assemblage by teeth may indicate that the occupants were selling partially processed carcasses that had been skinned with the skulls and lower limbs left attached to the skin, as was commonly done. The presence of other species, represented only by skull and lower limb elements at the site (wolf, horse, and deer) offers further support to the theory that skins were being reserved either for sale elsewhere or for on site processing. As will be discussed below, several tools associated with processing skins were also present at the site, making it probable that someone was initially processing the skins of the animals. They may have purchased raw skins from other people and at least did the initial processing before selling them to a either a local or foreign fellmonger (a dealer in hides and skins, especially sheep skins).

The wild animals in the assemblage represent Howland's reliance on fresh and salt water aquatic species- reptile, fish, birds, and to a lesser degree, mammals. It appears that the occupants of both this site and the Dew Pond house across the lane enjoyed fowling, which may account for the lack of larger shot in the artifact assemblage and the partially for the abundance of gunflints. The turkey and goose, and possibly even some of the ducks, may represent domestic species, but with the apparent abundance of wildfowl in the area, as attested by the bones present in the assemblage, the household would have no need to raise such species. The only other domestic species in the assemblage is the chicken, which was raised for both eggs and meat. The mink, skunk, raccoon, squirrel, and fox, may all represent species that happened to die at the site, which is especially true in the case of the fox, as it seems the excavators must have found the buried remains of a complete individual.

The occupants may have brought the skins with heads and lower legs attached, of two of the wild species, the wolf and deer. The same is probably true for the horse remains.

The calcined and burned bone represents hearth waste thrown into the yard. These materials were most abundant in the North, South, and West yards (**Table 9**) (**Figure 19**), indicating that occupants periodically threw the ashes and waste from the hearth into those areas. Little calcined or burned bone was found in the hearth itself, possibly indicating that it had been cleaned out just prior to the abandonment of the site. Little calcined bone was found in the cellar holes, indicating that they were not filled with dirt dug out of the yards, at least not out of the yards that had calcined and burned bone, but that they may have been filled with household waste and subsequently had soil wash into and between the refuse.

Shell

Excavations recovered a total of 9724 pieces of shell from across the site, the majority of which came from the west yard (**Table 10**) (**Figure 20**). Shell was a rare find in the East Cellar, but was more abundant in the West Cellar, where it may have arrived as part of a yard scraping used to fill the cellar itself. The principle species consumed at the site appear to be soft shell clam (a minimum of 2064 individuals represented by hinges), quahog (a minimum of 70 individuals represented by hinges), and surf clam (a minimum of 41 individuals represented by hinges). The other species

occurred in much smaller quantities with many of them (blue mussel, crab, mud nassa, scallop, oyster, slipper shell) possibly representing species accidentally brought to the site with loads of seaweed that may have been used as animal feed or fertilizer. They also could have arrived mixed in with salt marsh hay cut to feed to animals.

While most of the species present could be harvested either from the east or west shores of Rocky nook, two individual shells did not come from the immediate area. The Olive shells are common along the southern coasts of the United States and may represent shells picked up as souvenirs by someone living at or visiting the site (**Figure 21**). They offer further support for the idea that someone at the site was involved in merchant activities, possibly to the southern colonies.

Ceramics

Archaeologists recovered 16,077 pieces of ceramics, with redware and tin-glazed wares making up the bulk of the assemblage (**Table 11**). Sherds were found primarily in the North, South, and West yards at the site, indicating these were the principle areas of household refuse disposal (**Table 12**) (**Figures 22, 23, and 24**). Analysis did not reveal differences in the distribution of earlier versus later wares. It appears that the yard area immediately around the house did not witness any perceivable changes in use patterns that would result in ceramics being differentially distributed at different times.

Excavation recovered similar types of vessels from the Joseph and John Howland homesites (**Table 13**), with differences being a greater variety of older wares from the older, John Howland site and a greater emphasis on ceramic hygiene, food preparation vessels at the John Howland versus more solid consumption and solid storage vessels at the Joseph site (**Table 14**) (**Figures 25-27**). The difference in hygiene and solid consumption vessel types may be the result of the possible use of metal chamberpots at the Joseph Howland site and pewter or wooden plates/ trenchers at the John Howland site. Differences in the preparation class relate to the use of milk and baking pans at the sites. It is possible that John Howland placed greater emphasis on dairying (he did have a fully equipped dairy on the north side of the house) and baking pies in the oven, whereas Joseph Howland may not have dairied as much and may have used his parent's oven and pans. The occurrence of solid storage vessels (storage/ butter pots) at the Joseph Howland site may be reflective of the possible small scale merchant activities that may have been undertaken.

Another difference in the assemblages was the much higher occurrence and variety of tin-glazed vessels at the Joseph Howland site, including vessels that may have originated in Portugal (**Figure 28**). It would appear that the occupants liked to show off their status through the use and display of brightly colored tin-glazed vessels and possible merchant activities may have provided greater access to vessels originating in Portugal. Because of the English Civil War (1640-1660), trade between England and the colonies was drastically curtailed, forcing colonial merchants to find other sources of the goods they desired. Portugal revolted against Spain in 1643 and became its own country and with its newfound freedom was a need for goods- specifically wood for wine casks, fish, and wheat. The colonies in turn needed wine, brandy, luxury goods, and salt. It appears that the two countries quickly became fast economic allies, at least until after the Restoration in 1660 when the Navigation Acts severely limited with whom the colonies could trade. Because Portugal was not one of the countries that the acts specifically was aimed at (Netherlands, Spain and France) trade probably continued relatively unhindered.

Vessel Glass

Hand blown vessel glass, well represented at the site with 837 pieces, (**Table 15**) consisted of wine bottles, small general purpose bottles, and wine glasses. Analysis arrived at an estimate of the minimum number of bottles represented in the assemblage by examining the rims and bases (**Table 15**). It was found that over the 80 years that people occupied the site, a least 30 vessels were broken (**Figure 29**). The aqua, olive, and medicine bottles measured from 4-10 cm in body diameter and they would have held medicines, oil, vinegar, or virtually anything needed in smaller amounts.

Archaeologists recovered an appreciable number of wine bottles and wine glasses, including a wine bottle seal bearing an image of the goddess Fortuna, patron of merchants and sailors (**Figures 30-32**). The wine glasses all appear to date to the late 17th to early 18th century.

Other Foodways Items

Both Deetz and Wheeler recovered a variety of other items used in the kitchen or on the table (**Table 16**). While the majority are what one would expect to find at any 17th to 18th century house (kettles, hearth equipment, forks), two classes (knives and spoons) stand out for the sheer number of items present (**Figures 33-36**). The spoons appear to span several periods with some bearing broad oval bowls and "slipped-in-stalk" handles characteristic of the middle to late seventeenth century, while others have elongated oval bowls and trifid ends more characteristic of the very late 17th and first half of the 18th century. The pewter spoons date to the late 17th to 18th century. The famous Howland Spoon appears to be a William III portrait spoon. These were popular from 1694-1702 and made in Boston.

Several bone handles were found to go along with the iron knives, which is a rare occurrence as bone handles usually decompose rapidly in New England's soils. The knives themselves took the form of both forged bolster (one with an elongated tang at the butt end) and slab handled forms (where the handle is a flattened sheet to which bone slabs were attached on either side to form the handle).

The abundance of spoons and knives may point to their use as trade items.

Pipes

Deetz and Wheeler found over 7,500 tobacco pipe fragments and tobacco -related artifacts (**Table 17**). The pipe bowl styles span the entire occupation of the site, showing that the property was occupied around the middle of the 17th century, a date that coincides with Joseph and Elizabeth's marriage ca. 1665. The most common style was a heelless funnel (1720-1820), indicates that someone was using an appreciable number of pipes, or at least stored a large number of pipes, on the site after Joseph's death in 1703 (**Figure 37**). This may have been his son James, but it is much more probable that the abundance of pipes from the first half of the 18th century are related to the occupation of the site by Benjamin Lothrop, a merchant, who would have had the best reason for having so many pipes in his home.

Tobacco pipes dating to the Joseph Howland period (pipe stems of the 9/64" to 6/64" stem bore; bowl styles 1, 7, 8, 10, 12, 17; redware pipes; and the Virginia pipe) account for 22.8% of the stem fragments and 12.5% of the dated pipe styles. The remainder of the pipe fragments date to after 1700 and presumably must be associated with someone other than Joseph. As his son James does not appear to have been as industrious as his father (showing up only a few times in colonial records) it is more probable that Benjamin Lothrop, a merchant, would be the one to whom many of the artifacts recovered at the site, including the tobacco pipes, are associated with.

The distribution of dated styles (**Table 18**) appears relatively similar for both the Joseph and Post-Joseph periods (**Figures 38 and 39**), which indicates no substantial changes in the way that people made use of the yards. The density analysis shows that the south yard may have seen slightly more use during the later period while the occupants may have used the North Yard more intensively during the earlier period. This change from the disposal of material in the North Yard to the South Yard may reflect either the movement of the household away from this site during Benjamin Lothrop's occupation (thus the disposal of material on the south side of the house as the house is being abandoned) whereas the North yard reflects common 17th and 18th century disposal patterns that favored that side of the house for refuse disposal.

An examination of the median dates of occupation of the site, as represented by the occupation ranges of various inhabitants and the median use dates of the tobacco pipes, offers further support to the interpretation that Joseph, James, and Benjamin Lothrop all lived at this site (**Table 19**). The comparison shows that if only Joseph and Elizabeth occupied the site, then much earlier median dates would be expected for the pipes recovered in the cellar holes (similar to the earlier dates found at the John Howland house for Strickland's dig, which focused on the house, and Wheeler's at the same site, which focused more on the yard). The median dates of occupation for the cellar holes correlate better with an occupation that started with Joseph Howland, continued with James, and ended with Benjamin Lothrop, possibly due to the house being abandoned due to fire. The occupation of the Dew Pond correlates better with occupation by Benjamin Lothrop versus James Howland. It is possible that Benjamin Lothrop began by living in the Joseph house and moved to the other side of the lane partway through his occupation of the property.

The similarity in the median dates for the East and West cellars indicates that they were both abandoned and filled at approximately the same time. Deetz felt that one cellar was older than the other, but the tobacco pipe data, and all the other data, does not support this conclusion.

Excavations recovered a few other interesting pipes and pipe-related objects including red clay pipes, a possible Virginia pipe, and two smoker's companions (**Figure 37**). The red clay pipes are only found on sites occupied during the ca. 1670s. These are believed to have been made in Charleston, Massachusetts as a local alternative to the imported pipes. Their short period of popularity (ca. 1670-1680) has been credited to the British enactment and enforcement of the Navigation Acts and the concomitant increase in regulation of colonial industries.

The possible Virginia pipe is a round bellied bowl with three rows of dentate stamping, similar to what is seen on pipes from Virginia. It is also possible that this is a local Native pipe bowl. If it is Virginian, it would support the idea that someone was trading down the coast in the 17th or 18th centuries.

Smoker's companions are multi-purpose tools used by the serious pipe smoker. The iron tongs were used to clutch coals used to light pipes and to ream out bowls, while the end opposite the tongs often bore a tamper to tamp the tobacco in the pipe. They are rarely found on New England sites, but are more common in the Mid-Atlantic states where tobacco was more a part of the culture. They date from the late 17th to middle 18th centuries.

Personal

Personal artifacts are those that were used on a person's body or which may have had a more intimate association with the site's occupants. Deetz found the majority of the personal items (**Table**

20) from within and immediately around the house (**Table 21**) (**Figure 40**). This artifact class offers more evidence for mercantile activity at the site in the form of scale weights, bale seals, numerous pairs of scissors, several combs, a padlock and chest locks, and the lenses (**Figures 41-51**). This final artifact is interesting as they were identified as optical lenses possibly for a telescope, by Deetz. What they are, are burning lenses used to start fires by focusing sunlight. These were often used as trade items for the Native people.

The earlier excavations resulted in the recovery of a bone awl made from a pig lower leg bone (fibula) from the hearth area (**Figure 41**). Deetz cited this bone as evidence of Native presence at the site, but it was, in fact, obviously made by one of the European inhabitants for sewing. Another piece of sewing evidence was a bone bodkin, a flat tool used for lacing garments, found in the North Yard (**Figure 41**). To go along with the bodkin was a piece of silver threaded galloon, a narrow tightly woven trimming used on clothing, found in the Western Cellar (**Figure 42**).

Two very personal artifacts were found in the North Yard- human first molars (**Figure 43**). These teeth came from some adult who lived at, or visited the site. Both bore large cavities, which must have precluded the need to remove the offending members.

When John Howland died in 1673, there were a large number of books present in his library and a question I always had, was what became of those books. We know that some of the books listed later show up in his wife Elizabeth's probate when she died in 1687. A total of 10 brass book clasps were recovered from the Joseph Howland site, several of which were matching pairs (**Figure 44**). It appears that part of the mystery of what happened to John Howland's library is solved, they probably ended up at Joseph's house and were eventually thrown out (at least the covers or the clasps were anyway).

Deetz reported that his excavations recovered four coins, all William III, one with a date of 1700 another with the date 1724 coin in the east cellar. He also reportedly recovered two small silver discs, neither of which is in the collection any longer. Two coins are present in the collection today (**Figure 43**). One is a c. 1697 William III half penny while the other is a smooth disc, which may be a William II half penny, but this can not be confirmed. One was found in the house and the other in the South Yard.

Archaeologists found a perforated lead disc with jagged edges in the South Yard (**Figure 43**). It appears to be a failed attempt at making a whizzer, an antique toy that has two holes in the center through which a cord is strung. When the opposite ends of the string are pulled taught, the center whizzer disc spins, producing a whizzing sound. Someone spent the time cutting the edges, only to fail by making one hole in the center. Another toy found was a pewter plate with two fish molded onto it. This is a very unique toy and probably dates to the 18th century.

A bronze alchemy spoon bearing a double stamped alchemy symbol for Vitrol (the archaic name for sulfuric acid) which was used by alchemists to make sulfates (salts) of various metals such as iron, copper, and tin was found (**Figure 43**). The salts were then used for other alchemical or metallurgical purposes.

Rarely do organics like leather survive at archaeological sites, but several leather scraps and a complete leather knife sheath were recovered from the cellars at the site (**Figure 42**). The sheath is 15.7 cm long, 3.2 cm wide at the tip, 6 cm wide at top, with a 2.1 cm wide belt attachment on back

and 4.5 cm long belt cuts. It is roughly stitched along the edge with a thick leather thong bearing a knot at one end and 14 holes on the edge. The bottom is open and use wear is present on the front and back. It was obviously a working person's knife sheath, nothing fancy but something quickly made to keep a knife in.

Half of a stone button mold was found in the House (**Figure 45**). It is made from gray slate and is 4.8 cm long with a 1.5 cm diameter button hole that is dome shaped and .2 cm deep. No corresponding buttons of this shape were recovered, but several matching pewter buttons were found concentrated in the North Yard, possibly representing a complete garment that was discarded here.

Six lead bale seals, which were affixed to bales of cloth to identify them as having been inspected, certified as to what they were, and taxed, were recovered (**Figure 46**). They range in size from 1.5 to 3 cm wide. Two of them bore imprints of a coarse woven cloth on the interior. Another is stamped "P" with an unidentified mark, while a third bears a Fleur de lis on 1 side and the GURENG/ LANG on the other. A final seal bears what looks like to sets of tooth arcade imprints on each side. The size of the bite corresponds to a child. Bale seals are associated with merchant goods and are not generally found on non-mercantile related sites.

Husbandry

Husbandry-related artifacts were those associated with domestic animals (**Figure 52**). On most sites we find a few horseshoes a few horseshoe nails, and maybe, if we are lucky, a spur, a bridle fragment, and maybe a stirrup. At this site, there were dozens of horseshoes, over a hundred horseshoe nails, silver and brass harness and spur accouterments, several spurs, and even more bridle bits (**Table 22**). Joseph's probate indicates that he owned two mares when he died, as well as a saddle and pillion, and many more cattle, yet the artifacts show a strong bias towards horses and less evidence of cattle (just two oxen shoes). This may be the result of the fact that riding and using a horse requires many more extras as opposed to using milk cows or a team of oxen. The abundance of horse-related pieces also show that horses, which were animals used more to show off status in New England colonial times, were very important components of the life at this site.

Husbandry equipment was scattered across the site, but in terms of relative density, the cellar holes had the highest, while the House, North Yard, and South yard all had relatively moderate densities (**Table 23**). The East and West yards both had low densities. This density distribution indicates that disposal or loss of husbandry related artifacts was highest in the cellarholes, where they were presumably discarded when the house was abandoned, and in the House, North, and South yard areas where they were stored and used. This may indicate that stables or barns, or at least work or refuse discard areas, were located to the north and south of the house, right where one would expect them.

Tools

Excavations recovered a total of 57 tools with the majority having been found around the house by Deetz (**Table 24**). Joseph's probate listed a spade, a froe, draw knife, ax and scythe, all of which (except for the froe) were found archaeologically (**Figure 53**).

The tools were distributed around the site, but, aside from the cellars which had the highest densities, the density was highest in the house, around and in the hearth, and in the East Yard (**Table 25**). These are different locations than other artifact classes and may represent the more valuable

nature of these tools versus horseshoes or horseshoe nails for example. These were tools, artifacts that the people who lived at the site may have relied closely on to make a living or make important repairs to the house itself.

The brass face of a 17th century mariner's pocket sundial and compass was found (**Figure 53**). It bears a folding sundial gnomon, which when aligned with magnetic north, enabled telling local time in mid-latitudes such as the Chesapeake. This may have been a compass used by Joseph Howland for survey work, but more probably was used on board a ship. Unfortunately, the locational information (where it was found on the site) has been lost and it was not identified as a compass until Derek Wheeler took it to be cleaned and conserved.

Archaeologists recovered a total of 30 artifacts that I have called “wedges”, for lack of a better explanation for what they were, from across the site (**Figure 53**). These iron pieces have broad, rectangular shaped heads, often curved shanks, and spade bit ends. The heads are often battered from repeated striking. Whether they were actual wedges used for splitting wood, wedges to hold the heads on tools, or wedges used for some architectural purpose, is not known. They average 1.3 to 8 cm long.

Another type of artifact were what may have either been draw knives or spokeshaves, or were more likely, fleshing knives used to scrape raw animal skins to remove the fat, muscle and membrane (**Figure 54**). These fleshing knives were used along with a wooden beam, set up at a 45 degree angle, on which the skins were laid and scraped. Once scraped they could be further tanned or they could be dried for transportation. It is believed that these tools, along with the animal species that were represented by mostly head and foot elements, represent on site hide tanning, or at least hide preparing, that was part of larger mercantile activities carried out by the inhabitants.

Other tools that were found include wood working tools like an ax, chisels, gimlets (piercers), and drill parts, as well as agricultural tools such as an iron spade shoe (the metal edge to a wooden shovel), a scythe, and several stone whetstones used to sharpen any edged tool. An iron saw tooth set, used to adjust the angle of large saw blade teeth, was also found (**Figure 53**).

One curious artifact appears to be a bunghole reamer, used to make the holes in barrels containing liquid. It is not known what may have been shipped from the site that required a bunghole (**Figure 53**).

Weapons and Subsistence

Deetz recovered numerous weapons and subsistence-related artifacts, with most having been recovered from around the house (**Table 26**). Six of the pieces were associated with one or more flintlocks (**Figure 55**). Flintlocks were a type of firearm that used a flint to make sparks that ignited the gunpowder to set off the charge and fire a shot. The earliest forms, snaphaunces, were developed in the 1550s and were used until the 1680s in Plymouth Colony. Flintlocks were developed in the early 17th century and continued in use throughout the 18th. The pieces recovered from the Joseph Howland homesite may have once belonged to John or Joseph Howland. Pieces were recovered from the house and North and South yards (**Table 27**).

A total of 33 pieces of what appears to be armor, specifically a tasset (plate that covered the upper leg) from a suite of pikeman's armor, were recovered from the West Cellar and North and South yards (**Table 27**) (**Figure 56**). The pattern of the rivets on some of the pieces of the possible armor appears to be circular, and may match the tasset from the John Howland homesite, where it may have been used as a fireback. Several separate lames (separate pieces making up a tasset) represent a second type of possible tasset (**Figure 56**). These two types of tassets- separated and joined lames) were in use at the same time in the 17th century.

Another type armor may be represented by six squares of iron measuring 1.5 x 2.3 cm, 2 x 2.6 cm, 2.3 x 3.5 cm, 2.4 x 2.9 cm, 2.6 x 2.6 cm, and 3.6 x 4.3 cm, were recovered from the East, North and South yards. These pieces are all pierced and may be part of a quilted armored vest called a jack coat (**Figure 56**). These were relatively light as compared to a pikeman's suite of armor, and flexible. When the Pilgrims were on Cape Cod in November of 1620, it is recorded in Mourt's Relations that "we marched through boughs and bushes, and under hills and valleys, which tore our very armor in pieces". They may have very well been talking about the cloth jack coats being "torn to pieces" versus plate armor (which could have been torn to pieces only metaphorically by thorns). Jack coats were used until the late 17th century and may have belonged to Joseph Howland. He may have used it during King Philip's War, where he served as a Lieutenant. This is the only identified possible occurrence of this type of armor in New England.

Deetz recovered two artifacts, identified as a possible pike tip and a possible pole cap (the cap that would go on the opposite end of a pole arm like a pike). It is not known for sure that these artifacts are as they appear, but the identification is a possibility.

Eight pieces of lead shot (four bird shot and two shot measuring 1.5 cm [.6 "]) were recovered from the House, the Hearth, and the South and West yards. As shot was an important item, it is not surprising that they were found in the house and near the hearth. Lead scrap and waste, at least partially the result and intended for, the manufacture of lead shot, were found in the Hearth and House, and in the North, South, and West yards. Archaeologists found one piece of lead possible sprue, the scrap left over when casting multiple shot, in the West Yard.

Flint debris (flakes, cobbles, cores, shatter, and strike-a-light), numbering 163 pieces, was recovered from across the site (**Figure 57**). These pieces were the result of the manufacture of the 99 gunflints that were recovered. Four types of gunflints were found (bifacial, advantageous, spall, and wedge), concentrated in the East Cellar, Hearth and House. These gunflints had been used by the occupants of the site, presumably at least in part for hunting the numerous waterfowl represented at the site, but may have also been sold as part of the mercantile activity that the occupants engaged in. Numerous gunflints had also been recovered from the William Clark/ RM Site (a known Plymouth

merchant's house destroyed in 1676), the homesite of a man who may have been supplying gunflints to the colonial militia during King Philip's War. Joseph Howland or Benjamin Lothrop may have been manufacturing gunflints for sale to the colonial government as well. Deetz found a possible flint knapping hammer head measuring only 2" (5 cm) long.

Subsistence-related items included a possible eel spear and several large fish hooks (probably used for cod) (**Figure 58**).

Other

A variety of other miscellaneous pieces of metal (and a clay cone that may represent fill from a tobacco pipe) were also recovered (**Table 28**). These pieces represent undiagnostic fragments.

Distribution Analysis

The artifacts from the excavations were examined separately by the portion of the site from which they came. As can be seen in **Table 29**, which shows the gross distribution of certain artifact classes, archaeologists recovered relatively few artifacts from the East Yard, the House footprint, the Hearth, or really even the cellar holes when those counts are compared to the North, South, and West yards.

The different parts of the site were excavated to differing degrees: the cellars, hearth and house footprint were completely excavated while the yards were just sampled to varying degrees. As a way to control for the fact that not all the site was completely excavated and the recovered assemblage may be more reflective of what areas were the foci of more extensive excavation, the total area excavated for each site area were calculated (**Table 30**).

The counts presented in **Table 29** were then divided by the total area excavated, as presented in **Table 30**, for each of the gross artifact classes to arrive at an artifact density for each of the classes in each of the areas. When the density of the artifacts per square foot excavated in each of these areas are compared though (**Table 31**), it can be seen that the cellar holes had the highest densities of material overall with the West, South, and North yards having the next highest densities (in that order). The House footprint and the East Yard had the lowest densities. It would be expected that few artifacts would have been found beneath the house, and the low density of material to the east may indicate either a conscious decision not to dispose of refuse towards the lane, or may indicate that that area was the location of a work yard and was kept clear of household refuse.

So why is a consideration of artifact densities important or exciting? Analyzing the collection in this way allows us to see that the two cellars contained similar fills in similar concentrations, supporting the conclusion that they were in use and abandoned at the same time. Further support for this conclusion will be presented below. It also shows us how the occupants ordered their yard space. The yard at the John Howland homesite, appears to have been very well ordered. Excavations carried out by Strickland and those carried out by Chartier in 2015 and 2016 have shown that the yard to the south of the house was laid out in what appears to be a classic open court arrangement, very classically English. Buildings were arranged around the east and west sides of the central courtyard, which had the front door of the house as its central focus. The yard space at the Joseph Howland site, by contrast, seems to have been very haphazardly used with refuse being concentrated on the south, north and west sides and very little on the east side. This may be a result of the lack of any need by Joseph and his family for an ordered work yard, as they seem to have used the outbuildings at the John Howland homesite, jointly with his parents. This left his

household and family in a very dependent state, which may also be reflected in the location of Joseph's House on a lower terrace in a somewhat poorer area of the property than that of his parents. Without any local or colony sponsored aid for the elderly or disabled, parents in the seventeenth century were very dependent on their children for support in their old age. As a result, parents would often withhold grants or land or inheritances to their children until after the death of the parent. Often if grants were made during a parents life, they included stipulations for the support of the parent, either as a member of their child's household, or as an obligation for the child to support the parent in the parent's house. The latter was the case following John's death, as Joseph was required to help support his mother in her household, until she moved away to her other son's house in Swansea where she eventually died. Archaeologically, in 2016, we found that the original Howland barn appears to have undergone a makeover in the later 17th century, after John's death, when it may have served at least partially as a threshing barn. It appears that after John died, Joseph continued to use the outbuildings on the east side of the lane. These buildings may have ceased to have been used after Joseph's death, as the Dew Pond house appears to possibly intersect a corner of the old barn. It is also built on a different alignment than the original buildings, indicating that the original buildings were gone from the site when the Dew Pond house (possibly Benjamin Lothrop's house) was built.

The gross distributions also highlight some trends that were further explored when specific classes were examined. The West Yard seems to have been the main focus of the concentration of architecturally related items, bones, and shells. The distribution of architectural items may indicate that the building collapsed to the west or that any disassembly was carried out primarily in the West yard. The concentration of faunal remains in the West Yard may indicate that this area was general food midden where as other household refuse was commonly disposed of elsewhere.

The South Yard yielded the highest concentrations of ceramics, glass, weaponry, pipes and husbandry equipment, items that are more intimately connected to the food serving and storage (ceramics and glass), possible mercantile activities (weaponry and pipes), and transport away from the home (husbandry).

The North Yard yielded other items associated with foodways (spoons, knives, kettles), items associated with transport away from the home (husbandry), and personal items.

The East Yard yielded tools and personal items, possibly representing a work area where activities were carried out and where items such as tools would have broken and personal items would have been lost.

One of the interesting things noted when the collection was cataloged was the abundance of certain types of artifacts that were found to occur in quantities not commonly seen on the average domestic site. These included hair combs, scissors, knives, spoons, gunflints, scale weights, bale seals, Portuguese ceramics, tobacco pipes, and burning glass lenses. The abundance and occurrence of these artifacts may indicate that the household was involved in some degree of mercantile activity, either on the local or regional level. A similar abundance of certain types of ceramics, specifically North Devon Gravel-free baluster jars, was noted at the John Howland site where it was attributed to his possible involvement in trade to the north, either in Maine or even further north.

Joseph Howland's Architecture

Joseph Howland's house looks like it measured 40' east to west by at least 22' north to south and

was a hall and parlor style. The pipe stem dates do not support the idea of two separate buildings. The building may have begun as a smaller single cell house that was enlarged to a hall and parlor, but overall the east and west cellars have the same material, just one was filled first. The house looks like it was deliberately removed versus burning down as well. Based on Deetz rudimentary drawing, it does not appear that either cellar nor the hearth line up with each other. It has to be concluded that, while Deetz may have recorded what he saw (or interpreted that he saw) it may not have been what was really there. The walls of the cellars could have shifted and what he recorded was the shift and not the true orientation of the walls, and he also admits that, while he did not see a brick apron on the east side of the hearth, it may have been there but had been removed. I think that what happened is that as he excavated he came up with the idea that there were two buildings, and then never changed his mind about it.

The house discovered by Deetz appears very similar to the Ezra Perry II house in Bourne. This house, mistakenly claimed by its excavator in 1927 to be Plymouth Colony's 1627 Aptuxcet Trading Post (aka the house at Manomet), appears to have begun as a single-cell cottage measuring 27'6" long (north to south) by 25'3" wide (east to west) with a hearth and associated chimney on the east wall and a large cellar beneath its western half. The building appears to have been later expanded laterally to the east with the construction of a 21' long (east to west) by 16'9" wide (north to south). This addition had a hearth on the western wall that was shared with the original house and a smaller cellar beneath the eastern half. The construction of the addition changed the house form from a cottage to a hall and parlor house with the original house serving as the hall and the addition being the parlor.

Joseph Howland's house may have had a similar evolution with the eastern half of the house, which may have measured 25' long (east to west) by at least 22' wide (north to south) with a 5' hearth on the western wall, being the original cottage. The addition of the western room (15' east to west), which would have been the parlor, transformed the structure into a hall and parlor house. This transformation may be evident in the wall that Deetz claimed to have found beneath the hearth, which could represent the original house's west wall versus an earlier hearth. It is possible that Joseph expanded his house in the 1680s when the maximum number of people in the original small house may have reached critical mass at over 9 people (**Table 32**). His son James may have remained in the house when he married in 1694, sharing it with his aging parents. After Joseph's death in 1703, his wife Elizabeth appears to have eventually moved to Barnstable to live with their daughter Abigail (Seabury). Benjamin Lothrop, the next owner of the property after Joseph's son James, may have begun by living in Joseph's house, eventually using parts of the original Joseph Howland home to build a new house on the east side of the lane. This could account for the window leads bearing that date of 1681 at the Dew Pond house site.

Construction of Joseph's house in what appears to be a less desirable location than the original John Howland house, also suggests that it was constructed while the original family homestead was still occupied and in use, making it likely that Joseph built his house soon after he was married, and not after his father's death a decade later. The presence of pipe stems with stem bore measurements of 8 and 9/64" (dating to around mid 17th century) support this interpretation. The possibility exists that Joseph's house or at least the house location, was the spot where John Jenney built his original house, thus accounting for the earlier pipe stems. Unfortunately, the only evidence to support this theory are the 8 and 9/64" pipe stems. The location itself is not consistent with where the early colonists situated their houses- they preferred high, dry knolls versus lower, possibly wetter areas. They had their choice of prime locations on which to build, and it appears that they favored the

knolls overlooking water with fresh water nearby. If, in the future, further excavations are conducted at the actual location of the house (the cellar holes and the hearth) and either a post-in-ground (earthfast) house is found beneath or close by to Joseph's House, with artifacts dating it exclusively to the first half of the 17th century, then the theory that this was John Jenney's original homesite would need to be reconsidered. I think it is much more probable that Joseph built his house near his parents on the next best land available.

CONCLUSION AND RECOMMENDATIONS

The excavations carried out first by Deetz and later by Wheeler have resulted in providing us with an excellent example occupation at a mid-17th to mid 18th century rural homesite. Joseph and his wife Elizabeth built the house ca. 1665 when they married with the couple possibly receiving the land as a wedding present from Joseph's parents. There may have been a verbal or implied understanding that Joseph would continue to assist his parents on the farm and would be responsible for them in their old age. The house may have begun as a small structure, as many newlywed or pioneer homes were in the 17th century, that the family expanded ca. 1680 when they had outgrown the small initial structure. Joseph's son James apparently continued to live at the site after Joseph's death. James, who does not appear to have been extremely active in Plymouth government affairs, sold the property to Benjamin Lothrop in 1735. Lothrop, a well-known merchant, appears to have kept some of his stock and may have processed animal skins that were later sold to tanners at the house. The house appears to have suffered some degree of fire, and was abandoned while Lothrop lived in it. Lothrop may have then built the "Dew Pond" house on the east side of the lane after the fire.

Unfortunately, the artifacts from the site are not easily distinguished by occupation. The occupants consistently used of the same yards for refuse disposal, making it hard to parse out what rubbish is associated with what household. For example, the book clasps date to the occupation of Joseph Howland, but, did Joseph dispose of them himself, or was it his son James, or did Benjamin Lothrop decide that they were too ratty and worn to be saved when he abandoned the house. Since we don't know who threw them out, we can't really say with any confidence what they meant to the owners.

That being said, we learned a great deal about the Native occupation (which wouldn't be affected by who lived in the house), animal husbandry, refuse disposal, and architectural styles in Plymouth Colony and Plymouth County, as well as being able to glimpse the material remains of all of the households that lived and died at the site. One of the most important portions of the assemblage is the Tin-glazed wares, especially the Portuguese ones, which are quite rare in New England (possibly because archaeologists lack the experience identifying them) but which speak volumes regarding the role of trading in the 17th and 18th centuries.

When Derek Wheeler initiated the excavations at the site, he had hoped to be able to locate where his mentor Dr. James Deetz had previously excavated. Knowing where Deetz dug would have allowed him to gain a better understanding of what Deetz found and the significance of the artifacts he had recovered. It is this investigator's opinion that Wheeler did, in fact, locate Deetz excavation areas, but that due to probable varied screening methods used in the past, he just didn't know it at the time. More importantly, Wheeler inadvertently investigated the yard area around the house, allowing us to gain a better understanding of how the households used the space around the structure that they lived, loved and died in. Future investigations could be carried out to definitely locate where Deetz's excavations were, but thanks to Wheeler, we have a much better understanding of where they weren't and where they most probably are.

It is recommended that efforts be made to continue the battle to drive the vegetation from off the site, allowing it to be more accessible for visitors. I would also recommend conducting limited excavations to locate once and for all where the house stood, and then to mark the location using fieldstones placed on the ground surface to outline the extent of the building. An interpretive kiosk or board should also be erected at the site showing what was found archaeologically.

**APPENDIX A
ARTIFACT CATALOG**