

University of Massachusetts Boston

ScholarWorks at UMass Boston

Graduate Masters Theses


Doctoral Dissertations and Masters Theses

5-2019

Set in Stone: Recontextualizing the Lithic Assemblage of a Seventeenth-Century Storage Cellar in Charlestown, Massachusetts

Anna M. Greco

Follow this and additional works at: https://scholarworks.umb.edu/masters_theses

 Part of the [Archaeological Anthropology Commons](#), [Indigenous Studies Commons](#), and the [Social and Cultural Anthropology Commons](#)

SET IN STONE: RECONTEXTUALIZING THE LITHIC ASSEMBLAGE OF A
SEVENTEENTH-CENTURY STORAGE CELLAR IN CHARLESTOWN,
MASSACHUSETTS

A Thesis Presented

by

ANNA M. GRECO

Submitted to the Office of Graduate Studies,
University of Massachusetts Boston,
in partial fulfillment of the requirements for the degree of

MASTER OF ARTS

May 2019

Historical Archaeology Program

© 2019 by Anna M. Greco
All rights reserved

“SET IN STONE: RECONTEXTUALIZING THE LITHIC ASSEMBLAGE OF A
SEVENTEENTH-CENTURY STORAGE CELLAR IN CHARLESTOWN,
MASSACHUSETTS”

A Thesis Presented

by

ANNA M. GRECO

Approved as to style and content by:

David B. Landon, Associate Director,
Fiske Memorial Center for Archaeological Research
Chairperson of Committee

Stephen W. Silliman, Professor, Department of Anthropology
Member

Heather B. Trigg, Research Scientist,
Fiske Memorial Center for Archaeological Research
Member

David B. Landon, Program Director
Historical Archaeology Program

Stephen W. Silliman, Chairperson
Department of Anthropology

ABSTRACT

“SET IN STONE: RECONTEXTUALIZING THE LITHIC ASSEMBLAGE OF A SEVENTEENTH-CENTURY STORAGE CELLAR IN CHARLESTOWN, MASSACHUSETTS”

May 2019

Anna M. Greco, B.A., Boston College
M.A., University of Massachusetts Boston

Directed by Dr. David Landon

Feature 43 is a domestic structure that belonged to the wealthy seventeenth-century merchant community of Charlestown, Massachusetts, and was excavated in the early 1980s as part of the Maudlin Archaeological District. The extant collection has remained in storage for the last thirty years, demanding a recontextualization of the site, both in provenience and in historical context. Primary sources portray an image of a predominantly European settler household; however, a counter-narrative emerges from lithics found within the assemblage. While the ultimate goal is to analyze the patterns of lithic sourcing and production in the Massachusetts Bay Colony, the findings hinge on the reconstruction of the site’s archaeological context. Initial archaeological interpretations did not focus on the locally-sourced lithics found within the assemblage as their provenience, like most of the collection, remains subject to debate. Through a series of distribution analyses, the ambiguity of the lithic assemblage is clarified, and its site provenience is reestablished. Upon establishing

context, this project employs a lithic analysis in order to reexamine early colonial interactions between European settlers and Native Americans and to evaluate the nature of the material relationship between the two communities as manifested in colonial assemblages.

ACKNOWLEDGEMENTS

As a descendent of colonialism, I have benefitted from privilege, and for this, I would like to thank and give respect to the Indigenous peoples whose history and material culture I have had the fortunate opportunity to study.

Personally, I would like to thank my partner, Dennis Nahas, for his constant support and for always being there to edit my papers. I am indebted to Joseph Bagley for introducing me to the site and mentoring me through the lithic analysis. I also want to thank my committee members Dr. Heather Trigg and Dr. Stephen Silliman for their inspiration and support throughout the program and thesis process. Many thanks to my advisor and committee chair, Dr. David Landon, for recognizing my potential and giving me a chance to succeed. Lastly, I would like to thank my fellow classmates for being the type of friends you need to get through graduate school.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS	vi
LIST OF FIGURES	viii
LIST OF TABLES	ix
Chapter	Page
1. INTRODUCTION	1
2. HISTORICAL BACKGROUND.....	10
The Massachusetts Bay Colony and Feature 43.....	10
“ <i>We neither feared nor trusted them</i> ”: Native American and European Relations.....	16
Lithic Practices in Native New England	22
3. SITE BACKGROUND AND DISTRIBUTION ANALYSIS	27
The Research Collection	27
The Excavation and Stratigraphy of Feature 43.....	33
Methodology	38
Results	40
Discussion	43
4. LITHIC ANALYSIS.....	47
Methodology	48
Source Materials	48
Lithic Tools and Debitage	55
Results and Discussion.....	58
Ballast Flint Debitage	61
Ballast Flint Tools	65
Cores	70
Locally-Sourced Debitage	71
Locally-Sourced Materials	74
Locally-Sourced Tools	78
5. CONCLUSION.....	81
REFERENCES	86

LIST OF FIGURES

Figure	Page
1. Plan of the Maudling Archaeological District.....	4
2. Examples of seventeenth-century ceramics excavated from Feature 43.....	29
3. Fragment of blue and white Portuguese tin glaze earthenware.....	32
4. Sample of diagnostic seventeenth-century artifacts.....	33
5. Plan of Feature 43.....	36
6. Results of the distribution analysis by depth.....	41
7. Choropleth map of locally-sourced chipped stone.....	45
8. Choropleth map of colonial deposit.....	46
9. Debitage from Feature 43 organized by source material.....	52
10. Debitage from Feature 43 organized by source material.....	53
11. Debitage from Feature 43 organized by source material.....	54
12. The anatomy of a lithic flake.....	56
13. Pie chart of Feature 43's lithic assemblage by source material category.....	61
14. Ballast flint strike-a-light and gunflint.....	68
15. Lithic Diagram.....	69
16. Pie chart of locally-sourced lithics by material.....	76
17. A sample of locally-sourced tertiary flakes from Feature 43.....	77
18. Braintree slate Stark point from Feature 43.....	79

LIST OF TABLES

Table	Page
1. Lithic Morphological Forms by Material Category from Feature 43.....	59
2. Triple Cortex Typology of Feature 43 Lithics by Material Category	59
3. Weight (g) of Whole Flakes by Material Category	60
4. Weight (g) Statistics of Worked Ballast Flint and Locally-sourced Lithics.....	60
5. Triple Cortex Typology of Ballast Flint Whole Flakes	62

CHAPTER 1

INTRODUCTION

And an Indian said, before the English cam, that a white people should come in a great thing of the sea, and their people should be loving to them and receive them; but if they did hurt or wrong the white people, they would be destroyed. And this hath been seen and fulfilled, that when they did wrong the English they never prospered and have been destroyed. So that Indian was a prophet and prophesied truly (Simmons 1986:68, an anecdote told by a Wampanoag woman of Martha's Vineyard and recorded by Cotton Mather, 1672).

When combing through the Boston City Archaeology Program's collection of field notes and lab sheets taken during the excavation of Feature 43, also known as the James Garrett homestead of the Maudlin Archaeological District in Charlestown, Massachusetts, I came across a context notecard with clear instructions: "throw out prehistorics." While this short, handwritten phrase raises pragmatic questions (*how much was thrown out? are the lithics only a fraction of what was originally collected?*), its message communicates a more consequential lesson to be understood: the definition and identification of "prehistoric" removes certain artifacts from analytical consideration, and thus contributes to the erasure of Indigenous peoples from historic sites. This attitude towards Native American heritage and history, particularly in its relationship to colonial New England, has experienced a significant transformation since the excavation of Feature 43 in the 1980s. The importance of this

project stems from the theoretical developments that have taken place over the last three decades.

The prehistory/history divide in archaeology identifies the introduction of European colonialism as the beginning of modern history in North America and in practice labels Native American sites and material culture as prehistoric and European sites and artifacts as historical. This approach minimizes the relationship between the two periods and creates "segregated ethnic domains" of the past and its material culture (Lightfoot 1995:202). As Lightfoot (1995) discusses, the prehistoric-historical dichotomy in archaeology, in general, leads to detrimental consequences when studying early colonial sites, such as the erasure of coexistence, agency, and political dynamics in culturally pluralistic communities. This is perpetuated when Native lithics found in colonial contexts are implicitly classified as "prehistoric." Historical archaeology in New England has a long history of over-applying the prehistoric-historical divide to the classification and study of Native American lithics from colonial contexts, which some have been unpacking for the last few years (Hart 2004; Lightfoot 1995; Silliman 2009).

The separation of materials, time periods, and peoples imposes racial segregation onto the past, especially during time periods when such segregation was not fully realized (Smedley and Smedley 2011). The words "prehistoric" and "historical" are not without utility; however, their use also amplifies the dissolution of Native Americans from historical environments and coincides with the extinction myth of Indigenous peoples in New England (Gould 2013; Hart 2004; Panich 2013; Schmidt and Mrozowski 2013). As Hart (2004:59) explains, post-contact Native peoples become "visitors but not residents" once European

peoples settle the area. Handsman (1991:15, as referenced in Hart 2004) furthers the sentiment, stating, "Native Americans are written out of history and the present-day, even as their long-term presence in prehistory is acknowledged." The erasure of Indigenous populations did not start with historical archaeology but is further implicated by the discipline when proper attention to the prehistory/history dichotomy is denied (Schmidt and Mrozowski 2013).

This thesis addresses this issue by analyzing the lithic assemblage of Feature 43. Feature 43's lithic assemblage consists of chipped stone, primarily debitage. Is the chipped stone the result of a nearby ancient Indigenous site that was disturbed during construction of this early Boston resident, or is it part of the early colonial deposit? In the early 1980s, as part of Boston's Big Dig project, Dr. Steven Pendery (1984:17; 1987) and his team excavated large swaths of Charlestown's waterfront, discovering multiple sites dating from the Late Archaic period to the late nineteenth century. The site clusters were divided into districts, including the Maudlin Archaeological District of which Feature 43 is a part (Figure 1). "The Maudlin Street Archaeological District is composed of two historic period sites, the Carey houselot and Smith-Mardlin houselot sites" (Pendery 1984:1). Feature 43 was a wood-built, rectangular domestic structure, approximately 4 meters wide by 5.2 meters long, located on the southern boundary of the Maudlin Archaeological District (Pendery 1984, 1987; Figure 1). The seventeenth-century site of the Maudlin Archaeological District was excavated in two phases between 1982 and 1983. Pendery (1984, 1987) concluded that this site was either a

“storage cellar or servant’s quarters” that was constructed, occupied, and filled between 1640 and 1660. This makes Feature 43 one of the earliest colonial sites in the greater Boston area.

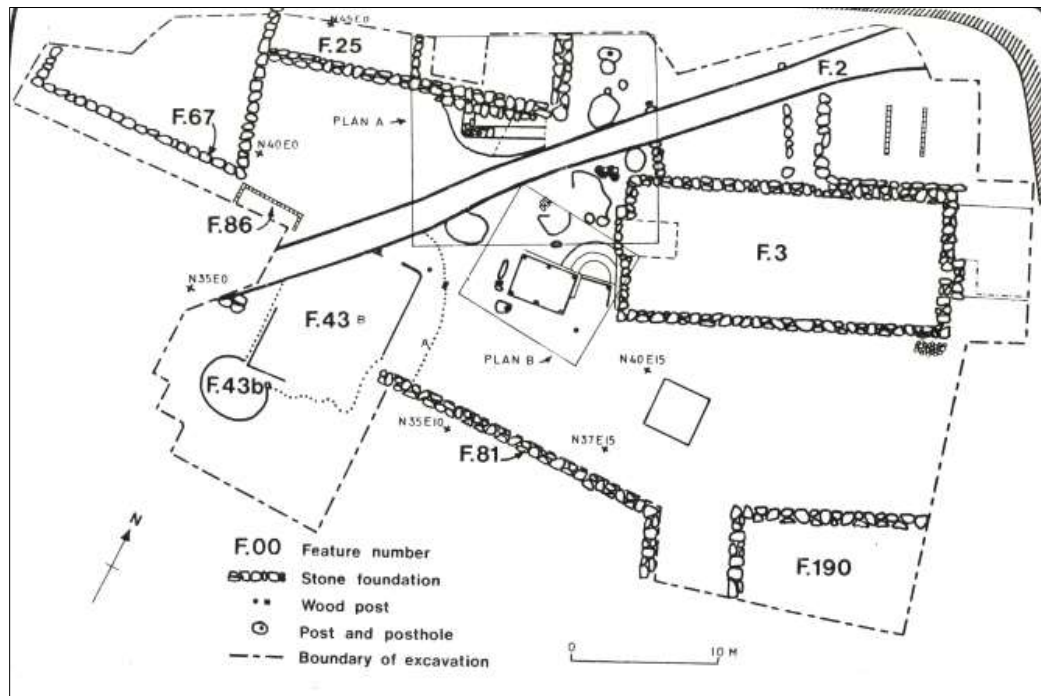


Figure 1. Plan of the Maudling Archaeological District. Details Feature 43 and its relation to other features encountered by Pendery and his team (Pendery 1984, 1987).

Collections-based research on a seventeenth-century domestic site excavated and studied in the 1980s permits the discussion of theoretical and methodological developments by viewing Feature 43 through the present-day lens of post-colonial studies. The goal of this thesis is to build upon the previous analysis of Feature 43 by incorporating the lithic assemblage into the site’s narrative, addressing the limitations of the prehistoric- historical divide, and assessing the validity of applying preconceived expectations of the prehistoric- historical divide onto material culture. Firstly, in order to position the chipped stone artifacts in their proper place in the site’s timeline and address the contextual age of the lithic artifacts, distribution analyses needed to be conducted. Feature 43 was built in an area that

has thousands of years of Native American history, and lithics in seventeenth-century contexts are often seen as a result of that history. Feature 43 could be built on top of or into a preexisting Native site that was greatly disturbed by its construction and deconstruction. Once the context is established, the characteristics of the lithic debitage and tools can be analyzed in reference to its appropriate provenience as it relates to Feature 43. The lithics from Feature 43 are a material that molds to the daily practices employed by multiple cultural groups at a time when there is great social transformation associated with colonialism.

To understand the intricacies of collections-based research, the disparities between and evolution of popular archaeological theories must first be acknowledged. Throughout the twentieth century, in an effort to become a recognized and independent subfield of archaeology, historical archaeologists introduced the study of colonial European culture (Lightfoot 1995). Meanwhile, prehistorians continued to develop methods and theories to study ancient Native American sites. From the discrepancy in topics, a divide emerged and grew (Hart 2004; Lightfoot 1995), thus, beginning a trend in historical archaeology of excavating colonial sites with an emphatic European cultural focus. Similarly, Pendery (1984, 1987) uses Feature 43 to investigate the rise of the European merchant class in colonial Charlestown. Pendery's (1987:1) dissertation "examines the archaeological and documentary evidence for community development, settlement patterns, land use, architecture and consumer behavior for different status groups in the Massachusetts Bay seaport of Charlestown between 1630 and 1760." Consequently, the lithics were not analyzed in either the site report or his dissertation. The lithics were included in catalogs and many pulled from their original context bags perhaps for further study. But again, any intention or

conclusion of lithic analysis was not mentioned in either the site report or the dissertation. The reason for omission is not specified, though presumably the lithics were not specifically studied as they were outside the scope of Pendery's dissertation topic.

Pendery's (1984, 1987) focus on the merchant class omitted the relevance, if any, of the lithic assemblage and the corresponding cultural influence of Native Americans. Pendery's research is symptomatic of a larger systemic problem in historical archaeology, the marginalization of those less visible in the archaeological record. When archaeologists consistently study one group of people over another, that one group becomes a fixture of American heritage while the other remains silenced.

At the heart of this collections-based thesis is the reconciliation of older information with new knowledge. Barbara Luedtke (2002:3), an authority on Native American material culture in Massachusetts, estimated that in 1974, only nineteen Native American sites in the Greater Boston area were known to archaeologists, but by 2002 that number more than quadrupled. There is simply more information and comparative data regarding the Late Woodland and early colonial periods available today. The increased understanding of Native sites and the continued research on European settlements has led to a convergence of interests. Though often strictly divided, the Late Woodland and the early colonial periods have a very fluid relationship, one that often gets clouded by the prehistory-history dichotomy (Hart 2004; Lightfoot 1995; Silliman 2009). As more sites that bridge the Late Woodland to early colonial divide are found, we must start to critically analyze the classification of "prehistoric" lithics at "historical" settlements.

In recent years, archaeologists have acknowledged this divide and its effects, leading to a resurgence of studies that tackle the social complexities of colonial settlements (Gould 2013; Hart 2004; Jordan 2015; Lightfoot 1995; Loren 2008; Panich 2013; Silliman 2009; Voss 2008). The demographics of North American colonies consisted of various Native populations, multiple European nationalities, and diverse African peoples (Lightfoot 1995; Voss 2008). They were culturally pluralistic communities, often brought together by oppressive structures of servitude, labor, and enslavement. It is important to note the cultural pluralism of the early colonial period as the modern lens through which colonial sites are studied today is descended from and connected to the multi-cultural interactions of settlement communities (Panich 2013; Smedley and Smedley 2011). This cyclical relationship influences archaeology's handling of the prehistoric-historical dichotomy. The artificial divide remained commonplace in the 1980s but has, at the very least, partially deteriorated today, inducing the historization of New England's Indigenous past and present. In this light, the nuances of the lithic assemblage from Feature 43 presents potential insight into the agency of Native Americans living, working, and trading with the English. First, however, the archaeological context of the site must be confirmed.

Trade and labor provided a gateway for immediate and continuous multi-cultural interactions, daily activities that defined the merchant community of Charlestown. In the seventeenth century, particularly the early seventeenth century, the relationships between Native Americans and European settlers were not etched in stone, not deterministic, and not unbalanced (Cobb 2003; Lightfoot 1995). It is important to note the momentous change introduced with English colonialism. As Cobb (2003:1) explains, “contact situations

transformed the material cultures of the societies involved, and the reproduction of those societies in new ways.” The role of stone tool technology among Indigenous groups remains an enigma to studies regarding English colonialism (Cobb 2003). Assumptions that Native peoples abandoned lithic technologies in favor of metals remain prolific, though some have worked to counter such arguments (Bagley et al. 2014; Cobb 2003; Hayes 2013; Nassaney and Volmar 2003). Nassaney and Volmar (2003) argue that the adoption of metals among Native populations was highly selective and usually with a specific function in mind. Today it seems common sense that it would take more than colonialism to derail a tradition practiced for thousands of years, passed down through hundreds of generations. The presence of lithic technology within a wealthy English merchant community, the material associated with a marginalized people alongside the material of a people responsible for said marginalization, presents a juxtaposition of perspective. In an environment with laws, policies, and attitudes all aimed at the acculturation and assimilation of an entire group of people, lithics that were once a commonplace daily activity translate into a cultural tradition that counters the erasure of Indigenous peoples. By reestablishing Feature 43’s lithic assemblage in its proper context, we can shed light on the effects colonialism has had on the Indigenous population of coastal Massachusetts.

The next chapter provides a historical background of the site and the relationships between Native peoples and European colonists that characterize seventeenth-century New England. Special attention is given to interactions that revolve around trade and labor, as they are hallmarks of the merchant industry, and the discussion reviews in depth the realities of those interactions, such as servitude and enslavement. Afterwards, Chapter 3 dives into the

excavation of Feature 43 and aims to reconstruct the stratigraphy of the domestic structure. The excavation techniques are explained, and previous research is summarized. Chapter 3 also analyzes the distribution of artifacts. This section includes the methods used to reconstruct the stratigraphic and archaeological context of the lithic assemblage and colonial deposit and finishes with a discussion of the results. Chapter 4 begins with a presentation of lithic analysis techniques, including source material identification, morphological typology, and triple cortex typology. All lithic terms and classification criteria are defined in this section. Chapter 4 also notes the results and provides a discussion of the lithic data. The discussion in Chapter 4 offers insight into colonial activities, emphasizes themes of cultural continuity, and examines significant artifacts. In total, Chapter 4 culminates the interpretation of the site's context and lithic assemblage and questions the relevance of Feature 43 to other colonial sites of New England. Lastly, Chapter 5 finishes with the conclusion and closing remarks regarding the importance of Feature 43 and collections-based research.

CHAPTER 2

HISTORICAL BACKGROUND

The Massachusetts Bay Colony and Feature 43

Upon receiving a Royal Charter in 1628, the Massachusetts Bay Company founded the Massachusetts Bay Colony and established settlements in Boston, Salem, and the surrounding areas by 1630 (Vaughan 1965). Governor Winthrop arrived in the colony in 1630, heralding in the momentous wave of Puritans to the “New World” known as the Great Migration (Taylor 2001; Vaughan 1965). In 1634, each town appointed an overseer of powder and shot, and the General Court encouraged settlements to enlarge and improve their military installations (Vaughan 1965). No doubt the construction of the battery in Charlestown in 1634 was part of these efforts. In 1638, ship merchants Captain Augustine Walker, Captain James Garrett, and carpenter Steven Fosdick received permission from the Massachusetts Bay Colony to build a quay for their personal estates and wharf on the Boston harbor shoreline, adjacent to the fortified battery that was previously built in 1634 (Book of Possessions 1638). The shoreline quay in Charlestown became known as Sconce Point and the wharf as Wapping Dock, presumably named for the London neighborhood from which Captain James Garrett emigrated, Wapping Street (Record Commissioners 1883:141). The

area was prime real estate for the Charlestown merchants. It offered easy access for water transportation, salt hay for livestock, and space for commercial development (Pendery 1987).

Map referencing and deed descriptions conducted by Pendery (1984, 1987) places Feature 43 directly on Captain James Garrett's parcel. Garrett's lot included "one dwelling house with a garden plott and a yard" that neighbored the estates of Captain Augustine Walker and Steven Fosdick (Massachusetts Archives Collection 1603-1799, Volume 2 Colonial 1638-1720, Roll 69:256). The Garrett household included his wife Deborah, his children Mary, Priscilla, and James, and at least two servants. While the domestic structure may have stood specifically on Captain James Garrett's land, his lot was repeatedly divided and sold to various tenants after 1656, upon his return to England. Additionally, the seventeenth-century records of the Sconce Point estates are vague descriptions at best. Lot descriptions from the properties listed in the Charlestown Book of Possessions, or Charlestown Land Records, are lacking complete details and only describe the properties in reference to adjacent properties or land features (Record Commissioners 1883, ii-v).

Most likely, Feature 43 was constructed as either a storage cellar or a temporary home while a more permanent house was built for the occupants (Cummings 1979; Pendery 1984, 1987). When colonists first arrived in Massachusetts Bay, many constructed makeshift shelters until suitable houses were built. The temporary shelters were typically subsurface burrows or cellar-type, rectangular pits in the ground; the walls were lined with timber and the floor with planks (Cummings 1979:18-20). While Feature 43 may be one of these early makeshift shelters, which would explain why it was later used as a refuse pit, cellars became widely popular in the seventeenth century and became a characteristic feature of New

England homes by 1700 (Cummings 1979:30). These substructures were often used for provision storage, as a larder, for dairying, and as service rooms. By reviewing oral tradition and probate records from seventeenth and eighteenth-century Rhode Island, Fitts (1996) notes that enslaved individuals were frequently given quarter within a house's cellar. From an archaeological perspective, the physical features between a storage cellar and a makeshift shelter are probably too nuanced for one to tell the difference, especially from remnant site reports and field notes. The traditional custom of repurposing storage cellars may be why Pendery (1984, 1987) concludes that Feature 43 could potentially be a servant's quarter as well.

Feature 43 corresponds to the Sconce Point quay, but due to urban development, it is the sole surviving deposit relating to the early colonial landscape of Charlestown's waterfront, meaning its relationship to other structures remains uncertain. In 1656, Garrett sold his house and land to Samuel Beadle and returned to England with his family (Wyman 1879; Record Commissioners 1883:141). However, Garrett continued trading in New England and remained active in the Massachusetts Bay Colony (Massachusetts Archives Collection 1603-1799, Volume 2 Colonial 1638-1720, Roll 60:95-109). James Hull, mint master and treasurer of the Massachusetts Bay Colony, assumed Garrett's death at sea in a journal entry dated April 1658 when he received word that his ship never arrived in London (American Antiquarian Society 1857). In 1660, Samuel Beadle sold the property to John Drinker, who mortgaged the estate back to Beadle until 1675 when the lot was repeatedly divided and sold to dock workers in Charlestown (Pendery 1987; Wyman 1879). Given the deed history, the movements of merchants, and the construction of Feature 22, it is probable

that the seventeenth-century deposit associated with Feature 43 was a communal effort rather than the product of a single household. Garrett's return to England and his eventual death predate some of the deposits (B and C), suggesting further that the refuse fill may be associated with multiple households. Feature 43 likely belongs to a colonial community in the middle of creating a maritime economy and developing an urban settlement, as evident by the early artifacts connected with transatlantic trade and the quick succession of construction and abandonment of the feature.

Early colonial efforts in New England are characterized by the English's quest for land, a subsequent growing shortage of labor, and an economic depression threatening success of the colony (McWilliams 2007; Smedley and Smedley 2011). At the forefront of the Massachusetts Bay Colony's political economy were the merchants of Charlestown. Merchants, displaced by the English Civil War (c. 1642-1651), settled in the Massachusetts Bay Colony and explored new markets in hopes of relieving the early economic depression (Hunter 2001; McWilliams 2007). Due to the disruption in European trade caused by the war, colonists in the Northeast relied on non-European markets and Native trading routes (Hunter 2001). Subsequently, merchants had a significant and influential role in establishing and shaping Native American-European affairs in the expanding colonies.

With the establishment of the Massachusetts Bay Colony came the globalization of European goods and the rise of a merchant power, but also the acceptance of people as capital. The story of Sconce Point, from a European heritage perspective, tells the story of a developing frontier maritime industry, with evidence of trade goods originating from across the Atlantic, from Portugal to the West Indies (Gomes and Casimiro 2013; Hunter 2001;

McWilliams 2007). Yet, underlying the wealth of the emerging merchant industry of early colonial Charlestown was the capital of trade and labor, specifically of people. According to historical records, Garrett had at least two servants who died at sea (Frothingham 1845). However, the details regarding Garrett's servants are unclear. There is not enough documentary evidence to establish whether the servants were members of the household in England as well as in Boston or to determine from where they originated. The only mention of the servants is a record of their death at sea off the coast of "Cales" in October 1645 (Frothingham 1845; Joslyn 1984; Wyman 1879:403). Additionally, it is unclear to what city or port "Cales" refers, as in the seventeenth century the English language did not have standardized spelling, but perhaps corresponds to Calais in France or Portus Cale in Portugal. Without further evidence, it would be equally true that the servants in Garrett's household were European, African, or Native-American, and each option has a very different analytical implication. While the details of Garrett's household may remain murky, his was only one lot of many on Sconce Point, and merchants, including Garrett, were not the sole occupants of the structure and area during the seventeenth century.

Pendery (1987) estimates that approximately one-third of the wealthy class in colonial Charlestown employed enslaved individuals. A member of the merchant community, Samuel Maverick, exchanged Pequots captured in war for enslaved Africans from the West Indies in 1638 (Manegold 2010; Pendery 1987). James Garrett and his neighbor Augustine Walker, as fellow merchants in the area, knew Samuel Maverick. Garrett and Walker assisted the Massachusetts General Court and oversaw the administration of Captain John Howsen's estate in part to Samuel Maverick in 1652 (Massachusetts Archives Collection 1603-1799,

Volume 2 Colonial 1638-1720, Roll 60:95-109). The Trans-Atlantic Slave Trade Database (2016) places incoming shipments of enslaved individuals to Boston as early as 1645. McWilliams (2007:51-52) claims the first trading trip to Barbados, for the Massachusetts Bay Colony, took place in 1641, and by 1645 New England colonists were trading enslaved Africans in exchange for goods. In the fall of 1657, James Garrett's final voyage carried Reverend Thomas Mayhew and some of his Indian converts to England to increase support for missionary efforts on Martha's Vineyard (American Antiquarian Society 1857). In many ways, New England merchants were at the forefront of human trade and ignited the culture of forced labor and slavery that colored the colonial experience (e.g.: Hunter 2001; McWilliams 2007). Labor in the early seventeenth century did not follow neatly defined rules; concepts of race and servitude were only beginning to be explored and formed (Smedley and Smedley 2011). And the merchants of the Massachusetts Bay Colony, such as Maverick, Walker, and Garrett, were at the vanguard of this development as they continually engaged with an economy that treated people as capital.

The Massachusetts Bay Colony disrupted the existing power relations between Indigenous tribes. Following the English Civil War, at least 20,000 English emigrants journeyed to the new colony over the next decade; this wave of immigration became known as the Great Migration (Newell 2009; Taylor 2001). By 1670 in southern New England, due to increasing immigration and the widespread disease devastation in Indigenous communities, colonists outnumbered Native Americans three to one (Taylor 2001:197). The influx in population added stress to already mounting tensions between Native Americans and European settlers. It is not a secret that the English Puritans and Indigenous peoples of

Massachusetts clashed culturally, economically, and politically throughout the seventeenth century, frequently to the point of violent outbreaks, which eventually culminated in King Philip's War in 1675.

“We neither feared nor trusted them”: Native American and European Relations

The phrase “we neither feared nor trusted them” by Puritan minister Reverend Higginson in reference to the Native population of New England is perhaps the best explanation of the English's contradictory attitude towards Indigenous peoples, an attitude that simultaneously promoted segregation and paternalism (Vaughan 1965:96). By the 1620s, the Indigenous population of the Northeast became enveloped by European powers, the Dutch to the southwest, the English to the east, and the French to the north (McBride 1994; Richmond 1994). As European populations swelled into the colonies, Native Americans were exposed to epidemic diseases, shifts in political stability, and the pressures of trade and looming warfare (Johnson 2000a; Kavash 1994; McBride 1994). Richmond (1994:106) describes the first 100 years of colonization as “devastating and shattering for Native peoples, who were forced to face damning decisions.” The Pequot and Narragansett chose to oppose, the Mohegans and Wampanoag allied with the English, and many others simply sold their land and retreated (Richmond 1994:106). Richmond (1994) explains that 1640-1660, after the Pequot War and before King Philip's War, is often viewed as a stable time period in European-Native American relations; however, this is exclusively the European perspective.

Secularly, English settlers held dear the philosophy of possessive individualism, which emphasized that a man's freedom and independence were a direct reflection of his

property (Smedley and Smedley 2011). Religiously, Puritans believed that the land was a gift from God, waiting to be tamed by their Protestant faith, along with its inhabitants (Taylor 2001). The combination of these two cultural ideologies contributed to the removal of Native peoples from their ancestral lands and continued to compound tensions between the English and their neighbors for decades to come. Governor John Winthrop avidly supported the doctrine of *vacuum domicilium*, which justified the removal of Indigenous peoples' land on the basis of ineffective agricultural practices (Newell 2009; Vaughan 1965). As Winthrop (Perley 1912:17; Taylor 2001:192) stated in his own words:

as for the Natives in New England, they inclose noe Land, neither have any settled habytation, nor any tame Cattle to improve the Land by, and soe have noe other but a Naturall Right to those Countries, soe as if we leave them sufficient for their use, we may lawfully take the rest.

At a time when jurisdiction over land needed to be secured, the English supported rules and regulations to control the behavior of Native Americans by limiting their freedoms in the colonial environment.

Upon settlement of the Massachusetts Bay Colony in 1630, the general court passed laws and regulations minimizing the coexistence between the two peoples and expanding their military strength. All English men were required to be skilled in the use of firearms and settlements had to appoint a master gunner (Vaughan 1965). In addition to these measures, the General Court passed a law requiring each town to establish a trading post in order to restrict the invitation of Native Americans into settlements and prohibited all arms trades with Indigenous peoples (Vaughan 1965). On the one hand the English limited access to colonial settlements yet on the other continued to rely on the Native population for

commercial trade. In the first decade of the colony, there were a series of skirmishes, close-call conflicts, and warfare between the English and Native Americans. In the Spring of 1630, Narragansett and Massachusett peoples attempted to cut the English colony off from interior trade, but their efforts were thwarted by John Sagamore, a Wampanoag ally to the English. In August of 1631, Captain Underhill and 20 musketeers were sent to disperse a large group of Native men, including 10 sagamores (Vaughan 1965:96-102). The most notable of these early conflicts is the Pequot War (1636-1638), which greatly impacted the quality of life in New England under English colonialism (Hunter 2001; McWilliams 2007; Newell 2009; Smedley and Smedley 2011). At the close of the Pequot War, a war brought about through competition trade and political shifts in the Connecticut River Valley and led to the massacre of over 400 Pequot individuals, at least 250 captives, including women and children, were brought to the Connecticut and Massachusetts colonies to be distributed among English households as “servants” (Newell 2009). These conflicts drastically changed the way English settlers viewed Native Americans and primed the idea of the “other” that would lead to a racially-defined hierarchy.

While the violence ensued, the expansion of colonial settlements consumed land that required labor. During the seventeenth century, the dominant form of non-white labor was that of enslaved Native Americans (Newell 2009:33). By King Philip's War in 1675, Native Americans frequently labored for colonists “to clear stumps, build fences and stone wall, and harvest fields” (Silverman 2001:624). Though a struggle to secure, Native American labor quickly became regulated by law. By 1641, Gov. John Winthrop and the Massachusetts General Court approved the *Body of Liberties* law which permitted the enslavement of

individuals who were either captured in war, sentenced to servitude, or sold into slavery (Higginbotham 1978; Newell 2009). In 1647, the court revised *Laws and Liberties* to include kidnapping and man-stealing as a capital crime. The need for such regulation suggests that the dependence on slave labor and the coercion of Native Americans into servitude was a prevalent issue in the Massachusetts colonies.

Wars plagued the first decades of English colonial endeavors, and settlers knew they could enslave those that were captured and trade them for those already enslaved. As previously mentioned, one of the earliest known incidents of slave trade in Massachusetts occurred under this perception by Samuel Maverick in 1638, even before the *Body of Liberties* law was established in 1641. Newell (2009) explains that by the 1640s, Winthrop was receiving requests to wage a battle against the Narragansett for the sole purpose of procuring more Indigenous workers as war captives. In a revised treaty with the Narragansett in 1646, the English claimed they had a right to ship out any Native American that harbored, protected, or gave refuge to those accused of crimes in exchange for enslaved Africans (Newell 2009). Enslavement only increased from the mid-seventeenth century. In 1700, Native Americans by Massachusetts Bay protested Englishmen's "drawing them to consent to covenant or bind themselves or children Apprentices or Servants for an unreasonable Term in pretense of, or to make Satisfaction for some small debt contracted" (Silverman 2001). English merchants frequently forced Indigenous individuals into service by allowing them to accrue debts, then demand the balance and bring them to court when they could not afford to pay (Newell 2009; Silverman 2001). Bonded service gave Englishmen direct control over the Native American body and an opportunity to regulate their conduct (Fitts 1996; Silverman

2001). Bonded service provided a means by which to simultaneously subjugate and assimilate the non-English. It was, at its core, paternalism through surveillance.

In the following decade, the court began punishing Native Americans brought before them with indentured servitude or enslavement (Newell 2009). In 1650 and 1659, the Connecticut General Court and the General Assembly of Rhode Island, respectively, passed laws that stated if a Native American failed to pay restitution for their crimes against the English, they could be seized and sold into slavery (Newell 2009). In Silverman's (2001) review of merchant accounts in the early eighteenth century of Martha's Vineyard, he repeatedly encounters records of merchants suing Native Americans for unpaid debts to be paid back through labor. Ship merchants are among the many who established this practice (Silverman 2001). Although indenture was presented as a time to work off debts, Native servants were regularly targeted for legal troubles and often had their terms extended, entrapping Native Americans into a cycle of poverty that would continue into the centuries to come (Silverman 2001).

While enslaved labor may not have affected all Native populations, those who escaped servitude were often forced into missions aimed to convert Native Americans to the Christian faith and the Puritan work ethic (Newell 2009; Taylor 2001). By 1650, Puritan missionaries, such as Reverend John Eliot, sought to convert the indigenous inhabitants of New England and established praying towns aimed at assimilating Native Americans to Christian traditions (Richmond 1994; Taylor 2001). The Puritan Indian Policy aimed to acculturate and assimilate Native Americans into the English way of life, but also restricted the same level of coexistence (i.e., intermarriage, social interaction, employment, etc.)

employed in other New World colonies (Newell 2009; Taylor 2001). Even though the formal mission of Praying Towns was to assimilate Native Americans, the English colonists did not accept Native Americans as equals in their society.

The prejudice with which the Massachusetts Bay Colony approached the interactions between the English and Native Americans would have lasting effects. By the eighteenth century, the labor class was exclusively populated by enslaved Africans and Native Americans (Fitts 1996). Throughout the eighteenth and nineteenth centuries, nearly all Native Americans in southern New England had been in some way affected by indentured servitude or forced labor, whether by legal authority or institutionalized poverty (Silverman 2001). The roots of this racialized labor force extend into the first years of the Massachusetts Bay Colony, during a time that is often regarded as peaceful when in reality is marked by rising tensions and violent outbreaks.

The economic benefits of trade, the need for labor, and missionary efforts brought together diverse communities creating culturally pluralistic settlements. Colonial law supported efforts to bring Indigenous bodies under English control, by regulating physical movement through trading posts, praying towns, and bonded servitude. The English employed conflicting approaches of segregation, assimilation, and paternalism towards the Indigenous population. It is under these strained interactions that Native Americans became entangled in colonial settlements, living and working with, for, and among the English. The intersection of trade and labor in early colonial Charlestown ultimately underlies the site's contextual environment. While the lithic traces of Native Americans at Feature 43 may be minimal, as a structure that stood during this period, it provides an opportunity to actualize

the reality of colonial settlements, a reality of cultural pluralism. Thus, the refuse fill of Feature 43 is considered a reflection of the culturally pluralistic diverse merchant community as a whole.

Lithic Practices in Native New England

By the seventeenth century, the largest groups of people living in southern New England were the Massachusetts, Wampanoag, Nipmuc, Narragansett, Pequot, Mohegan, and Niantic. Although these groups remained autonomous and did not belong to a central political system, they were linked linguistically as Algonquian peoples (Bragdon 1996; Johnson 2000b; Kavash 1994; Vaughan 1965). The peoples of southern New England were culturally diverse yet engaged in dynamic social-political organization that allowed for some fluidity in cultural identity (Johnson 2000a, 2000b, Kavash 1994; Vaughan 1965). A major issue with retelling Native American history, especially in New England, is that much of the historical evidence is recited through the European voice (Johnson 2000a; Richmond 1994; Vaughan 1965). While archaeology aims to clarify European assumptions, much of what is known regarding the social, economic, and political systems of Indigenous peoples comes from colonial records written by European colonists. In contrast to colonial records, lithic studies afford an understanding of an intimate daily cycle of activity from the Native American experience, entailing manufacture, use, maintenance, and finally discard.

From the Middle to Late Woodland period, before the arrival of European colonists, there was a shift in the types of source materials used for lithic production (Luedtke 2002; Ritchie 2002). While the archaeological record of the Middle Woodland period presents a

diversity of lithic materials traded across North America, the Late Woodland period is characterized by a preference for locally-sourced materials. “The long distance transport of lithic materials such as chert and jasper from outside the southern New England region, so characteristic of the latter part of the Middle Woodland period was replaced by increased use of locally available stone in the Late Woodland period, after about 1200 BP” (Ritchie 2002:108). Ritchie (2002) hypothesizes that this trend reflects the growing cultural ties of Native American communities to their local environments and increased territoriality, the latter of which defines the Late Woodland period (Bragdon 1996; Luedtke 2002; Ritchie 2002). Bragdon (1996) suggests that the post-contact introduction of foreign European influences heightened the territoriality of the Late Woodland period.

At the Lucy Vincent site on Martha’s Vineyard, the Late Woodland lithic assemblage of over two thousand artifacts consisted predominantly of rhyolites (47.75%) and quartz (36.59%), as well as small amounts of quartzite, chert, chalcedony, jasper and basalt (Chilton and Doucette 2002). Ritchie (2002) analyzed 116 Levanna and Levanna-like projectile points from twenty-one Late Woodland and early colonial period sites located in the Sudbury-Assabet-Concord drainage area and concluded that 40% were made from rhyolites quarried from the Lynn Volcanic Complex just north of Boston. Other materials included quartz (20%), Blue Hills hornfels (12%), quartzite (7%), New Hampshire hornfels (1%), New York chert (10%), Melrose green rhyolite (5%), and Saugus jasper (5%) (Ritchie 2002). While the assemblage included non-local materials from New York and New Hampshire, the collection was dominated by locally-sourced stone (Ritchie 2002).

At the Sleepy Hollow site, a Native American planting field in Concord dating to c. 1635, the lithic assemblage of over one thousand artifacts primarily consisted of gray and black rhyolites and black hornfels, all local resources (Volmar and Blancke 2002). Luedtke (2002) compared the lithic assemblages between two Late Woodland sites on the north and south ends of Thompson Island in Boston Harbor. The lithics from the northern site included stones quarried from north of Boston, from the Middlesex Fells area, such as Saugus Jasper and Melrose green rhyolites. Stone from the Blue Hills area south of Boston, such as hornfels, dark gray rhyolites, and Braintree slates, populated the southern site. From this, Luedtke (2002) concludes that the difference in lithic materials used at different sites in such close proximity reflects potential efforts to communicate group affiliation and identity. The hyper-regional preferences for lithic materials on Thompson Island are accentuated among Indigenous peoples whose territories straddle the Charles River of Boston, the natural divide between the northern and southern quarries (Luedtke 2002; Ritchie 2002). Charlestown lies within this area.

In addition to local materials, European flint demands attention as there is ample evidence that indicates Native Americans utilized the stone material for lithic production. European flint is also the primary source material used to produce gunflints and strike-a-lights. European flint is commonly referred to as ballast flint in historical archaeology, as it was used to stabilize ships during voyage and was then dumped in piles along the coast upon arrival. This undoubtedly took place in Massachusetts Bay harbor (Luedtke 1998). The stone material is commonly associated with European colonists and is a foreign material introduced in North America as a direct result of colonization. However, the material was not

exclusively used by Europeans. At John Alden's homestead in Duxbury, Massachusetts, archaeologists found a Levanna point made from ballast flint (Luedtke et al. 1998). In other words, they found a uniquely Native American stone tool made from a solely European material. Additionally, Indigenous peoples produced their own gunflints and strike-a-lights in their own traditional fashion. At Monhantic Fort, a Mashantucket Pequot site in Connecticut, at least 35 bifacially flaked gunflints of Native American manufacture were identified (Kelly 2011). In a coastal ship merchant community such as Charlestown, nodules of European flint would be easily accessible in dumps along the port's shoreline, available for collection or trade (Bagley et al. 2014; Luedtke 1998). Given the ambiguity of the lithic assemblage at Feature 43 and the diverse uses of ballast flint, it is vital to identify all stone materials present at the site, not only those produced from local sources.

Feature 43 provides an opportunity to identify, assess, and analyze the presence of Native American lithic technology on an early colonial site. Lithics frequently fall victim to the prehistory-history dichotomy and are perhaps more susceptible to the misnomer "prehistoric" at early seventeenth-century sites where the first signs of colonial deposits evoke the designation of historical period. The paradigm presents lasting interpretative problems regarding early colonial sites. However, the dichotomy is still born from a grain of truth: lithics found at a historical period site could come from a disturbed ancient site. This begs an investigation of the lithics' context within Feature 43. It may seem counter-intuitive to engage with the prehistory-history stereotype to study a people and material culture that have suffered erasure from history because of its implications, but it is necessary in order to dismantle it. With this chapter's review of the merchant history of the Massachusetts Bay

Colony, the frail relations between Europeans and the Indigenous population in the early seventeenth century, and the intersections of trade and labor in colonial daily life, we can approach Feature 43 and its lithic assemblage with the expectation of a dynamic and culturally diverse community rather than create a boundary that may not exist.

CHAPTER 3

SITE BACKGROUND AND DISTRIBUTION ANALYSIS

The Research Collection

Pendery (1984, 1987) recovered over 1000 bags of artifacts and soil samples. Due to the overwhelming size of the assemblage, Pendery (1984, 1987) and his team selected a 23% sample of the total number of bags for processing and further analysis, which equates to a 25% volumetric sample of the excavated feature. The sampling strategy incorporated contexts of varying levels across the site to allow for an unbroken chain of stratigraphy from top to bottom of Feature 43. The subsequent research focused on ceramics, glass artifacts, faunal remains, and plant remains.

Pendery (1984, 1987) dates three distinct deposits from the site with Binford's pipe stem regression and South's mean ceramic date formula. "Binford's pipe stem dates are 1633.4, 1641.1, and 1660 respectively for fill deposits A, B, and C" (Pendery 1984:53). However, Pendery (1984, 1987) included red clay pipes in his calculation, and this may bias earlier dates as they tend to have on average larger bores, which in white clay pipes is associated with earlier dates (Agbe-Davies 2004; Capone and Downs 2004). The dominant ceramic on site was redware, but even samples of redware were highly decorated, including one such sample that was glazed deep brown with a green slipware design. Other notable

ceramics include North Italian Montelupo, Portuguese tin-glazed wares, Iberian olive jars, Bellarmine fragments, early German stonewares, North Devon Sgraffito, Italian marbled slipware, and an array of slipped redware (Figure 2) (Bagley 2016; Gomes and Casimiro 2013; Pendery 1999). In fact, Gomes and Casimiro (2013:128) cite the Maudlin Archaeological District as one of the largest deposits of Portuguese tin-glazed earthenware outside of Portugal. Pendery (1987) does not provide a year for Deposit A when calculating South's mean ceramic dates; rather, he explains that the number is biased due to inaccurate dates for Iberian storage jars. With South's formula, Pendery (1984:55-56) calculated the mean ceramic dates for Deposit B and C as 1666.33 and 1714, respectively. With this and his deed research of the area, Pendery (1987) concludes that construction of Feature 43 occurs between c.1630 and 1640 and is filled and abandoned by c.1660.

In addition to Pendery (1984, 1987), three researchers have analyzed parts of Feature 43's assemblage. Bogucki (1984) conducted a faunal analysis on a sample of 1346 bone fragments from Feature 43, resulting in an MNI of 64 mammals, 69 fish, and 3 mollusks. Bogucki (1984) noted a heavy dependence on mature cattle and an amateur level of butchering by axe, perhaps reflective of an unskilled labor force. Fully 35% of the bones were calcined, which Bogucki (1984) states is evidence of fire roasting. Patricia Capone and Elinor Downs (2004) incorporated a sample of artifacts from Feature 43 in their petrographic analysis of red clay pipes from New England and Virginia colonial sites. In the samples collected across nine different sites in New England, Capone and Downs (2004:313) found that each tobacco pipe is distinct enough from one another to conclude that production took place in various locations and materials were derived from different sources, indicating that

in New England pipes were perhaps made locally rather than centrally. While neither study directly pertains to the lithic assemblage, both provide insight into the labor and trade activities behind Feature 43.



Figure 2. Examples of seventeenth-century ceramics excavated from Feature 43. Includes Portuguese tin glaze earthenware, Montelupo tin glaze earthenware, Italian slipware, and Bellarmine stoneware. Photo courtesy of Joseph Bagley.

Pendery's site report (1984) only briefly reviews Feature 43, as it is one of many features excavated from the Maudlin Archaeological District. In his PhD dissertation, Pendery (1987, 1999) utilizes Feature 43 to examine the rise of social class and elitism in Charlestown from the early seventeenth to mid-eighteenth century. Thus, neither the site report or his dissertation explicitly includes an analysis of lithic materials and subsequently omits the influence of marginalized peoples in early colonial communities.

As only a quarter of the collection was sampled and cataloged, Feature 43 required a complete inventory for this thesis project. Pendery assigned all contexts of the Maudlin Archaeological District, regardless of feature or site, with an M number (M.0126 - M.1353), which corresponds to specific contexts, bags, or artifacts. All boxes belonging to the Maudlin Archaeological District, of which Feature 43 is a part, were sorted, logged, and reorganized sequentially by M number. Provenience information was pieced together by compiling bag information, inherited catalogs, context notecards, and field paperwork. However, not all gaps in information could be filled. Consequently, only bags with M numbers or contexts that definitively belong to Feature 43 were inventoried. A bag was determined to be part of Feature 43 only when the site designation was written on the bag or in the inherited M number key. Bags without an M number that belonged to the Feature 43 assemblage were given a context number beginning with the letter X (X.1400 - X.1493), so as not to be confused with earlier labels from the 1980s. It was determined that Feature 43 consisted of 811 bags amounting to a total of 32,099 artifacts. Of the 1000+ bags Pendery (1987) cited, only 811 bags of artifacts were recovered at the City of Boston Archaeology Lab and were available for this thesis study. Many of the bags presumed missing correspond to Pendery's study sample, which was likely rehoused without provenience information or relocated to another facility. Thus, most of Pendery's sample was not available for study and the following analyses derive from the artifacts excluded from the 1980's site report and dissertation.

Several boxes contained pulled artifacts organized by material class, presumably for past research. Some boxes of previously pulled artifacts included chipped stone, non-ferrous

metals, locally made red clay pipes, and seventeenth-century ceramics. These artifacts were also inventoried and, when they could be, were reunited with their respective parent bag. In several instances, artifacts previously pulled for research were all that remained of an otherwise missing bag. These single artifacts were included in the inventory and thesis research.

Certain choices had to be made which may ultimately limit the conclusion of any data. Catalog sheets from the 1980s that corresponded to Pendery's absent sample resurfaced. However, this presented a problem: how to study artifacts that were missing. For example, field notes indicated that several small-stemmed quartz points were found in the same context as the "1639" tin glazed earthenware fragment (Figure 3), but the quartz stone tools could not be found despite efforts to locate the complete collection. The tin-glazed ceramic continues to be part of the collection today because it was pulled for additional research in the 1980s. For consistency, only artifacts physically present in the City of Boston Archaeology Lab were inventoried, catalogued, and analyzed. In summary, data were collected only on the tangible materials in the lab that are undoubtedly associated with Feature 43. Thus, the results in the next chapter do not include unaccounted materials. Well over half of the collection is dominated by domestic household trash and architectural fill, including 6,851 (21.4%) pieces of charcoal, 5,050 (15.8%) faunal remains, 6,191 (19.3%) ferrous nails and objects, and 7,376 (23%) brick fragments. The lithic assemblage includes 404 chipped stone artifacts (1.3% of the collection). No ground stone was present. The lithic collection is dominated by debitage, with multiple types of flakes represented. It

also contains two cores, one casual and one assayed cobble, and five bifaces, which include four formal tools and one basal fragment of a projectile point.

In addition to the lithic assemblage, the collection includes 138 glass trade beads, 183 chunks of coral, 438 red and white clay pipe fragments, 10 Native ceramic sherds, and over 2,000 sherds of European-imported ceramics, a significant portion of which pertain to redware and Portuguese tin-glazed earthenware (Gomes and Casimiro 2013). Feature 43 also includes certain metal artifacts of note, such as an early seventeenth-century copper alloy spoon, a lead textile seal dating to c.1678, several cannon balls, and an array of copper pins (Figure 4).



Figure 3. Fragment of blue and white Portuguese tin glaze earthenware. Dated to 1639, sherd was found in the same context as several missing small-stemmed quartz points. Photo courtesy of Joseph Bagley.



Figure 4. Sample of diagnostic seventeenth-century artifacts. Feature 43 assemblage includes glass trade beads, copper pins, locally made pipes, copper alloy seal-top spoon with baluster molding, quartzite and ballast flint flakes, and a pair of scissors.

The Excavation and Stratigraphy of Feature 43

Due to the age of the extant collection and its tenure in storage, Feature 43's excavation history and stratigraphy derives from Dr. Steven Pendery's publications and surviving field notes. Feature 43 was excavated during a Phase III investigation in reaction to the Chelsea-Water street connector project and construction in Charlestown, Massachusetts (Pendery 1984:2). Overall, Pendery (1984:43-44, 1987) describes the preservation of Feature 43 as impressive and that it "contains one of the earliest and best preserved colonial domestic artifact assemblages discovered archaeologically in New England." However, the site experienced contained episodes of disturbance due to urban development. The southern half of the feature was severely disturbed by the construction of Feature 81, a nineteenth-century

tenement building. As the floor joists of Feature 43 were intact below, the damage was limited. This section was the only area that was machine excavated to reveal the seventeenth-century deposit below. The northwest corner of the site was also impacted by an eighteenth-century privy that burned in place. And lastly, in the 1950s, the northwest corner of Feature 43 was additionally obstructed by the installation of a cement-encased electrical utility, labeled Feature 2, which capped an unexcavated portion of Feature 43 (Figure 5).

Due to the complications of urban development and the significance of the site, Pendery (1987:147) employed “rigorous horizontal and vertical excavation controls.” Excavation units were placed on a 50cm-by-50cm horizontal grid and excavated vertically with 10cm arbitrary levels, though natural stratigraphy was recorded as well. Pendery (1984, 1987) noted three substantial deposits that contained as many as 12 different strata. Pendery (1987:148) hypothesizes that this variation in strata within the same deposit is due to filling “occurring from different directions around the cellar perimeter.” Soils were screened through ¼ inch mesh sieve on site. During the winter months, Pendery (1984, 1987) and his team relied on propane-heated tents. Due to the limited work space during the cold season, archaeologists sampled soils to be processed at the lab post-excavation. Soil samples were taken from principal strata, which may account for the boxes of unfloated soil samples at the City of Boston Archaeology Lab. Although Pendery (1984, 1987) employed strict excavation techniques, a comprehensive visual depiction of the stratigraphy or profile is unavailable. These records presumably existed at one point considering that Pendery (1984, 1987) was able to compare the materials between the three deposits; however, only written descriptions remain.

According to the site report, the stratigraphy of Feature 43 consisted of three depositional episodes, deposits A, B, and C. Deposit A corresponds to the clay floor of the seventeenth-century structure and includes “the very few artifacts found beneath the clay floor, the artifacts contained in the clay floor level, and the artifacts resting on the floor at the time of abandonment and filling of the cellar” (Pendery 1984:48). Deposit B is a major fill episode that caps Deposit A. Deposit B is described as “mostly sand which appears to represent the collapse and slumping of the sandy subsoil sidewalls of the cellar hole...and was largely devoid of artifacts” (Pendery 1984:48-50). The third major fill, Deposit C, consists of a dark brown loam that sealed the fill of the Feature 43. Pendery (1984:49) details that Deposit C dipped “down toward the center of the cellar floor from all sides, suggesting a depression in the center of the feature that originated from its period of occupation.” The depths of Feature 43’s deposits are not discussed in detail, save for that of Deposit A which includes a clay floor at approximately 1.20 to 1.30 meters above sea level (Pendery 1984, 1987). On one page of the field notes, the site’s datum is written as 1.60 meters above sea level, suggesting that Deposit A is 30-40 centimeters below the site’s datum. It is unclear if Deposit B and C are within the 40 centimeters between the site’s datum and the clay floor of Deposit A.

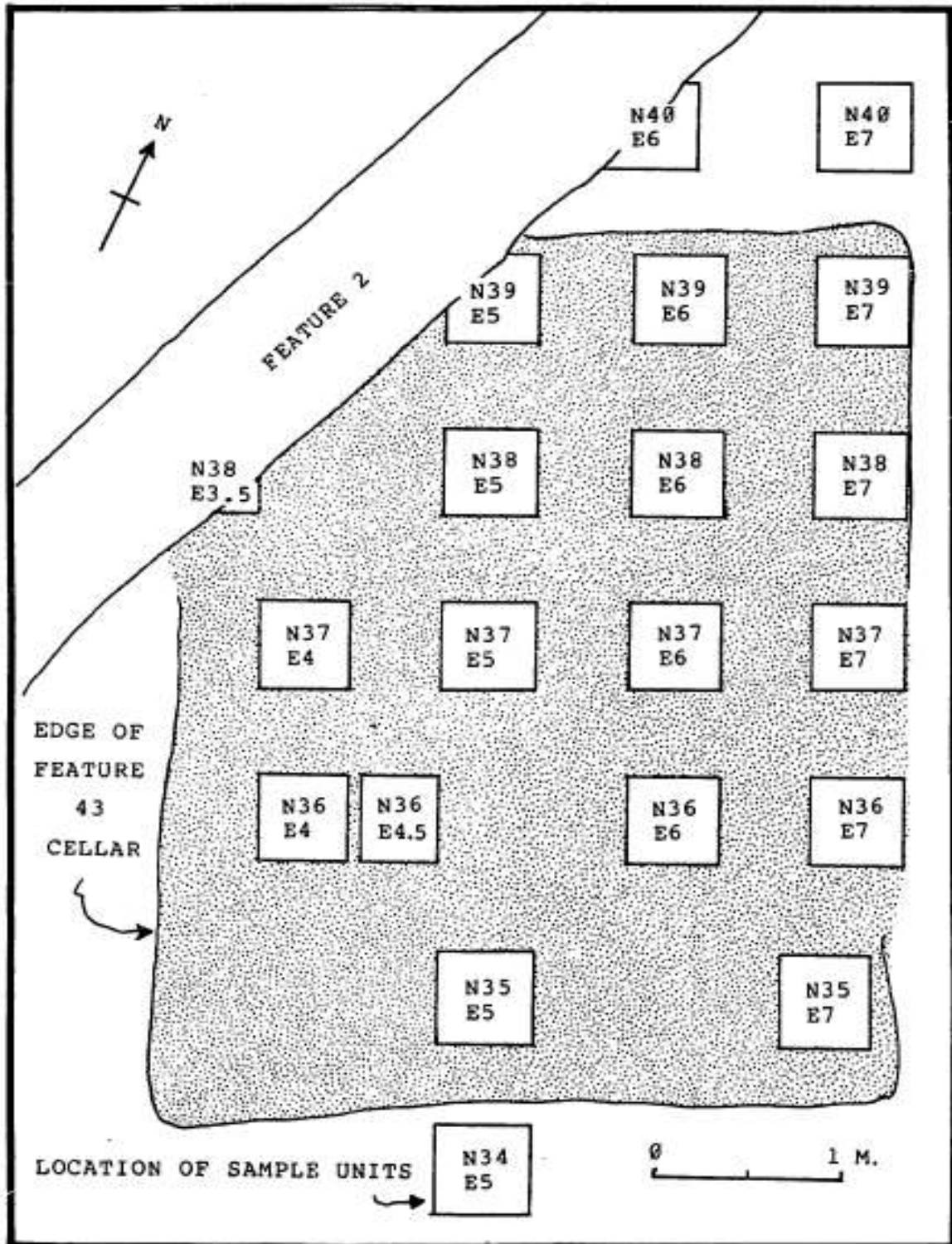


Figure 5. Plan of Feature 43. Shows the layout of the units used to sample the assemblage for Pendery's study (Pendery 1984, 1987).

Pendery (1987) notes that Deposit A, the oldest fill episode, includes more kitchen and faunal materials than Deposit B, which caps it. Deposit A is most likely “primary kitchen and bone refuse that accumulated in the lower levels of the unfilled cellar” (Pendery 1987:152). Deposit B, in addition to having less kitchen and bone materials, is dominated by architectural debris, leading Pendery (1987) to hypothesize that the level results from the construction of a nearby cellar, Feature 22. Feature 22 of the Maudlin Archaeological District corresponds to earliest phases of construction, a dry masonry cellar, of the Jonathan Carey House Site, c. 1650-1680. Deposit C mimics Deposit A, meaning the partially filled cellar may have been used as a refuse dump before its final abandonment. The filling of the cellar began after 1639, according to the date exhibited on a fragment of tin-glazed earthenware (Figure 3), but before the construction of Feature 22 (c. 1650 and 1680) (Pendery 1984, 1987).

With the documents on hand, the stratigraphy of Feature 43 can only be described as piecemeal, demanding creative ways to reconfigure the profile of the site. The lack of solid stratigraphy demands distribution analyses to, if possible, detect distinct deposits through patterns of artifact dispersion. Since the site’s stratigraphy is not definitive, the relevance of the chipped stone and their relationship to the colonial deposit comes under debate. Additionally, the prehistoric-historical dichotomy that played a role in the site’s initial analysis further overshadows their provenience. The chipped stone could be part of the colonial trash deposit. It also could have resulted from the caving of sidewalls as proposed by Pendery in his discussion of Deposit B, which means Feature 43 could have been built on top of a preexisting Native site. It is also possible that the lithic assemblage results from a fill

episode post the construction of Feature 22 which Pendery (1984, 1987) hypothesizes is the meat of Deposit B. However, the lithics could also result from activities contemporaneous with the domestic structure. The distribution analyses aim to reconstruct the distinct deposits A, B, and C based on depth, as well as to assess the distribution of locally-sourced lithic materials within those deposits, which may have been prematurely categorized as “prehistoric.”

Methodology

To determine the site provenience of the chipped stone, an analysis of the lithic distribution in comparison with other artifacts was required. Distribution analyses can be pivotal in assessing the temporal context of an artifact class and features (e.g., Bagley 2013; Bagley et al. 2014; Beisaw 2010). The provenience information of Feature 43 needs to be tested and validated. Nearly one-third of all contexts with ballast flint, a colonial material, included locally-sourced chipped stone, and one-fifth of contexts with locally-sourced chipped stone included ballast flint. If the locally-sourced lithics resulted in the site by means different than the seventeenth-century deposit, then their distribution should follow a pattern that contrasts with that of colonial materials.

To assess whether the locally-sourced chipped stone resulted from a different, earlier site than the seventeenth-century materials, two distribution analyses were conducted. The first distribution analysis focuses on the depth of locally-sourced chipped stone throughout the feature and then compares it to the rest of the colonial deposit, including confirmed post-contact materials such as redware, tin-glazed earthenware, domesticated animal bones, coral,

red clay pipes, white clay pipes, worked ballast flint, glass trade beads, and brick. These artifact types are commonly associated with seventeenth-century sites in New England (Beranek et al. 2016, 2017; Hume 2001, 2001; Pendery 1984, 1987, 1999). The distribution of the chipped stone and the colonial deposit were grouped into ten-centimeter increments based on the starting depth of the context, 0-9, 10-19, etc., to mimic the arbitrary excavation technique employed by Pendery. This created 20 groups ranging from 0 to 200 cm. Once numbers per 10-cm layer were tallied, they were then calculated as percentages reflective of each individual artifact types' assemblage total. Each distribution was then plotted on a line chart for a visual comparison. Percentages were calculated with overall total numbers, which include artifacts with an unknown provenience.

Certain contexts had a depth that ranged beyond the arbitrary 10 centimeters (i.e., M.1431 which ranged from 18-69 cm or M.0991 which ranged from 83-113 cmbd). To compensate, the average depth of the context was used rather than the start or end depth which would push the distribution in either direction. Additionally, context depths were recorded in an array of measurements including: cm, cmbd, cmbs, cmMSL, MSL, etc. Although a field note recorded the site datum as 160 cmMSL, the depth measurements were conflated as cmbs based on the assumption that in the field people would have measured depth in relatively the same way.

Second, a choropleth map was produced to gauge the spatial distribution of the locally-sourced lithic artifacts. To envision the quantity of the chipped stone by excavation unit (1m x 1m) and analyze any visible spatial pattern, the number of chipped stone per unit was plotted on top of a recreation of Pendery's 1984 site plan. Density is rendered by color.

For comparison, an additional choropleth map detailing the spatial distribution the colonial deposit was created. The choropleth map of the seventeenth-century material provides an opportunity to address the physical parameters of the colonial deposit and how the locally-sourced lithics relate.

Results

The foundational assumption is that if the locally-sourced chipped stone was deposited in Feature 43 by different means than the seventeenth-century artifacts or originated from a different site altogether, then the distribution and average depth of the lithics would be different than the early colonial deposit. Pendery (1984, 1987) argues that deposit B, which caps Deposit A, results from the construction of Feature 22, the Carey House foundation (c. 1650-1680). This presents a method by which the locally-sourced debitage and tools of Feature 43 would be discarded as disturbance of another nearby site. However, this would be visible in the distribution analysis as the chipped stone would peak at a depth capping a lower colonial deposit. If, like Deposit B, the lithics collapsed in from the sidewalls or came from Feature 22, then presumably they would have been presented in their own deposit above Feature 43 or concentrated around the edges of the structure. In either of these scenarios, the distribution of the locally-sourced lithics would contrast with the seventeenth-century artifacts; however, it does not. In fact, the three separate deposits A, B, and C could not be distinguished by depth or artifact type as detailed in the site report. Instead, Feature 43 appears to comprise a bulk fill deposit between 100-149 centimeters (Figure 6). The fill episodes of Feature 43 are perhaps too nuanced to distinguish by a

distribution analysis. This bulk deposit includes the locally-sourced chipped stone alongside the colonial artifacts.

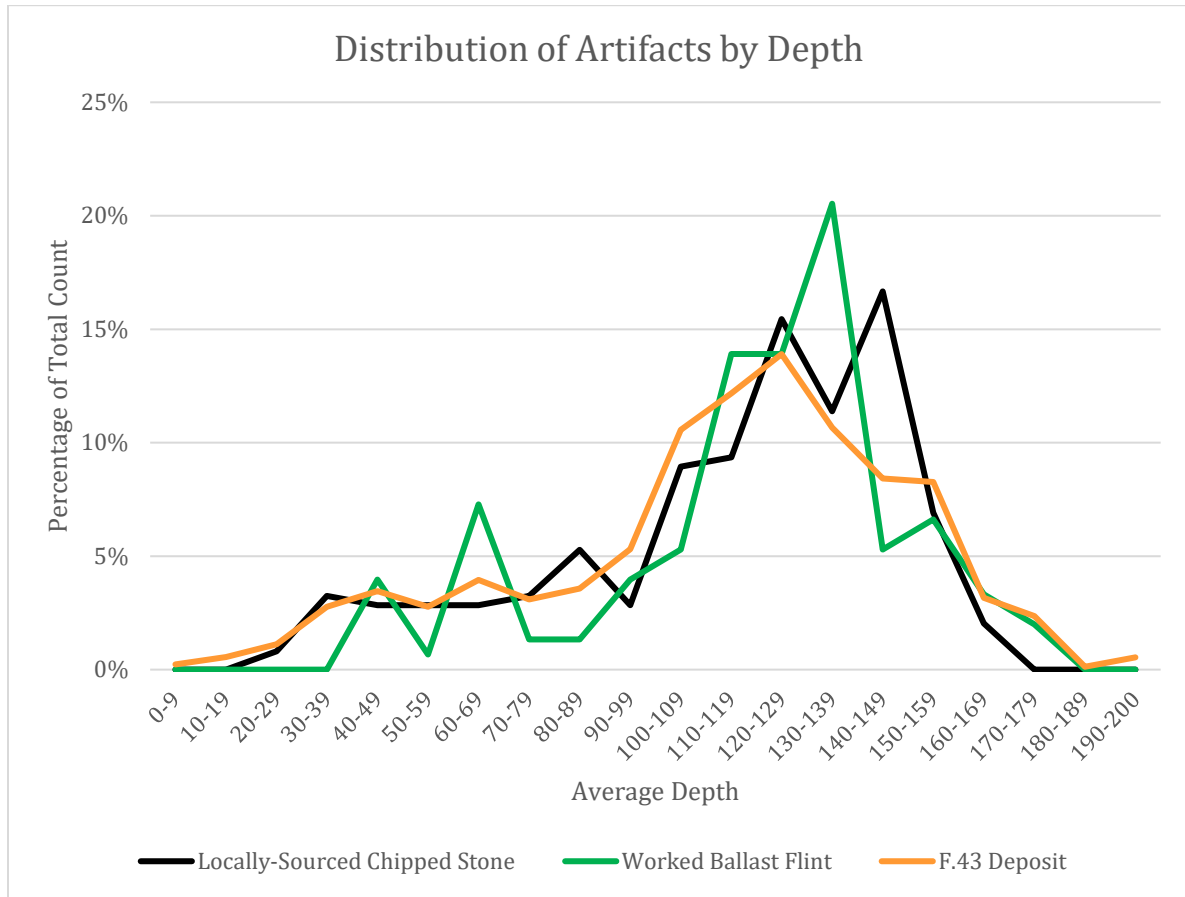


Figure 6. Results of the distribution analysis by depth.

When the number of artifacts is divided and laid out by depth, the results show that at least half, if not more, of each artifact class was found between 100-149 centimeters, including locally-sourced lithics. This half meter of heavier deposition includes 61% of locally-sourced lithics, 59% of worked ballast flint, and 56% of the Feature 43’s colonial artifacts. Another 9 to 14% of the artifact distribution continues below 149cm. Because quality recording of the stratigraphy within Feature 43 is lacking, the deposits could not be

studied separately, in particular to assess changes over time. Yet, when compared against the Feature 43 deposit, it becomes clear that the distribution of the locally-sourced lithics follows the same pattern as the early colonial artifacts, increasing and decreasing at relatively similar depths. The distribution of the locally-sourced lithics does not cap or sandwich that of the Feature 43 deposit; they are congruent.

The choropleth map shows that the locally-sourced lithics are scattered throughout Feature 43 (Figure 7). The units with the heaviest deposition of locally-sourced lithics are N39 E7, N38 E5, N38 E6, N37 E5, and N37 E4. They are not concentrated along the edges of the structure but slightly congregate diagonally across the middle of the feature, from the southwest to the northeast corner. The lightest deposition is in the southeast corner of Feature 43. Also, locally-sourced chipped stone is not present in the northwest corner of the structure as it was disturbed by Feature 2, a 1950s electrical conduit. The distribution shown in the choropleth map does not line up with what would be expected if the locally-sourced lithics deposited into Feature 43 resulted from a different depositional event, collapsed sidewalls, or a disturbed preexisting site. The concentration in the middle of the feature may reflect Pendery's site description of a central depression. The spatial distribution of the locally-sourced lithics is noticeably parallel to that of the seventeenth-century deposit of Feature 43, with high concentrations in many of the same units (Figures 7 and 8). The excavation units with the heaviest deposition of colonial materials overlap with those containing the most lithics, such as N37 E4, N37 E5, N38 E5, and N38 E6. Again, these units are focused in the center of Feature 43. In both choropleth maps, the distribution in the southeast corner bears the lowest density of artifacts, particularly of the locally-sourced chipped stone.

Discussion

The colonial materials and locally-sourced chipped stone generally follow the same distribution pattern, both by depth and horizontal extent, which demonstrates that both resulted from the same depositional processes. The presence of locally-sourced lithics in the same feature, units, and contexts as the seventeenth-century artifacts makes it difficult to imagine that these are the result of different sites or depositional events. As a result, the remainder of the analysis assumes that the lithic artifacts are contemporary with the other seventeenth-century artifacts and reflect the same pluralistic colonial community. The lithic assemblage is part of the colonial deposit disposed of in order to occupy, deconstruct, and fill in the domestic structure.

Given the wide range of dates from South's and Binford's formulas and the lack of clear chronological stratigraphy discussed earlier, the date of occupation for each individual deposit remains unclear. Respectively, based on Pendery's calculated range of dates and the uniformity of the deposit's distribution, the assumed occupation of the site as a whole is c. 1630 to 1714.

Within a colonial context, the lithic assemblage takes on new meaning. Several potential scenarios explain the presence of lithic materials, including trade, exchange, labor, consumption, and production. Within each of these frameworks is an aspect of labor relations, through which the presence of Indigenous peoples in colonial settings becomes hard to detect without archaeological or historical evidence (Silliman 2010). It is not uncommon for Native lithic objects to be present at colonial period sites. Examples in New England alone include Monhantic Fort, John Alden's homestead, Aptucxet Trading Post, the

Sarah Boston Homestead, and Burial Hill, to name a few (Bagley 2013; Bagley et al. 2014; Beranek et al. 2016, 2017; Kelly 2011; Luedtke 1998). Of course, this perspective benefits from the breadth of research published over the last 30 years, after the excavation of Feature 43. Though sparse, archaeological evidence does suggest that lithic traditions were still practiced in the nineteenth century in Massachusetts (i.e., Bagley 2013; Bagley et al. 2014). The lithic assemblage of Feature 43 may result from stone tools traded to and used by the English colonists, or it may derive from Native Americans living and working among the English, manufacturing their own tools. Or perhaps both the English and Native Americans were practicing their own lithic technologies side by side. Given what is known about English colonialism in New England, the second possibility is more likely. Only investigation into the lithic assemblage further clarifies the ambiguity of the flintknappers and the cultural environment of Feature 43.

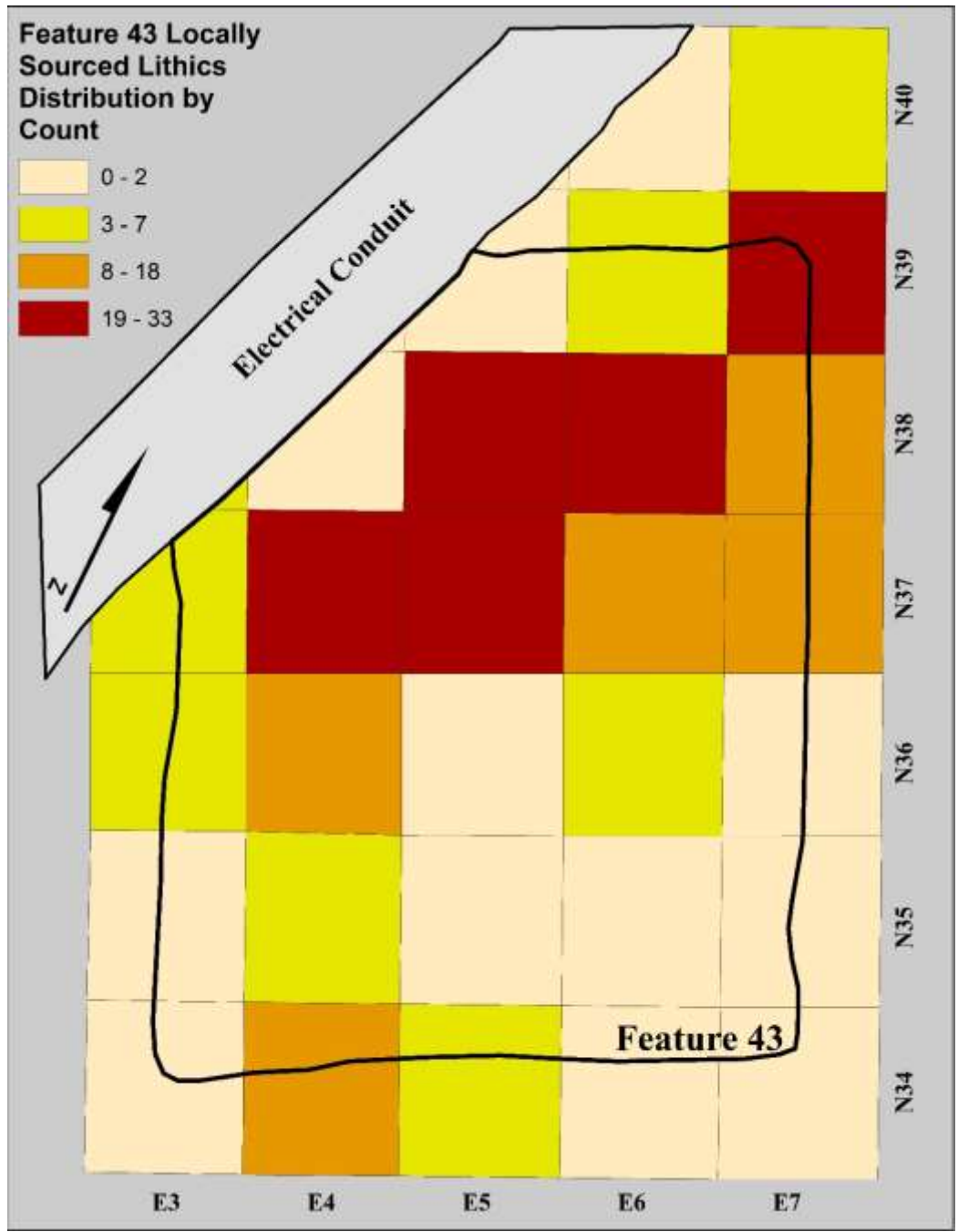


Figure 7. Choropleth map of locally-sourced chipped stone. Displays the concentration of the locally-sourced lithic assemblage in Feature 43, the storage cellar. Map created by Jared Muehlbauer.

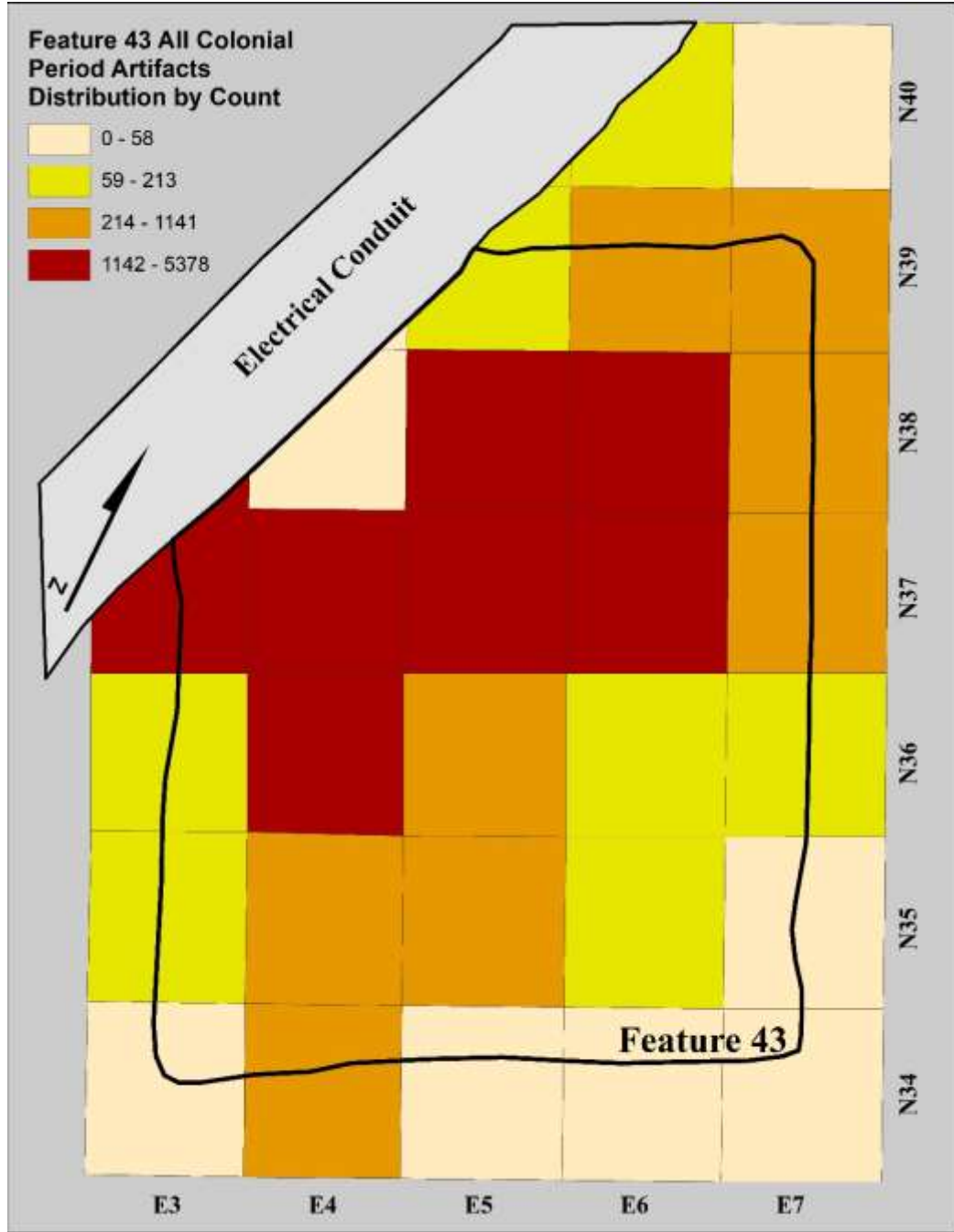


Figure 8. Choropleth map of colonial deposit. Displays the concentration of the seventeenth-century deposit in Feature 43, the storage cellar. Map created by Jared Muehlbauer.

CHAPTER 4

LITHIC ANALYSIS

Lithic traditions vary regionally and across cultures which is evident through differences in source materials, manufacturing techniques, and tool forms (Odell 2004:43). While source materials may depend on geological availability, they can also reflect cultural preferences (e.g., Luedtke 2002; Ritchie 2002). In reference to manufacture and tool types, European lithic tradition focused mostly on gunflint and strike-a-light production, whereas Native American lithic tradition in the Northeast displays a diverse array of tools produced through multiple methods (Blanchette 1975; Durst 2009; Hoffman 1991; Kelly 2011; Kenmotsu 1990; Kent 1983; Luedtke 1998; Witthoft 1966). Both Native Americans and English settlers practiced lithic technologies. The most convenient method to distinguish between Native and European lithics in the seventeenth century is by source material; unfortunately, this assumption contributes to the essentialization of Indigenous and European cultures. As discussed, the paternalistic culture of English settlers absorbed Native Americans into the same households and spaces as the colonists, causing their lithic contributions to the archaeological record difficult to identify in shared spaces (Fitts 1996; Silliman 2010; Silverman 2001). The chipped stone, both locally-sourced and imported, was discarded alongside the seventeenth-century material, and in some capacity was part of the colonial deposit used to fill in Feature 43. In this chapter, the characteristics of the chipped

stone debitage and tools are reviewed and discussed in order to gain insight into Native American and English lithic practices in the seventeenth century.

Methodology

All lithic materials were pulled during the inventory process, then further cataloged based on source material, debitage characteristics, tool type, and weight. Any lithic object determined to be natural debris, or in other words not an artifact, was noted and then excluded from the study.

Source Materials

Due to their high regional variability over time, lithic artifacts reflect how people adapted to and thrived in their changing environments. Sourcing of lithic materials can provide insight into quarrying activities, trade relationships, and cultural identification. Lithic source materials from Feature 43 were identified visually or macroscopically by “hand specimen” assessment (Odell 2004:28). Specimens were further compared with the lithic type collections created by the City Archaeologist, Joe Bagley, held at the City of Boston Archaeology Lab, and by Dr. Barbara Luedtke, housed at the Andrew Fiske Memorial Center for Archaeological Research by the Department of Anthropology at the University of Massachusetts Boston. Rhyolites that could not be definitively distinguished by quarry type were placed into categories by color, such as grey rhyolite, green rhyolite, and red rhyolite. The lithic artifacts were then divided into three categories based on material type: locally-sourced materials that were quarried from areas adjacent to or within eastern Massachusetts,

European ballast flint, and non-local materials that originated from other regions in the Northeast. Again, the lithic material categories - locally-sourced, ballast flint, and non-local - serve to minimize essentialization of colonial populations, both Indigenous and European, as well as to diminish preconceptions of who knapped which materials (see Loren 2008; Silliman 2010).

Two large quarries exist in the Boston area: the Lynn-Mattapan and the Blue Hills volcanic complexes (Luedtke 2002; Ritchie 2002). North of Boston is the Lynn-Mattapan volcanic complex, which includes red rhyolites, green rhyolites, and light gray rhyolites (Figure 9) (Ritchie 2002). Variations of pink to deep burgundy rhyolites are found in areas such as Saugus, Revere, and Malden. Saugus jasper is the most distinct of the red rhyolites, giving rise to its misnomer. This material is a fine-grained, silica-rich rhyolite that can range from a light pink to a vibrant red, often with characteristic thick white stripes. Saugus jasper comprises only a small portion of the Lynn-Mattapan Volcanic complex yet is widely seen throughout the Massachusetts area (Chilton and Doucette 2002; Howlett 2004; Luedtke 2002; Ritchie 2002; Volmar and Blancke 2002). As a visually striking and limited material, bright red in color with a matte glassy texture, Luedtke (2002) proposes Saugus jasper likely carries a cultural or religious symbolic meaning, especially among Indigenous peoples of northern Massachusetts (see also Howlett 2004; Ritchie 2002).

Light gray weathered rhyolites are associated with the Middlesex Fells area (Ritchie 2002). Dark gray to gray-brown rhyolites are found further north along the coast near Marblehead. Melrose green rhyolite comes from the Wyoming Quarry site, which was rediscovered by Luedtke in 1994 (Luedtke et al. 1998; Ritchie 2002). Melrose green rhyolite

can range in color from a sage gray to a teal to a deep dark green (Ritchie 2002:113). Though Melrose green rhyolite can range in shade and hue, the material tends to have homogenous geological features (Figure 10). This material was heavily quarried during the Middle and Late Woodland periods (Luedtke et al. 1998; Ritchie 2002).

South of Boston is the Blue Hills volcanic complex, which includes hornfels, Braintree slate, and Blue Hills gray rhyolite (Figure 10). Braintree hornfels, found in the Blue Hills range, is a fine-grained, charcoal-gray to black rock with a distinctive speckled gray-brown weathered surface (Bowman and Zeoli 1977; Ritchie 2002; Ritchie and Gould 1985). Hornfels was extensively used in the Middle Woodland period across central Massachusetts and as far as Narragansett Bay and was continually used in the Late Woodland period in southeastern Massachusetts (Ritchie 2002). A medium-grained hornfels, known as Braintree slate, is a dark gray to gray-green variation that exhibits rust spots and streaks from its high iron content. Braintree slate was heavily quarried in the Middle and Late Archaic periods (Ritchie 2002). Blue Hills rhyolite is a fine-grained dark gray to black stone with inclusions of pink feldspar and quartz crystals. The combination of feldspar and quartz crystals embedded against the dark color is the diagnostic visual feature. Blue Hills gray rhyolite is plentiful in coastal Massachusetts and was heavily quarried by Native Americans from the Early Archaic to the Late Woodland period (Ritchie 2002).

Quartz is ubiquitous in Massachusetts and is particularly common in coastal areas (Figure 11). Quartz also provides some insight into material quality. As an internally amorphous rock, it can be flaked into tools; however, materials such as granite, which

contain a high portion of large quartz crystals, are not flakeable. Granite is often confused for rhyolites, save for one distinguishable characteristic: its softness.

Flint is not native to Massachusetts. In fact, many argue that flint does not occur naturally in North America, but in Europe, and American sources believed to be flint are actually chert (Whittaker 1994:70). Typically, the flint found on colonial sites originates from Europe, carried over as ballast, and used to produce gunflints. Flint forms as a secondary deposit in rock beds of limestone and chalk (Whittaker 1994). Flint nodules usually have a chalk-like cortex, or exterior surface, and a glassy dark-colored interior but can vary internally in texture and color (Figure 11). Traditionally, dark brown-grey ballast flints are attributed to English or northern European regions, while honey-caramel colored ballast flint comes from France (Kenmotsu 1990; Kent 1983; Witthoft 1966). Although a European material, worked ballast flint was included in the lithic analysis as it is commonly found at early colonial sites that also have locally-sourced lithics, such that the cultural identity of the flintknapper cannot be easily assumed based on material alone (see Bagley et al. 2014; Beranek et al. 2016, 2017; Kelly 2011; Luedtke 1998).



Figure 9. Debitage from Feature 43 organized by source material. Top image: Lynn volcanic complex rhyolites; Middle left: Saugus jasper; Bottom Left: Melrose green rhyolite; Bottom right: red rhyolites.



Figure 10. Debitage from Feature 43 organized by source material. Top image: Blue Hills grey rhyolites; Middle Row, left to right: Braintree slate, Braintree slate, and argillite; Bottom image: hornfels.



Figure 11. Debitage from Feature 43 organized by source material. Top row, left to right: quartz, Pennsylvania jasper, Mount Tom jasper; Middle image: quartzite; Bottom image: ballast flint.

Lithic Tools and Debitage

All lithics materials were cataloged and categorized according to Andrefsky's (2005:76) generalized morphological typology. The lithic assemblage was sorted into cores, angular shatter, flake fragments, whole flakes, edge modified flakes, and bifaces. Bifaces were identified by tool type when possible. The use of a morphological typology to conduct a lithic analysis is also known as a free-standing typology, which requires "objective, replicable criteria" to categorize an assemblage (Andrefsky 2005:127). Debitage is defined as the waste byproducts of stone tool production and includes shatter, flakes, and flake fragments (Whittaker 1994). Cores are the scarred cobbles from which all debris is extracted (Andrefsky 2005). Angular shatter is a non-flake, an unintentional byproduct of the lithic production process that does not have the attributes of a flake and typically appears as jagged chunks of rock (Andrefsky 2005; Shott 1994; Whittaker 1994). As non-flakedebitage, angular shatter typically has more than two flat surfaces, making a single ventral or dorsal surface unrecognizable (Andrefsky 2005:84). Flakes represent intentional shaping and have distinct morphological characteristics (Figure 12). For the purposes of identification, these include a rippled yet smooth ventral side, or interior surface, and a cortex covered or scarred dorsal side, or exterior surface (Andrefsky 2005; Odell 2004; Whittaker 1994). Other ventral attributes noted for identification were bulbs of percussion, platforms, erailure flakes, and/or a termination edges (Andrefsky 2005; Odell 2004; Whittaker 1994). All flakes were divided into two groups: flake fragments and whole flakes. Flake fragments are, as the label describes, broken segments of a flake. These were subsequently categorized further into three groups: proximal, medial, and distal. The proximal end includes the bulb of percussion

and/or platform and the distal end includes a termination edge (Andrefsky 2005; Odell 2004; Whittaker 1994). If a flake fragment included neither, it was categorized as a medial segment. In cases of pressure flaking, flakes are often fragmented (Whittaker 1994). Whole flakes comprise the complete anatomy of a flake, from the bulb of percussion to the termination edge (Andrefsky 2005; Odell 2004; Whittaker 1994). Edge-modified flakes, or utilized flakes, are flakes that have been retouched or worked along their blades. Bifaces are stone tools flaked on both the ventral and dorsal sides.

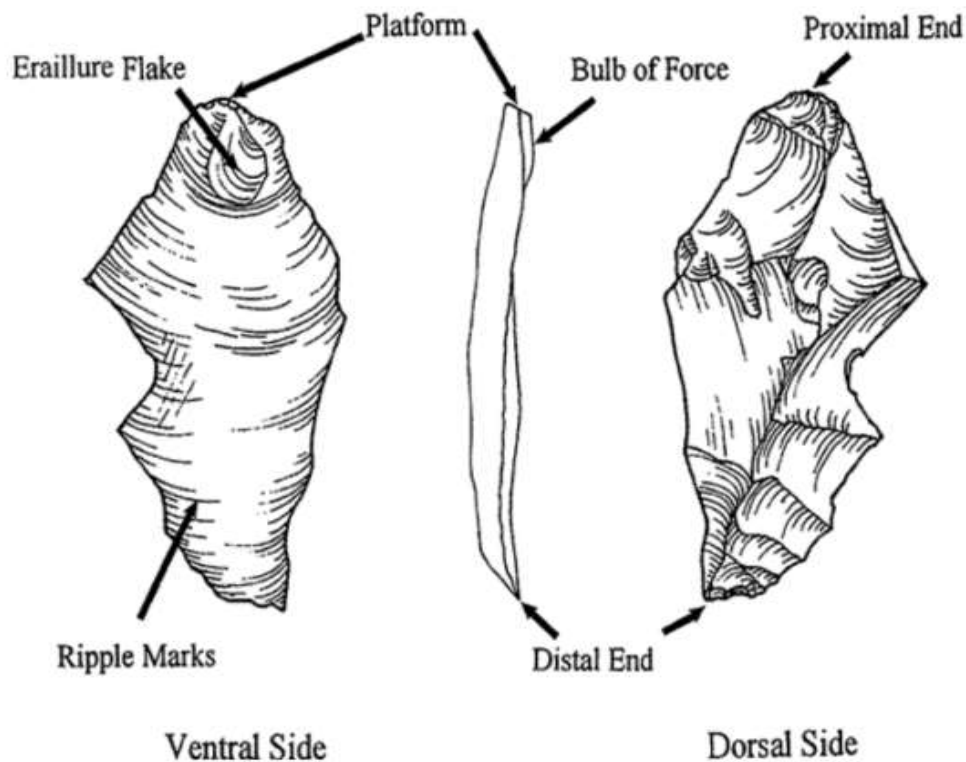


Figure 12. The anatomy of a lithic flake. (Andrefsky 2005:19).

To understand the nature of lithic production activities conducted on site, debitage characteristics were also observed. Debitage morphologies are frequently associated with specific lithic production activities or technology, meaning that “the presence of that type of

debitage or attribute provides a solid reason for making a technological inference” (Andrefsky 2005:129). An analysis ofdebitage characteristics can address the level of manufacture and further implicate the contextual conditions of lithic production.

Whole flakes and flake fragments were further categorized as either primary, secondary, or tertiary based on the amount of cortex present on the dorsal side of the artifact, a method known as the triple cortex typology (Andrefsky 2005). The cortex, or cortical surface, is the weathered exterior layer of a rock, which remains on the dorsal surface of the first flakes removed from a cobble (Whittaker 1994). Whittaker (1994:15) compares the rock cortex to a “rind.” Those removed from the untouched cobble first are primary flakes, and those removed last are typically tertiary flakes. The triple cortex typology helps to estimate the stage of production by revealing the ratio of primary and secondary flakes to tertiary flakes. Flakes with cortex on 50% or more of their dorsal side were labeled as primary, those with less than 50% were categorized as secondary. Tertiary flakes have no cortex (0%) present on their dorsal sides (Andrefsky 2005). While archaeologists employ a range of percentage thresholds to describe primary, secondary, and tertiary flakes, these values were used as they would be the easiest to replicate and test. Additionally, the weight of each flake was recorded as it relates todebitage size and corresponds to potential reduction stages (Shott 1994). Weight was taken in grams (g) using a scale with range from 0 to 500g with 0.01g accuracy. The smaller the weight of a flake, the more likely it was removed towards the end of the lithic production process (Andrefsky 2005). Measurements were taken on whole flakes and bifaces.

Results and Discussion

The lithic collection is composed of 79 fragments of angular shatter, 2 cores, 209 flake fragments, 109 whole flakes, and 5 bifaces (Table 1). There are 151 lithic objects made from European ballast flint with 43% angular shatter, 1% cores, 35% flake fragments, and 20% whole flakes. There are only two bifaces, identified as one possible preform or crude gunflint and one strike-a-light. The ballast flint core is an informal, multidirectional core. Of the 247 locally-sourced lithics, 6% are angular shatter, less than 1% are cores, 62% are flake fragments, and 31% are whole flakes. Neither the ballast flint nor locally-sourced debitage exhibit evidence of sharpening or utilization. Use-wear and retouch are not visible macroscopically. The lithic assemblage does not include utilized flakes or blades, which is a notable morphological characteristic. The absence of utilized flakes at Feature 43 may be significant, but such a conclusion would require comparisons between colonial period lithic assemblages. The locally-sourced assemblage includes three bifaces: one Braintree slate Stark point, one gray rhyolite concave basal point fragment, and one hornfels small-stemmed projectile point. Though the Braintree slate Stark Point dates to the Middle Archaic period (c. 5,500 to 7,500 years B.P.), its presence in the Feature 43 assemblage provokes the possibility of curation, which will be discussed further at the end of this chapter. There is one locally-sourced core that is an assayed core with only a few flakes removed from the otherwise untouched red rhyolite cobble. Only half of the ballast flint specimens, 55%, are flakes, including fragments, while the vast majority of the locally-sourced lithics, 93%, are flakes. Additionally, only 6% of the locally-sourced lithics are angular shatter, while 43% of the ballast flint is angular shatter.

Table 1. Lithic Morphological Forms by Material Category from Feature 43

Morphological Form	Ballast Flint		Locally- Sourced		Non-Local	
Angular Shatter	65	43%	14	6%	0	0%
Cores	1	1%	1	0%	0	0%
Flake Fragments	53	35%	153	62%	3	50%
Whole Flakes	30	20%	76	31%	3	50%
Bifaces	2	1%	3	1%	0	0%
Total	151	100%	247	100%	6	100%

Of the 83 ballast flint flakes, 7% are primary flakes, 18% are secondary, and 75% are tertiary (Table 2). The average weight of the whole flakes is 1.09 grams, with a range of <.01g to 6.37g (Tables 3 and 4). Of the 228 locally-sourced flakes, whole and fragment, 8% are primary, 10% are secondary, and 82% are tertiary. The average weight of the locally-sourced whole flakes is 3.0 grams, with a range of .05g to 17.37g. Flake fragments were not included as they would skew the average weight by increasing the number by which the total is divided.

Table 2. Triple Cortex Typology of Feature 43 Lithics by Material Category

Flake Type	Ballast Flint		Locally-Sourced		Non-Local	
Primary	6	7%	18	8%	0	0%
Secondary	15	18%	22	10%	0	0%
Tertiary	62	75%	189	83%	6	100%
Totals	83	100%	229	100%	6	100%

Table 3. Weight (g) of Whole Flakes by Material Category

Weight (g)	Ballast Flint Whole Flakes	Ballast Flint Whole Flakes	Locally-Sourced Whole Flakes	Locally-Sourced Whole Flakes
0-.5g	13	43%	15	20%
.5-.99g	7	23%	9	12%
1.0-1.99g	3	10%	12	16%
2.0-2.99g	0	0%	11	14%
3.0-3.99g	0	0%	8	11%
4.0-4.99g	4	13%	5	7%
5.0+	3	10%	16	21%
Total	30	100%	76	100%

Table 4. Weight (g) Statistics of Worked Ballast Flint and Locally-Sourced Lithics

Weight (g)	Ballast Flint Whole Flakes	Locally-Sourced Whole Flakes
minimum	<0.01	0.05
maximum	6.37	17.37
average	1.09	3.00
mode	0.62	0.18
median	0.51	2.09

The source materials identified primarily consist of rhyolites but include sixteen distinct material groups. More specific identifications include European flint, argillite, Blue Hills gray rhyolite, Braintree slate, Melrose green rhyolite, hornfels, Lynn Volcanic Complex rhyolites, red rhyolite, Mattapan-banded rhyolite, quartz, quartzite, and Saugus jasper. With the exception of European flint, Mount Tom jasper, and Pennsylvanian yellow jasper, local materials dominate the collection. In total, 61.1% percent of the lithic assemblage consists of

locally-sourced materials, while 37.4% are made from ballast flint (Figure 13). Only 1.5% are non-local materials from the Northeast region.

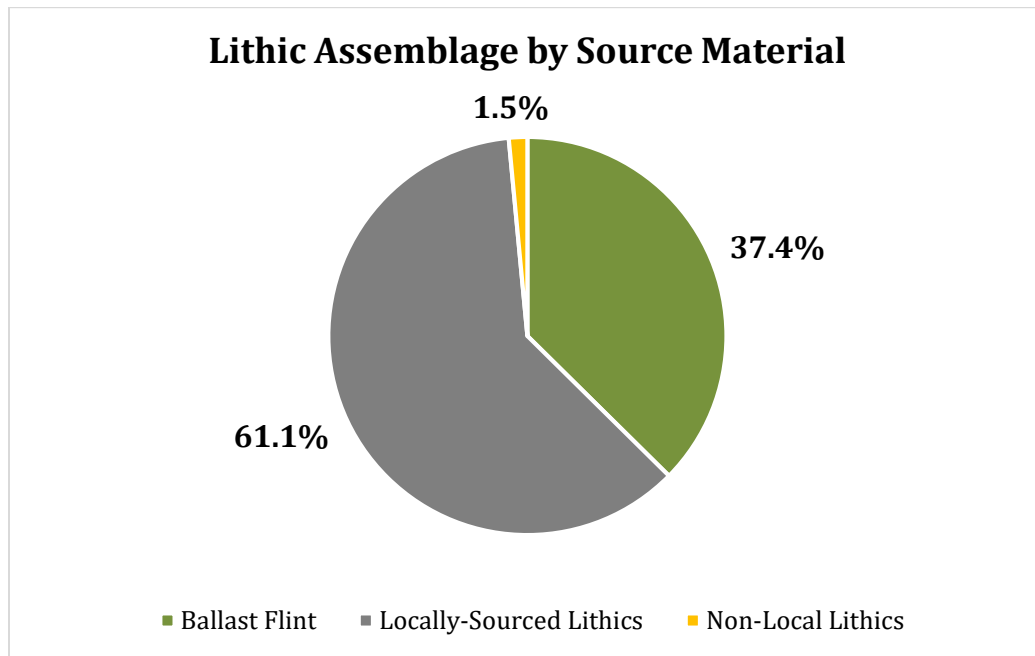


Figure 13. Pie chart of Feature 43's lithic assemblage by source material category.

Ballast Flint Debitage

Angular shatter and flakes together comprise 98% of the ballast flint lithic assemblage (Table 1). Slightly less than half (43%) of the ballast flint debitage from Feature 43 consists of angular shatter. As Andrefsky points out (2005:16), "it is not uncommon for an objective piece to shatter during shaping process and produce debitage in hundreds of different shapes and sizes." The large amount of angular shatter may be the result of ballast flint being a more plastic material than the locally available materials, such as rhyolite, but presumably flint would chip in a more predictable way (Whittaker 1994). In general, flint material flakes more easily than the hard rhyolites and quartzites found locally in

Massachusetts (Whittaker 1994:66). While the presence of ballast flint debitage points to lithic production, the high amount of angular shatter of a material more easily flaked than local materials hints at an inexperienced or casual flintknapper. An unskilled flintknapper practicing lithic production does not seem out of the question as Bogucki (1984) also proposed an unskilled labor force at Feature 43 upon analyzing the butcher marks found on the faunal remains.

In simplified terms, assemblages that consist primarily of cores and whole flakes result from core reduction (Odell 2004:123). Conversely, assemblages that include mostly broken flakes or flake fragments result from tool production (Odell 2004:123). As the ballast flint assemblage is 43% angular shatter and only 35% flake fragments, the debitage’s makeup does not align well with tool production. However, the assemblage is neither dominated by cores nor whole flakes, meaning the debitage is unlikely the result of core reduction. Interestingly, the average weight of the ballast flint whole flakes is 1.09g, and 70% are tertiary flakes, further distancing the association of whole flakes in this assemblage from core reduction (Table 2 and 5). Small, light-weight, tertiary whole flakes hint at tool production (Andrefsky 2005). Since the ballast flint debitage does not fit nicely into typical lithic production patterns, perhaps an alternative method of manufacture was practiced.

Table 5. Triple Cortex Typology of Ballast Flint Whole Flakes

Flake Type	Ballast Flint Whole Flakes	
Primary	4	13%
Secondary	5	17%
Tertiary	21	70%
Total	30	100%

The extent of European lithic technology in the seventeenth century is limited to the production of gunflints and strike-a-lights. Gunflints are an ammunition stone tool that produces the spark required to fire a flintlock firearm, whereas a strike-a-light is a casual household tool struck against metal or rock to produce sparks as a fire starter (Blanchette 1975; Durst 2009; Kenmotsu 1990; Kent 1983; Luedtke 1998; Williams 2010; Witthoft 1966). The gunflint is clamped in the jaw of the flintlock, a “spring driven mechanical device, mounted against the touch-hole of a gun barrel,” to strike the flint against the steel and produce the required sparks (Kent 1983:27; Luedtke 1998, 1999). Flintlock technology appeared in Europe by the end of the sixteenth century with the introduction of the snaphance firearm; however, matchlocks, a non-flintlock firearm, remained heavily popular throughout the seventeenth century (Kenmotsu 1990; Kent 1983).

The first flintlock weapons in New England would have appeared after 1620 and, based on the historical and archaeological evidence for gunflint production, flintlocks may have been widely used in the colonies by 1650 (Luedtke 1999; Kelly 2011; Kenmotsu 1990; Kent 1983). Kent (1983) asserts that flintlock firearms did not appear as a military arm in America until 1675. While flintlock weapons may have been rare in certain colonial contexts, they were probably common in Charlestown as the settlement included a battery, or ammunition storage, since 1634. As Feature 43 was constructed near merchant wharves and the settlement’s armory, raw European flint as both ballast and ammunition, as well as flintlock firearms, would presumably be in ample supply.

Archaeological evidence for gunflints and strike-a-lights, or at least flaked ballast flint, appears widely across seventeenth-century sites, though often the objects are few in

number (Blanchette 1975; Durst 2009; Kelly 2011; Kenmotsu 1990; Kent 1983; Luedtke 1998; Witthoft 1966). The earliest gunflints are called gunspalls, produced by removing individual flakes from a nodule through direct percussion and would have been the dominant form of the early seventeenth century (Kelly 2011; Kenmotsu 1990). This process produced a greater quantity of waste material than later gunflint production; one core would produce only one or two spalls, but with the introduction of blade technology by 1663, one long slender flake could be used to make several gunflints (Kenmotsu 1990:99). However, Luedtke (1998) attributes crude gunflints in the English colonies to the opportunistic production technique of nodule smashing. Nodule smashing, as Luedtke (1998:38) explains, is a manufacturing technique in which the knapper reduces the ballast flint core by placing a small nodule on a hard surface and hits it with a massive blow along its vertical axis. It is a very simple way to produce makeshift gunflints. In the seventeenth-century, gunflints came in a variety of sizes and were often simple, blocky chunks; the flint did not need to be perfectly shaped in order to draw a spark (Luedtke 1998). Luedtke (1998) theorizes that gunflints were crudely made in the colonies because they were in short supply either due to importation or expense; however, this would not be a limitation to a wealthy merchant community.

The high percentage of angular shatter among the ballast flint debitage suggests that the assemblage may be the waste material of gunspall or gunflint production. Specifically, the frequency of angular shatter may be indicative of nodule smashing. If the flintknappers were practicing nodule smashing, then the ballast flint angular shatter is the opportunistic byproduct of lithic tool production. Andrefsky (2005:129) states that “tool production

produces relatively greater frequencies of complete flakes than does core reduction.” Whole flakes are not solely symptomatic of core reduction but also of tool production. The light-weight tertiary flakes in combination with the high frequency of angular shatter perhaps indicate the lithic production of crude implements. As only 35% of the ballast flint debitage consists of flake fragments, it is unlikely that those flintknapping the ballast flint were aiming to produce highly specialized tools. Assuming the finalized product related to crude gunflints and strike-a-lights, the high percentage of angular shatter and the lower percentage of whole flakes points to either the primary stages of tool production or the manufacture of rough-and-ready implements.

Ballast Flint Tools

Witthoft (1966) proposed the first typology and chronology of gunflints in North America noting source material, manufacturing method, and shape as discernible qualities in the identification of gunflint origin and knappers. French and English gunspalls generally have a bulb of percussion on the ventral surface and a flat dorsal surface (Kenmotsu 1990). English gunspalls are characteristically left unmodified, whereas French gunspalls were further worked to form a semi-circular wedge shape known as the D-form (Kenmotsu 1990; Kent 1983). The French developed blade technique for producing gunflints in the first half of the seventeenth century, and these appear in Canada by 1663, as determined by their presence at the Chicoutimi Indian Site in Quebec (Blanchette 1975; Kent 1983). While the nuances between English and French gunflints are debated, archaeologists uniformly attribute bifacially flaked, pillow-shaped gunflints to Native Americans (Blanchette 1975;

Durst 2009; Kelly 2011; Kenmotsu 1990; Kent 1983; Luedtke 1998; Witthoft 1966). As Kent (1983:28) explains, “Indians did not copy European gunflints but instead produced this essential item of gun equipment according to their customary patterns for working flint.”

From a morphological perspective, gunflints and strike-a-lights are similar, and to confuse matters more, exhausted gunflints are frequently repurposed as strike-a-lights (Kenmotsu 1990; Luedtke 1999; Williams 2010). Both tools were employed to create a spark, and both were tools utilized in a colonial household. Due to their similar size and shape, the best way to distinguish between gunflints and strike-a-lights is by use-wear, as use-wear relates to function (Kenmotsu 1990; Williams 2010). In her study of gunflints, Kenmotsu (1990) identified several key characteristics of gunflints. These include step flaking along the worked edge, wide flat flaking scars along lower edges, minimal signs of crushing or blunting, and evidence of retouch (Kenmotsu 1990). Andrefsky (2005:29, 87) defines stepped flakes as those with a termination on the distal edge with a 90-degree angle that results from “discontinuous propagation.” “Discontinuous propagation” on a gunflint makes sense as the edge is not modified by a flintknapper but a flintlock, which would not produce the same level of controlled and fluid motion or force. Additionally, gunflints, especially bifacially flaked gunflints, can be mistaken for Native end scrapers based on appearance of a beveled edge, shape, and use-wear (Hirst 1991; Luedtke 1999). Conversely, strike-a-lights exhibit use-wear primarily on a concave surface of the tool and have a bifacial striking edge with mostly small flakes removed (Williams 2010:16-17).

Feature 43 includes one crude gunflint and one lightly-used strike-a-light (Figure 14). While gunflints made from locally-sourced materials have been found in the United States,

both of Feature 43's spark-making tools are made from European flint (Kelly 2011; Kenmotsu 1990; Kent 1983). Specimen M.1221 is a gunflint. It shows signs of step flaking on two worked edges that look similar to the edges photographed by Kenmotsu (1990:110). Additionally, the gunflint has wide flat flakes on lower surface of the worked edges (Figure 15). However, morphologically, it does not appear similar to Native end scrapers, which suggests that this particular gunflint, though bifacially flaked, was left unshaped by inexperienced flint knappers. Specimen M.1055 is a strike-a-light, though lightly used. It is not morphologically similar to the Native end scraper either, but also does not exhibit scars from step flaking (Figure 15). The struck area is concave, and the edge is bifacially flaked with only small flakes removed with some evidence of crushing.

The proximal ends of both flint tools are unmodified, suggesting they are of English manufacture (Kenmotsu 1990; Kent 1983). The strike-a-light is a dark olive grey color and the gunflint is entirely white, but both are consistent with the characteristics of English flint. The white crude gunflint is perhaps heat-treated in an effort to strengthen the material, turning the stone white (Whittaker 1994). A white ballast flint gunflint was also found at the Thomas Daniels early-eighteenth-century homestead in Connecticut (Harper 2010). In her description of the reduction process, Kenmotsu (1990:99) explains that flintknappers typically discarded flint that did not have a uniform color or had white chalk inclusions. The inconsistent coloring and white chalkiness of these two flint tools may explain the rejection of these stone implements and their presence in the refuse deposit of Feature 43.



Figure 14. Ballast flint strike-a-light (M.1055, left) and gunflint (M.1221, right).

The characteristics of the flint debitage and tools reflect English methods of manufacture. Unlike other European powers, the English did not have a sophisticated method of gunflint production in the seventeenth century. Wedge-shaped gunflints did not occur before 1650 and blade technology does not appear in the colonies until 1663 (Kent 1983; Witthoft 1966). The high amount of angular shatter relative to other debitage types further points to English manufacture, suggesting nodule smashing or gunspall production. The unmodified form of the two flint tools and the morphological makeup of the debitage indicates unskilled or improvisational flintknappers engaged with rough-and-ready tool production, such that flintknappers were purposely creating angular shatter, finessing the usable pieces a bit, then discarding the waste. This is a practice that aligns more closely with English flintknappers than Native flintknappers of the Northeast who have adapted specialized lithic traditions for over 11,000 years. At Sylvester Manor, a provisioning

plantation on Shelter Island, New York, Hayes (2013) argues that the multiple manufacturing techniques and unique use-wear scars exhibited in the lithic assemblage is reflective of the culturally pluralistic population, meaning that some of the modified stone could have been produced and used by enslaved Africans in addition to Native Americans and Europeans. Although there is little evidence of West African lithic traditions in the seventeenth century, there is evidence of glass-knapping in nineteenth-century African-American contexts suggesting an acquisition of the skill (Hayes 2013:107; in reference to Wilkie 1996). As previously mentioned, enslaved Africans resided in the Massachusetts Bay Colony by 1645. With this in mind, it is possible enslaved Africans produced chipped stone retrieved from Feature 43.

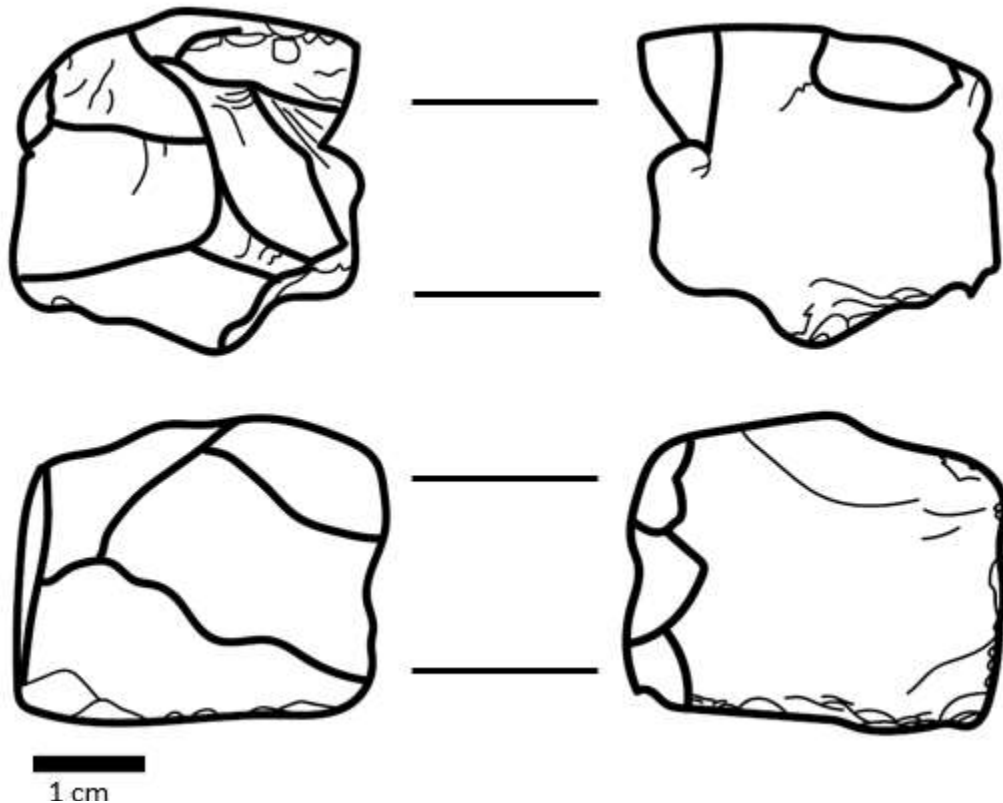


Figure 15. Lithic Diagram. Ballast flint strike-a-light (M.1055, top) and gunflint (M.1221, bottom).

The ballast flint is an English-imported material, in an English-built settlement near an English-run battery. Considering this, it is easy to accept that the worked ballast flint of Feature 43 is most likely the consequence of English colonist activity. However, it is important to analyze further the chipped stone as there is always the possibility that the lithic assemblage will counter common assumptions, such that the ballast flint could have also been worked by Indigenous or African flintknappers.

Cores

Cores are a diverse tool. As a typological category, cores encompass an array of shapes, sizes, and forms. Cores can be characterized into two general reduction techniques: formal and informal (Andrefsky 2005). Formal cores are well-prepared tools that follow a pattern of reduction that produces uniform or predictable flakes. Alternatively, informal cores do not show signs of preparation and flakes are removed from the stone in an “opportunistic manner” (Andrefsky 2005:144). Andrefsky (2005:158-159) explains that raw material and quality plays a significant role in the production of cores. Informal, multidirectional cores occur more frequently at sites where only poor-quality materials are available. Formal, bifacial cores occur more frequently at sites where high-quality materials are easily available. Both formal and informal cores occur at sites where there are high-quality materials in ample abundance. Additionally, cores from sites near raw material sources tend to be bigger than those found at sites with less access.

The lithic assemblage includes two cores: one informal, multidirectional core made from ballast flint and one assayed cobble of red rhyolite. The flint core has multiple worn

edges, characterized by jagged and uneven scars, and a beaten chipped surface that reveals the core may also have served as a pounding tool, or perhaps as a spark-making implement. The rhyolite core exhibits undisturbed cortex on more than half the surface of the cobble. It is a split cobble with a handful of flakes removed from a singular surface, also in a multidirectional, informal manner. The assayed red rhyolite cobble signals core reduction; however, one minimally scarred core more acutely reflects the testing of stone resources rather than early stages of lithic production. Neither core is close to being exhausted. Flint is a high-quality material (Whitaker 1994). An informal core of a high-quality material is unusual but indicates that flint was likely in abundance in Charlestown. However, given the debitage characteristics and the pounded edges and surfaces of the core, the informal, multidirectional reduction could also mean that the flintknapper was flaking the core erratically without reference to skill or experience. According to Andrefsky (2005:159), low-quality materials, such as rhyolite, are used to produce informal cores regardless of material availability. In view of this, the red rhyolite core does not provide strong conclusive insights into the lithic reduction practices at Feature 43. However, both cores are very large in size, each weighing more than 450g, meaning the abundance of material was probably not a concern for the flintknappers part of the Charlestown community.

Locally-Sourced Debitage

For Feature 43, 93% of the locally-sourced lithic assemblage consists of flakes, 62% being flake fragments (Table 1). The large portion of flakes, whole and fragmented, to other types of morphological debris at Feature 43 suggests that lithic manufacture took place in the

site's vicinity. The predominance of flake fragments (62%) indicates tool production. Furthermore, 82% of the locally-sourced lithic assemblage consists of tertiary flakes, with the average weight of whole flakes being 3.0 g (Tables 2 and 4). Generally, the prevalence of very small, light-weight, tertiary flakes within an assemblage points to the final stages of tool production, including fine-tuning, and/or retouching (Andrefsky 2005; Shott 1994). To be considered a tertiary flake for this analysis, the artifact must exhibit no cortex on its dorsal surface. If a higher threshold was used, as other archaeologists prefer, the percentage of tertiary flakes would have been even higher (see Andrefsky 2005). In summary, the high percentage of small, light-weight, tertiary flakes indicates that the lithic practices utilized on locally-sourced materials at Feature 43 were focused on the final stages of specialized tool production.

In general, at sites where stone implements are primarily maintained, rather than manufactured, lithic assemblages have a high amount of resharpening debris, or small tertiary flakes with signs of use wear and/or multiple dorsal scars (Fish 1981; Kelly 2011; Shott 1993, 1994). Many flakes, like those commonly associated with the final stages of production, are “too small, too misshapen, or otherwise too flawed” to be reused (Whittaker 1994:20). However, all material excavated from the Maudlin Archaeological District was screened through a 1/4-inch mesh, meaning that if there were small sharpening flakes at the site, they were likely not salvaged. Thus, this excavation method limits analytical findings.

Most fragments of ballast flint were angular shatter, while most pieces of locally-sourced debitage are flake fragments. Fully 62% of the locally-sourced lithics are flake fragments, versus 35% of the ballast flint, and 43% of the ballast flint is angular shatter,

versus 6% of the locally-sourced chipped stone. Based on the debitage characteristics, the manufacturing techniques and end objectives were different between the two material categories. The different morphological ratios between the two material categories suggest they were worked with different methods and with different goals in mind. The European flint assemblage reflects rough-and-ready nodule smashing or wasteful gunspall production whereas the locally-sourced chipped stone reflect the final stages of specialized tool production.

Though it is possible that the English produced the locally-sourced debitage by maintaining tools acquired through trade with Indigenous peoples, the evidence makes that circumstance highly unlikely. The English did have their own lithic technology but practiced unrefined production methods in which the flintknapper did not exercise finer techniques. In terms of labor and gender, lithic production and use was not a specialized nor exclusive skillset among Indigenous populations in New England (Howlett 2004; Kelly 2011; Nassaney 2004; Nassaney and Volmar 2003). The low percentage of locally-sourced shatter (6%) and the high percentage of tertiary whole flakes and flake fragments (82%) is indicative of the final stages of tool production conducted by skilled flintknappers. Thus, it is questionable whether European manufacturers possessed enough knowledge of lithic production to maintain Native stone tools. Additionally, save for at the Aptucxet Trading Post, not much evidence exists of colonists reusing Native stone tools for their own use in New England. In conclusion, based on the characteristics of the ballast flint assemblage, it is doubtful that the English of early colonial Charlestown engaged with highly-skilled lithic production enough for the upkeep of locally-sourced stone tools, meaning the presence of

locally-sourced debitage at the colonial settlement resulted from another source. With this in mind, and in conjunction with the distribution analyses, the locally-sourced lithic assemblage provides a tangible presence of an Indigenous population in early colonial Charlestown.

While the nature of the Indigenous presence at the colonial settlement cannot be decisively determined without further evidence, the characteristics of the locally-sourced debitage align strongly with a Native American lithic tradition and are attributable to those practicing tool production while living, trading, and/or working with or even enslaved by the English.

Locally-Sourced Materials

The locally-sourced chipped stone includes materials that were quarried in coastal Massachusetts, from as far north as Marblehead to as far south as Braintree (Figures 16 and 17). Just shy of two-thirds of the lithic assemblage belongs to this category. The use of non-local materials is minimal. The predominance of locally-sourced materials in Feature 43 aligns with the tradition of the Late Woodland period, during which cultures developed and valued the use of their regional environmental resources (Ritchie 2002). This practice continued into the seventeenth century. In other words, the lithic assemblage of Feature 43 reveals a persistence of the Indigenous regional culture by demonstrating a sustained preference for locally-sourced materials. If the preference for locally-sourced materials during the Late Woodland period signified a strengthening of regional cultures, then what did it mean under English colonialism? With the Massachusetts Bay Colony expanding its territory as the seventeenth century progressed, Native populations became increasingly

marginalized, with their resources controlled by English merchants and their bodies regulated by colony law (Newell 2009; Silverman 2001). The continued preference for locally-sourced materials signals a continuity of a cultural tradition during a time of great upheaval.

In the most basic sense, continuity of a tradition is the persistence of a cultural practice even when an individual's or a community's environmental circumstances have changed drastically (Jordan 2018; Silliman 2003, 2009). While undergoing loss of land, language, and people, and even of one's right to one's body, lithic production of locally-sourced materials becomes a daily practice by which to assert and preserve cultural affiliation. Luedtke (2002) similarly associates lithic materials with cultural affiliation in her study of Late Woodland sites on the Harbor Islands of Boston, in which different communities preferred different materials even though they lived in close proximity. This relationship between lithic source materials and cultural affiliation may explain why the worked ballast flint was not utilized in the same manner as the locally-sourced chipped stone, even though flint is more flakeable than stones native to Massachusetts. While Feature 43 was occupied very early in the days of European expansion, colonialism brought swift and monumental changes to the Northeast. The presence of lithic production within a colonial space provides insight into the early stages of continuity that allowed traditions to survive beyond the generations immediately affected by colonialism. Though a small signature, the debitage left behind offers that diminution of lithics in favor of metals in the very least does not happen immediately. The site is a stepping stone that links lithic traditions from the Late Woodland to the colonial period.

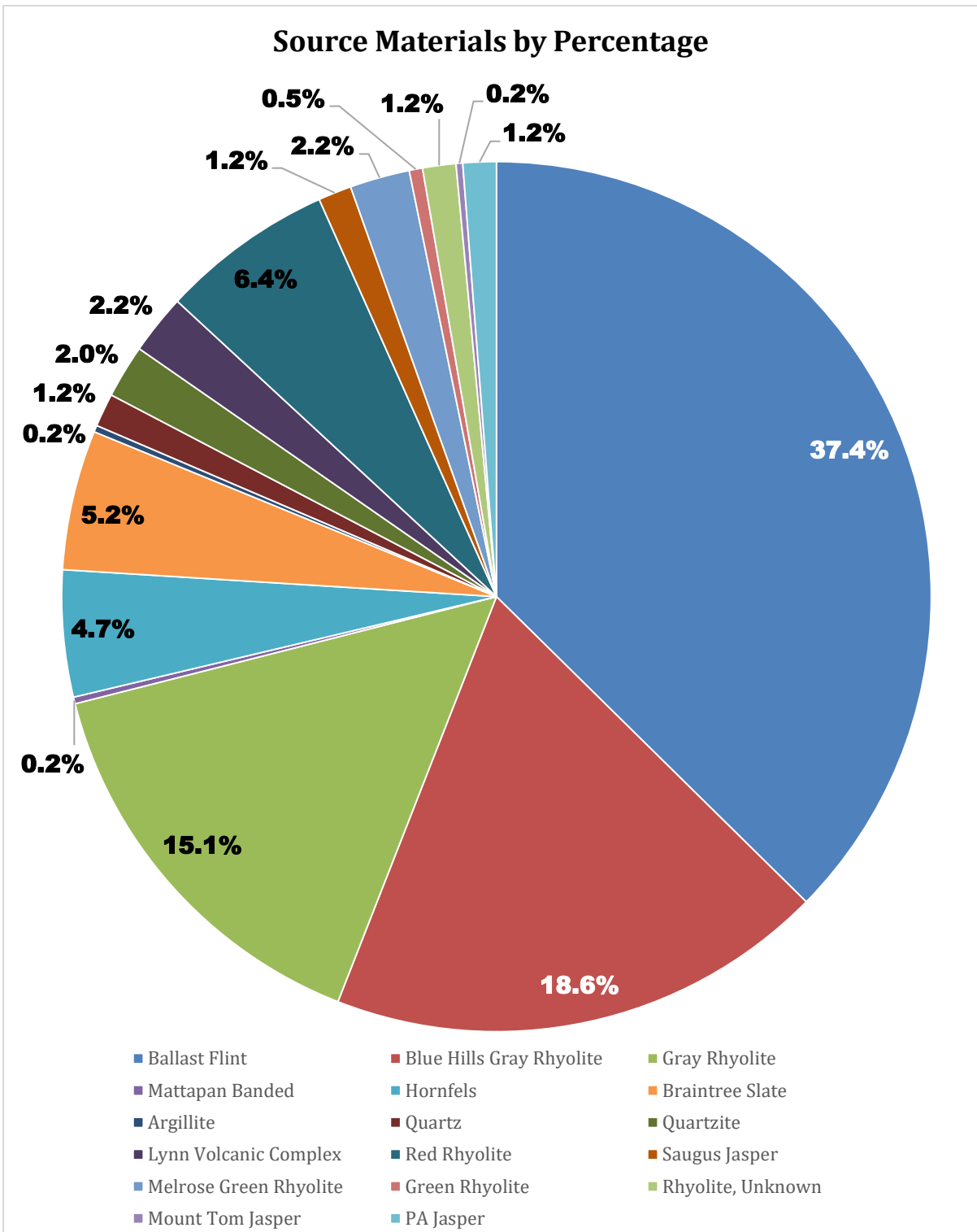


Figure 16. Pie chart of locally-sourced lithics by material.



Figure 17. A sample of locally-sourced tertiary flakes from Feature 43.

The use of the locally-sourced materials demonstrates an active agency in choice. The persistence of lithic production delivers a metaphor for the persistence of Native peoples in colonial communities. Assumptions regarding the abandonment of lithic technology in favor of European tools are widely acknowledged yet have little basis and feed into the assimilation and disappearance of Native Americans (Bagley et al. 2014; Cobb 2003; Silliman 2003). The exclusion of the lithic artifacts in previous studies symbolically excludes the contributions of Native Americans in colonial settlements. Taking the lithics out of the assumed “prehistoric” context and placing them back into the colonial deposit creates a reappearance and grounding of Native peoples through stone technology. Many of these

stone materials required trade, quarrying, or travel all while simultaneously navigating the increasingly “colonized” space. Though flintknappers at Feature 43 could have relied on the quartz or ballast flint easily found along the shoreline, rhyolites dominate the assemblage. In fact, quartz makes up only 1.2% of the assemblage. Rather than assimilate to more plastic European materials or scavenge the shoreline for stone, Native Americans in the Charlestown colonial community sustained their use of locally-sourced materials.

Locally-Sourced Tools

In a colonial environment, lithic traditions provided Indigenous peoples a means by which to practice their ancestral knowledge and to assert their cultural identity (Bagley et al. 2014; Silliman 2003). While lithic production in general conveys this idea, the presence of ancient stone implements further communicates a cultural and ancestral connection to the region. The lithic assemblage of Feature 43 includes a Stark point made from Braintree slate, a material available in the greater Boston area (Figure 18). Stark points are elongated triangular blades with tapered stems that date to the Middle Archaic, c. 5,500 to 7,500 years B.P. (Boudreau 2008:13; Dincauze 1976; Hoffman 1991:14). Locally-sourced tools also include a hornfels small-stemmed point and a fragment of a concave-based point made from Blue Hills gray rhyolite. Unfortunately, the base fragment cannot be typologically identified and therefore does not provide accurate dating. Small-stemmed points date from the Late Archaic to the Late Woodland period (Hoffman 1991:17). But given the material, hornfels, which was heavily used in the Middle and Late Woodland periods, the small-stemmed point probably dates later rather than earlier.



Figure 18. Braintree slate Stark point from Feature 43. Photo courtesy of Joseph Bagley.

The presence of the Stark point signals an ancient Native site near Feature 43. Yet, the distribution analyses discussed in Chapter 3 suggest that the locally-sourced chipped stone is part of the seventeenth-century site. As an ancient tool found within the colonial deposit, the Stark point was perhaps discovered nearby, collected, or saved before being

redeposited in Feature 43. There is precedent for this. At the Sarah Boston Homestead in Massachusetts, the Aptucxet Trading Post in Cape Cod, and at a nineteenth century Eastern Pequot site in Connecticut, ancient stone tools were found in later cultural deposits, signifying a purposeful procurement and reuse of these implements (Bagley et al. 2014; Luedtke 1998; Silliman 2009). Fragments of steatite bowls and vessels that are typically associated with the Terminal Archaic period (3800-2800 BP) were found in eighteenth to nineteenth century middens at the Sarah Boston Homestead (Bagley 2013:45-46; Bagley et al. 2014). A soapstone bowl fragment, an argillite projectile point, and a Fox Creek Lanceolate projectile point (c. 3700-1000 BP) were found in contexts that date to the 1830s on the Eastern Pequot reservation (Silliman 2009:224). Also, Luedtke (1998:37) found that English colonists at the Aptucxet trading post reused Native stone pestles as whetstones and later discarded them in their trash. For an Indigenous population living among English colonists, the Stark point could have acted as a tangible manifestation of Native identity, as a cultural descendent of the people and land. Although the Stark point predates the construction of Feature 43 by thousands of years, it is possible that it was redeposited in the colonial period as a result of curation and not simply due to disturbance.

CHAPTER 5

CONCLUSION

Mitark, the last hereditary chief, called people together on Indian Hill at sunset and told them that he was going to die and while he was talking a white whale arose from the water off Witch Pond and Mitark said that's a sign that another new people the color of the whale but don't let them have all the land because if you do that Indians will disappear. Then he died and shortly after the white people appeared (Simmons 1986:71; collected by Gladys Tantaquidgeon from Pearl Ryan of Gay Head in 1928)

The contrast between the morphological makeup of the locally-sourced lithic and ballast flint assemblages provokes an image of different flintknappers with different objectives in mind. There were multiple lithic activities taking place at Feature 43 with regard to source materials. The predominance of small, light-weight, tertiary flakes and flake fragments within the locally-sourced lithic assemblage indicates that part of the lithic activity within the colonial settlement of Charlestown focused on the final stages of tool production and maintenance. The atypical morphological composition of the ballast flint debitage suggests that the material was worked in a manner that would produce significant waste in the form of angular shatter. It is the high percentage of angular shatter that points to an improvisational or opportunistic practice of lithic production, such as nodule smashing or gunspall production. Additionally, the informal core of a high-quality flint material and the crudeness of the spark-making tools further implies that those knapping the European stone were unskilled or inexperienced. Though hesitant to assign cultural affiliation based on lithic

practices alone, the worked ballast flint reflects English manufacturing techniques and the locally-sourced chipped stone points to Native American lithic tradition. While this is a common assumption made about lithics, that locally-sourced debitage is Native and ballast flint is English, it is still important to investigate these expectations as ample evidence exists for overlap especially within colonial environments. More importantly, the archaeological signature of Native American lithic tradition places Indigenous peoples as part of the colonial space that is the domestic structure of Feature 43.

While it would be convenient to characterize the locally-sourced lithic assemblage as remains from an earlier Native site, this thesis argues that it is actually part of the colonial deposit, and thus represents contemporaneous seventeenth-century activity. The locally-sourced chipped stone is distributed in the feature in the same pattern and depth as other seventeenth-century artifacts. Attempts to date the locally-sourced lithic assemblage on its qualities alone does not provide a clear answer unless viewed through the lens of colonialism. At first look, the lithic artifacts represent three distinct time periods: the Stark point of the Middle Archaic, the source materials of the Late Woodland, and the ballast flint of the colonial period. Although the emphasis on local lithic sources follows the archaeological pattern of Late Woodland sites in southern New England, the context of the early colonial period (c. 1630-1660) elucidates the disjointed characteristics of the lithic assemblage as a whole. At the Aptucxet Trading Post, the 1830s Eastern Pequot site, and the Sarah Boston homestead, other archaeological sites in New England, either local lithic production continued past the prehistory-historical divide and/or curation of ancient stone tools occurred. It is not out of the realm of possibility that what appears to be three different

time periods is really the result of activities that materialized into one, the colonial period. The Stark point represents the curation of an ancestral tool, the source materials the continuity of a tradition, and the ballast flint a sign of European expansion.

The analytical power of this assemblage relies on its provenience, which is to say context is everything. The evidence indicates that the Native lithics were part of the colonial deposit. As part of the early colonial deposit, the lithic assemblage reflects a presencing of Indigenous peoples in the new English colony, allowing us to engage with the past with a more inclusive perspective. Although the physical presence of non-European peoples cannot always be established archaeologically, the inherent nature of colonial life consisted of multicultural interactions that revolved around labor and trade relations, two essential aspects of the merchant community. It is under the strained relationships of the seventeenth century that Native Americans became entangled in colonial settlements, living and working with, for, and among the English. The distribution analyses transform the lithic assemblage from the debris of an ancient disturbed site into the traces of an entangled and complicated relationship between peoples. Without knowledge of its provenience, an exclusively European picture of the Charlestown community is presented and that would be a disservice to New England's colonial history.

The dynamic between English merchants and the Native populations of New England is characterized by the common story of trade and labor. English merchants of the Massachusetts Bay Colony disrupted the existing relational dynamics of North America and established globalized mercantilist trade patterns that marginalized non-European peoples. The lithic assemblage reflects a presencing of the Indigenous peoples in the English colony,

contributing to its material culture, but also reverberates the cultural pluralism characteristic of colonial settlements. The chipped stone alone is but a small signature of multicultural interactions, being only 1.5% of the whole collection, but the collection also includes glass trade beads, red clay pipes, and coral. Merchants traded inexpensive glass trade beads made in Europe with Native Americans for resources worth ten-fold its value (Dubin 1995; Taylor 2001). The running deer motif on one of the red clay pipe bowls matches the maker's mark of Native American pipe makers from Nomini plantation in Virginia (c.1660-1670s); however, the cultural origin of the motif comes under frequent debate (Agbe-Davies 2015; Deetz 1996; Luckenbach and Kiser 2006). The wealth of Portuguese tin-glazed earthenware associates the Charlestown merchants with European trade, perhaps because of the lucrative cod trade (Gomes and Casimiro 2013). And the coral links the community of Feature 43 to trade in the West Indies where millions of people were bought and sold in exchange for sugar goods.

With the Portuguese tin-glazed earthenware, the glass trade beads, the Virginian red clay pipes, and the Caribbean coral, a more globalized picture of the trading system emerges, one that traces movements of people and their material culture across the colonies. These materials are closely linked to global markets and resonate the growing trend of consumption of both goods and labor that would come to shape the colonial era, all of which was spread through trade driven by the Massachusetts Bay Colony (Hunter 2001; McWilliams 2007). In this light, the locally-sourced lithic assemblage posits a juxtaposition of hyper-regional culture against the backdrop of an emerging international integration of European goods.

As collections-based research, Feature 43 exemplifies the importance of reexamining assemblages in storage as changes in archaeological theory and attitude greatly affect the overall interpretation of a site. With Feature 43 as an example, collections-based research can have serious implications in how the prehistory/history dichotomy is viewed in southern New England, giving rise to new interpretations of colonial sites. Previous perspectives placed Native lithics found in colonial contexts as signs of disturbance of earlier sites, but this study addresses those concerns and argues that the Native lithic objects of Feature 43 are signs of an enduring cultural tradition in an oppressive environment. While not all collections may provide evidence that reverses the prehistory-history bias, evidence from Feature 43 certainly counters tales of erasure and assimilation as told by the European perspective in discussion of Native American history in New England. Feature 43 is just one site of many that could provide answers about culturally pluralistic communities of colonial New England, and it remains to be seen how this site's lithic assemblage compares to other seventeenth-century sites in both material diversity and morphological typology. The comparison of lithic assemblages among early colonial period sites in southern New England has yet to be fully evaluated. As mentioned before, Native chipped stone is commonly found in "European" colonial sites, but the explanation why is not always fully explored. At the very least, it indicates social interaction, of trade, of labor, but also coexistence, though not necessarily peaceful. It is that coexistence that defined the early colonial period and the culturally pluralistic communities it produced.

REFERENCES

- Agbe-Davies, Anna S.
2004. Smoking Pipes along the Tobacco Coast. In *The Archaeology of Tobacco Pipes in Eastern North America, Smoking and Culture*. Sean Rafferty and Rob Mann, editors. pp. 273-304. The University of Tennessee Press: Knoxville.
2015. *Tobacco, Pipes, and Race in Colonial Virginia: Little Tubes of Mighty Power*. Left Coast Press, Inc.: Walnut Creek, CA.
- Andrefsky, William, Jr.
2005. *Lithics: Macroscopic Approaches to Analysis*. Cambridge University Press: Cambridge, UK.
- Bagley, Joseph
2013. *Cultural Continuity in a Nipmuc Landscape*. Master's thesis, Historical Archaeology Graduate Program, University of Massachusetts Boston. UMass Boston's ScholarWorks.
2016. *A History of Boston in 50 Artifacts*. University Press of New England: Lebanon, NH.
- Bagley, Joseph, Stephen Mrozowski, Heather Law Pezzarossi, and John Steinberg
2014. "Continuity of Lithic Practice from the Eighteenth to the Nineteenth Centuries at the Nipmuc Homestead of Sarah Boston, Grafton, Massachusetts," *Northeast Historical Archaeology*, (43): 172-188.
- Beisaw, April M.
2010. "Memory, Identity, and NAGPRA in the Northeastern United States." *American Anthropologist*, 112 (2): 244-256.
- Beranek, Christa M. and David B. Landon
2016. *Colony Archaeological Survey, Report on the 2015 Field Season, Burial Hill, Plymouth, Massachusetts*, Andrew Fiske Memorial for Archaeological Research Cultural Resource Management.
2017. *Project 400: The Plymouth Colony Archaeological Survey, Report on the 2016 Field Season, Burial Hill, Plymouth, Massachusetts*, Andrew Fiske Memorial for Archaeological Research Cultural Resource Management.
- Blanchette, Jean-Francois
1975. "Gunflints from Chicoutimi Indian Site (Quebec)", *Historical Archaeology*, 9(1):41-54.

- Boudreau, Jeff
2008. *A New England Typology of Native American Projectile Points*. Freedom Digital: Ashland, MA.
- Bowman, William F. and Gerald D. Zeoli
1977. "Discovery of a New Major Aboriginal Lithic Source," *Bulletin of the Massachusetts Archaeological Society*, 38(3): 34-47.
- Capone, Patricia and Elinor Downs
2004. Red Clay Tobacco Pipes: Petrographic Window into Seventeenth Century Economics at Jamestown, Virginia and New England. In *The Archaeology of Tobacco Pipes in Eastern North America, Smoking and Culture*. Sean Rafferty and Rob Mann, editors. pp. 305-316. The University of Tennessee Press: Knoxville.
- Chilton, Elizabeth and Dianna Doucette
2002. "Archaeological Investigations at the Lucy Vincent Beach Site (19-DK-148): Preliminary Results and Interpretations" In *A Lasting Impression: Coastal, Lithic, and Ceramic Research in New England Archaeology*, Jordan E. Kerber, editor, pp. 105-124. Praeger: Westport, CT.
- Cobb, Charles R.
2003. "Introduction: Framing Stone Tool Traditions after Contact." In *Stone Tool Traditions in the Contact Era*, Charles R. Cobb, editor, pp. 1-12, The University of Alabama Press: Tuscaloosa and London.
- Cummings, Abbott Lowell
1979. *The Framed Houses of Massachusetts Bay, 1625-1725*. Belknap Press: Cambridge, MA.
- Deetz, James
1996. *In Small Things Forgotten, An Archaeology of Early American Life*. Anchor Books: New York.
- Dincauze, Dena F.
1976. *The Neville Site: 8,000 Years at Amoskeag, Manchester, New Hampshire*. Peabody Museum Press of Harvard University: Cambridge, MA
- Dubin, Lois Sherr
1995. *The History of Beads: From 30,000 B.C. to the Present*, concise edition, Harry N. Abrams, Incorporated: New York.

- Durst, Jeffrey J.
2009. "Sourcing Gunflints to Their Country of Manufacture." *Historical Archaeology*, 43(2): 18-29.
- Fish, P.R.
1981. Beyond Tools: Middle Paleolithic debitage analysis and cultural inference. *Journal of Anthropological Research*, 37: 374-386.
- Fitts, Robert K.
1996. The Landscapes of Northern Bondage. *Historical Archaeology*, 30(2): 54-73.
- Frothingham, Richard Jr.
1845. *The History of Charlestown, Volumes 1-7*. Little and Brown: Boston.
- Gomes, Mario Varela and Tania Manuel Casimiro
2013. *On the World's Routes: Portuguese Faience (16th-18th Centuries)*. Instituto de Arqueologia L'Palloencias: Lisbon.
- Gould, D. Rae
2013. "Cultural Practice and Authenticity: The search for real Indians in New England in the 'historical' period." In *The Death of Prehistory*, Peter R. Schmidt and Stephen A. Mrozowski, editors, pp. 241-266. Oxford University Press: Oxford, UK.
- Harper, Ross K.
2010. Thomas Daniels Archaeological Site. Connecticut Department of Transportation. <<http://ahs-inc.biz/legacy/Daniels/index.html>>. Accessed 22 July 2018.
- Hart, Siobhan
2004. Mixed Assemblages and Indigenous Agents: Decolonizing Pine Hill. *Northeast Anthropology* 68: 57-72.
- Hayes, Katherine Howlett
2013. *Slavery Before Race: Europeans, Africans, and Indians at Long Island's Sylvester Manor Plantation 1651-1884*. New York University Press: New York and London.
- Hoffman, Curtiss R.
1991. *A Handbook of Indian Artifacts from Southern New England*. Massachusetts Archaeological Society: Middleborough, MA

- Howlett, Katherine
2004. Gendered Practices: Ethnohistoric and Archaeological Evidence for Native American Social Divisions of Labor. *Bulletin of the Archaeological Society of Connecticut* 66: 65-85.
- Hume, Ivor Noël
2001. *A Guide to Artifacts of Colonial America*. University of Pennsylvania Press: Philadelphia

2001. *If These Pots Could Talk: Collecting 2,000 Years of British Household Pottery*. Chipstone Foundation: Milwaukee, WI.
- Hunter, Phyllis Whitman
2001. *Purchasing Identity in the Atlantic World: Massachusetts Merchants, 1670-1780*, Cornell University Press: Ithaca and London.
- Kavash, Barrie
1994. "Native Foods of New England." In *Enduring Traditions: The Native Peoples of New England*, Laurie Weinstein, editor, pp. 5-30, Bergin and Garvey: Westport, CT and London.
- Kelly, John M.
2011. *Flint at the Fort: Investigating Raw Material Scarcity and Locations of Lithic Activity at Monhantic Fort*. Master's thesis, Historical Archaeology Graduate Program, University of Massachusetts Boston. UMass Boston's ScholarWorks.
- Kenmotsu, Nancy
1990. "Gunflints: A Study", *Historical Archaeology*, 24(2): 92-124
- Kent, Barry C.
1983. "More on Gunflints", *Historical Archaeology*, 17(2): 27-40.
- Johnson, Eric S.
2000a. "Community and Confederation: A Political Geography of Contact Period Southern New England," In *The Archaeological Northeast*, Mary Ann Levine, Kenneth E. Sassaman, Michael S. Nassaney, editors, pp. 155-168. Bergin and Garvey: Westport.

2000b. "The Politics of Pottery: Material Culture and Political Process among Algonquians of Seventeenth Century Southern New England," In *Interpretations of Native North American Life: Material Contributions to Ethnohistory*, Michael S. Nassaney and Eric S. Johnson, editors, pp. 118-145. University Press of Florida: Gainesville.

Jordan, Kurt A.

2015. "Pruning Colonialism: Vantage Point, Local Political Economy and Cultural Entanglement in the Archaeology of Post-1415 Indigenous Peoples." In *Rethinking Colonial Pasts through Archaeology*, Neal Ferris, Rodney Harrison, and Michael V. Wilcox, pp.103-120. Oxford University Press: Oxford.

2018. "Markers of difference or Makers of Difference? Atypical Practices at Haudenosaunee (Iroquois) Satellite Sites, ca. 1650-1700." *Historical Archaeology* 52: 12-29

Joslyn, Roger D.

1984. *Vital Records of Charlestown, Massachusetts to the Year 1850*. Massachusetts Historical Society, New England Historic Genealogical Society: Boston

Lightfoot, Ken G.

1995. Culture Contact Studies: Redefining the Relationship between Prehistoric and Historical Archaeology. *American Antiquity* 60(2): 199–217.

Loren, Diana DiPaolo

2008. *In Contact: Bodies and Spaces in the Sixteenth- and Seventeenth Century Eastern Woodlands*. AltaMira Press: Plymouth, UK.

Luckenbach, Al and Taft Kiser

2006. "Seventeenth Century Tobacco Pipe Manufacturing in the Chesapeake Region: A Preliminary Delineation of Makers and Their Styles." In *Ceramics in America 2006*, Robert Hunter, editor. pp. 160-177. Chipstone Foundation, University Press of New England: Hanover and London.

Luedtke, Barbara E.

1998. "Worked Ballast Flint at Aptucxet." *Northeast Historical Archaeology* (27): 33-50.

1999. Gunflints in the Northeast. *Northeast Anthropology* 57: 27-43.

2002. "Archaeology on the Boston Harbor Islands after 25 Years," In *A Lasting Impression: Coastal, Lithic, and Ceramic Research in New England Archaeology*, Jordan E. Kerber, editor, pp. 3-12. Praeger: Westport, CT.

Luedtke, Barbara E., O. Don Hermes, and Duncan Ritchie

1998. Rediscovery of the Wyoming Quarry Site, Melrose, Massachusetts. *Bulletin of the Massachusetts Archaeological Society* 59(1): 25-30.

Manegold, C.S.

2010. New England's Scarlet Letter, *The Boston Globe*, 18 January
<http://archive.boston.com/bostonglobe/editorial_opinion/oped/articles/2010/01/18/new_englands_scarlet_s_for_slavery/> Accessed 11 May 2016.

Massachusetts State Archives

1652. Massachusetts Archives Collection 1603-1799: Volume 38B, Judicial 1640-1658, Massachusetts State Archives, Boston.

McBride, Kevin A.

1994. "The Source and Mother of the Fur Trade: Native-Dutch Relations in Eastern New Netherland." In *Enduring Traditions: The Native Peoples of New England*, Laurie Weinstein, editor, pp. 31-51. Bergin and Garvey: Westport, CT and London.

McWilliams, James E.

2007. *Building the Bay Colony: Local Economy and Culture in Early Massachusetts*. University of Virginia Press: Charlottesville and London.

Nassaney, Michael S.

2004. Native American Gender Politics and Material Culture in Seventeenth-Century Southeastern New England. *Journal of Social Archaeology* 4(3): 334-367.

Nassaney, Michael S. and Michael Volmar

2003. "Lithic Artifacts in Seventeenth Century Native New England." In *Stone Tool Traditions in the Contact Era*, Charles R. Cobb, editor, pp. 78-93, The University of Alabama Press: Tuscaloosa and London.

Newell, Margaret Ellen

2009. Indian Slavery in Colonial New England. In *Indian Slavery in Colonial America*, Alan Galloway, editor. pp. 33-66. University of Nebraska Press: Lincoln and London.

Odell, George H.

2004. *Lithic Analysis*. Kluwer Academic/Plenum Publishers: New York.

Pendery, Steven R.

1984. *Final Report: Phase III Chelsea-Water Street Connector Project Charlestown, Massachusetts: Excavations at the Wapping Street and Maudlin Street Archaeological Districts*. Peabody Museum, Harvard University: Boston.

Pendery, Steven R.

1987. *Symbols of community: Status differences and the archaeological record in Charlestown, Massachusetts, 1630-1760*. Doctoral dissertation, Department of Anthropology, Harvard University, University Microfilms International, Ann Arbor, MI.

1999. Portuguese Tin-Glazed Earthenware in Seventeenth Century New England, *Historical Archaeology*, 33(4): 58-77.

Perley, Sidney

1912. *The Indian Land Titles of Essex County Massachusetts*. Essex Book and Print Club: Salem, MA

Richmond, Trudie Lamb

1994. "A Native Perspective of History: The Schaghticoke Nation, Resistance and Survival." In *Enduring Traditions: The Native Peoples of New England*, Laurie Weinstein, editor, pp. 103-112. Bergin and Garvey: Westport, CT and London.

Ritchie, Duncan

2002. "Late Woodland Lithic Resource Use and Native Group Territories in Eastern Massachusetts," In *A Lasting Impression: Coastal, Lithic, and Ceramic Research in New England Archaeology*, Jordan E. Kerber, editor, pp. 105-124. Praeger: Westport, CT.

Ritchie, Duncan and Richard A. Gould.

1985. "Back to the Source." In *Stone Tool Analysis: Essays in Honor of Don E. Crabtree*, Mark G. Plew, James C Woods, and Max G. Pavesic, editors, pp. 48-52. University of New Mexico Press, Albuquerque.

Schmidt, Peter R and Stephen A. Mrozowski

2013. "The Death of Prehistory: Reforming the Past, Looking to the Future." In *The Death of Prehistory*, Peter R. Schmidt and Stephen A. Mrozowski, editors, pp. 1-30. Oxford University Press: Oxford, UK.

Shott, Michael J.

1993. *The Leavitt Site: A Parkhill Phase Paleo-Indian Occupation in Central Michigan*. University of Michigan Museum of Anthropology, Memoirs No. 25, Ann Arbor.

1994. Size and Form in the Analysis of Flake Debris: Review and Recent Approaches. *Journal of Archaeological Method and Theory* 1(1): 69-110.

Silliman, Stephen

2003. "Using a Rock in a Hard Place: Native American Lithic Practices in Colonial California," In *Stone Tool Traditions in the Contact Era*, edited by Charles Cobb, pp.127-150. University of Alabama Press: Tuscaloosa.

2009. "Change and Continuity, Practice and Memory: Native American Persistence in Colonial New England," *American Antiquity* 74(2): 211-230.

2010. Indigenous Traces in Colonial Spaces: Archaeologies of Ambiguity, Origins, and Practices. *Journal of Social Archaeology* 10(1): 28-58.

Silverman, David J.

2001. The Impact of Indentured Servitude on the Society and Culture of Southern New England Indians, 1680-1810, *The New England Quarterly*, 74(4): 622-666.

Simmons, William S.

1986. *Spirit of the New England Tribes: Indian History and Folklore*. University Press of New England: Hanover and London.

Smedley, Audrey and Brian D. Smedley

2011. *Race in North America: Origin and Evolution of a Worldview*. Westview Press, Boulder.

Taylor, Alan

2001. *American Colonies: The Settling of North America*. Penguin Books: New York.

Vaughan, Alden T.

1965. *New England Frontier Puritans and Indians 1620-1675*. Little, Brown and Company: Boston.

Voss, Barbara

2008. "Gender, Race, and Labor in the Archaeology of the Spanish Colonial Americas." *Current Anthropology*, 49(5): 861-893.

Voyages Database

2016. Voyages: The Trans-Atlantic Slave Trade Database.
<<http://www.slavevoyages.org>> (accessed September 13, 2016).

Whittaker, John C.

1994. *Flintknapping: Making and Understanding Stone Tools*, The University of Texas Press: Austin.

Wilkie, Laurie A.

1996. Glass-Knapping at a Louisiana Plantation: African-American Tools? *Historical Archaeology*, 30(4): 37-49.

Williams, Scott E.

2010. *Monhantic Fort Gunflints: Continuity or Change in Mashantucket Pequot Lithic Manufacturing Patterns Due to European Contact*. Master's Thesis, Anthropology Graduate Program, University of Connecticut. OpenCommons@UConn.

Witthoft, John

1966. "A History of Gunflints." *Pennsylvania Archaeologist*, 36: 12-49.

Wyman, Thomas Bellows

1879. *The Genealogies and Estates of Charlestown in the County of Middlesex and Commonwealth of Massachusetts 1629-1818*. David Clapp and Son: Boston.