Northeast Historical Archaeology

Volume 43 Article 9

2014

Continuity of Lithic Practice from the Eighteenth to the Nineteenth Centuries at the Nipmuc Homestead of Sarah Boston, Grafton, Massachusetts

Joseph M. Bagley

Stephen Mrozowski

Heather Law Pezzarossi

John Steinberg

Continuity of Lithic Practice from the Eighteenth to the Nineteenth Centuries at the Nipmuc Homestead of Sarah Boston, Grafton, Massachusetts

Joseph M. Bagley, Stephen Mrozowski, Heather Law Pezzarossi, and John Steinberg

Stone tools have been found at all Nipmuc-related house sites in central Massachusetts dating from the 17th through 20th centuries. This article explores in detail the lithic assemblage recovered from the kitchen midden of the late 18th and early 19th century Sarah Burnee/Sarah Boston farmstead in Grafton, Massachusetts. Quartz and quartzite lithics were found in similar concentrations as historic ceramics within the midden suggesting that these tools were in active use within the household. Ground-stone tools of ancient origin indicate curation and reuse of older materials, and knapped glass and re-worked gunflints suggest knowledge of flintknapping. This article argues that despite colonial rules forbidding traditional Native practices, this and other Nipmuc families continued to practice the production and use of lithics for at least 300 years after the arrival of Europeans.

Dans la partie centrale du Massachusetts, des outils en pierre ont été trouvés sur tous les sites Nipmuc datant du XVIIe au XXe siècle. Cet article étudie en détail l'assemblage lithique provenant du dépotoir de la cuisine de la ferme Sarah Burnee/Sarah Boston (fin XVIIIe au début XIXe siècle) à Grafton, Massachusetts. Dans le dépotoir, des pièces de quartz et quartzites ont été trouvées dans des concentrations similaires à celles des céramiques historiques, ce qui suggère que ces outils lithiques étaient activement utilisés au sein de la maisonnée. Des outils en pierre polie plus anciens indiquent une forme de conservation à long terme et de réutilisation des matériaux, tandis que le verre taillé et les pierres à fusil retouchées suggèrent une connaissance des techniques de taille. Cet article soutient qu'en dépit des règles coloniales interdisant les pratiques traditionnelles amérindiennes, les familles Nipmuc ont continué à produire et à utiliser des outils lithiques pendant au moins 300 ans après l'arrivée des Européens.

Introduction

The presence of stone tools, worked glass, and modified gunflints on 17th- to 19th-century Native American sites in Massachusetts provides an opportunity to study the continuity of native lithic practices, specifically knapping. This paper explores the late 18th- through early 19th-century lithic assemblage from the kitchen midden of the single-family Sarah Burnee/Sarah Boston Farmstead in the town of Grafton, Massachusetts (FIG. 1). This house was owned and occupied by a family of self-identifying Nipmuc Native Americans, who had passed the property from mother to daughter and named their first daughters Sarah for at least four generations. The combined analysis of flaked quartz, gunflints, ground-stone tools, and worked glass presented here contributes to growing evidence of the complicated and nuanced negotiation of personal identity, cultural continuity, and domestic practice in native households living under colonial regulations.

Lithics on 17th–19th Century Nipmuc Sites in Central Massachusetts

Lithic practice is often overlooked on historical Native American sites with the presumption that knapping quickly declined after European contact. The presence of stone tools and other knapped materials on historical native sites serves as an ideal proxy for native cultural continuity and self-identity. Viable alternatives (metal knives, etc.) and, in some cases, the requirement by European colonists that Native Americans abandon all overt and so-called "traditional" practices made the continuity of this practice a social, political, and symbolic choice by native people (Cobb 2003). A growing body of scholarship focusing on the continuity of lithic practice by native people after the arrival of Europeans (Silliman 2001, 2003, 2009, 2010; Cassell 2003; Cobb 2003; Nassaney and Volmar 2003) has contributed greatly to the ongoing dismantling of the prehistoric/historical divide in Native American cultural studies (Lightfoot 1995; Den

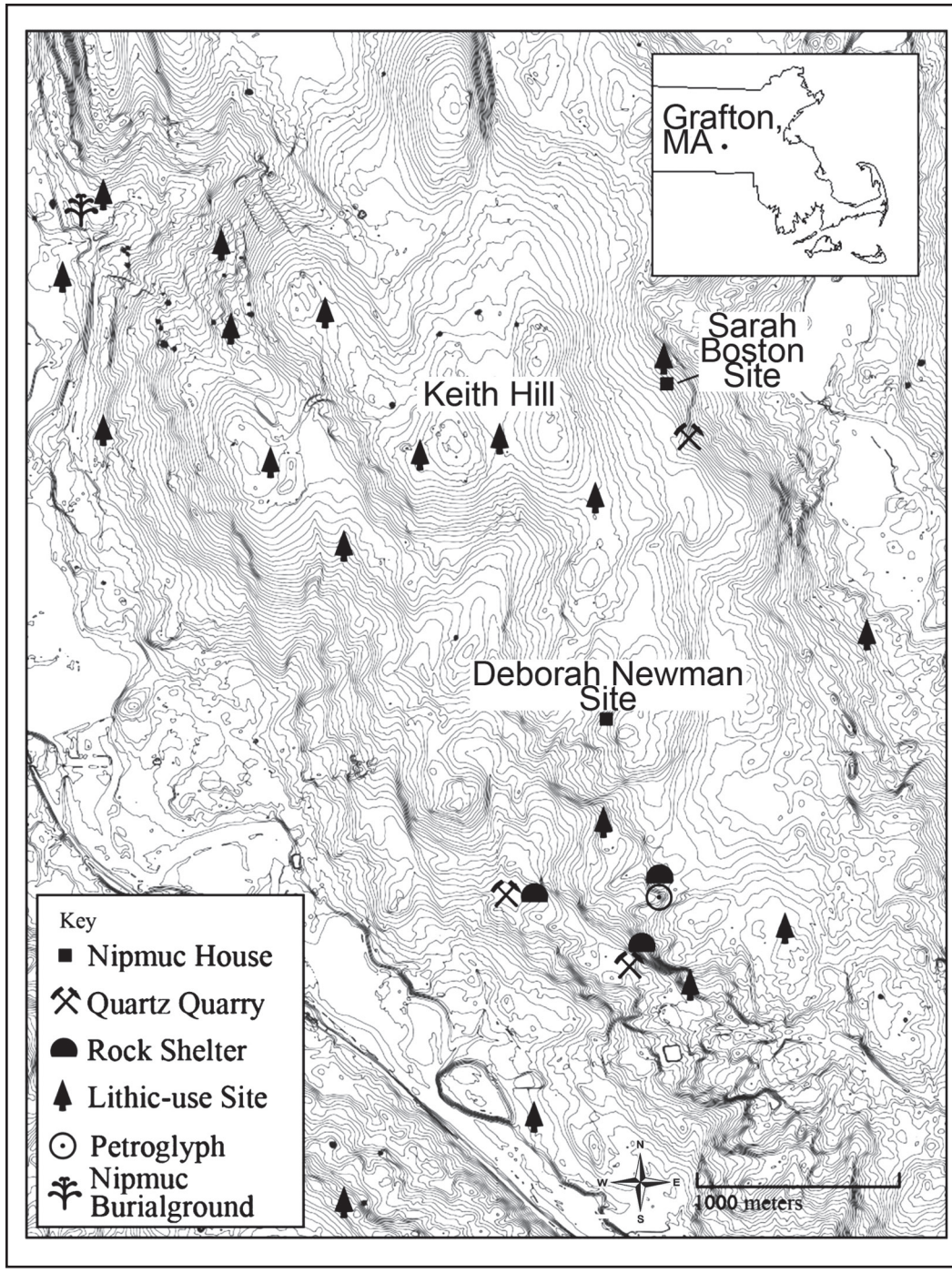

Figure 1. The Sarah Boston site and surrounding Native American archaeological sites on Keith Hill in Grafton, Massachusetts. (Map by Joseph Bagley, 2013.)

Ouden 2005; Gould 2010; Silliman 2012; Schmidt and Mrozowski 2013).

A pattern of lithic materials recovered within cultural deposits on central Massachusetts Nipmuc sites dating to the period after the arrival of Europeans has emerged (FIG. 2). Six Nipmuc house sites have undergone archaeological investigation, and lithics have been documented within household refuse on all six sites. These sites are not examples of later occupation and the disturbance of earlier Native American materials, as neighboring contemporary domestic sites occupied by European settlers have no evidence of lithics within their archaeological assemblages (Mulholland, Savulis, and Gumaer 1986; Pagoulatos 1988; Leveillee, Dalton, and Hoffman 1994; Fragola and Ritchie 1996; Glover 1990; Gary 2005; Ritchie and Van Dyke 2005; Tritch 2006; Mrozowski et al. 2009).

In Westborough, a 19th-century cellar hole associated with Nipmuc occupants was identified in the National Register–listed Cedar Swamp Archaeological District (Leveillee, Dalton, and Hoffman 1994). Research indicates that Nipmuc people used the swampland, which was considered undesirable land by the colonists, for harvesting cedar for European-style homes (for sale and personal use) (Leveillee, Dalton, and Hoffman 1994). Sixteen test pits around the foundation produced a quartzite biface and 45 pieces of quartz-chipping debris (flakes) in concentrations greater than the surrounding background lithic scatter (Leveillee, Dalton, and Hoffman 1994: 50).

The Magunkaquog Hill archaeological site, excavated by a team from the University of Massachusetts, Boston, identified a 17th-century house site directly associated with the Magunkaquog Praying Indian village, with quartz concentrated within domestic refuse deposits associated with the house (Mrozowski et al. 2009).

The Deborah Newman House, on a lot neighboring the Burnee/Boston Farmstead site on Keith Hill, is a documented 18th- to 19th-century Native American site, with 40 quartz flakes and a Neville point base (5,000–7,500 years old) recovered within a concentration of later European-made ceramics (Bagley 2013).

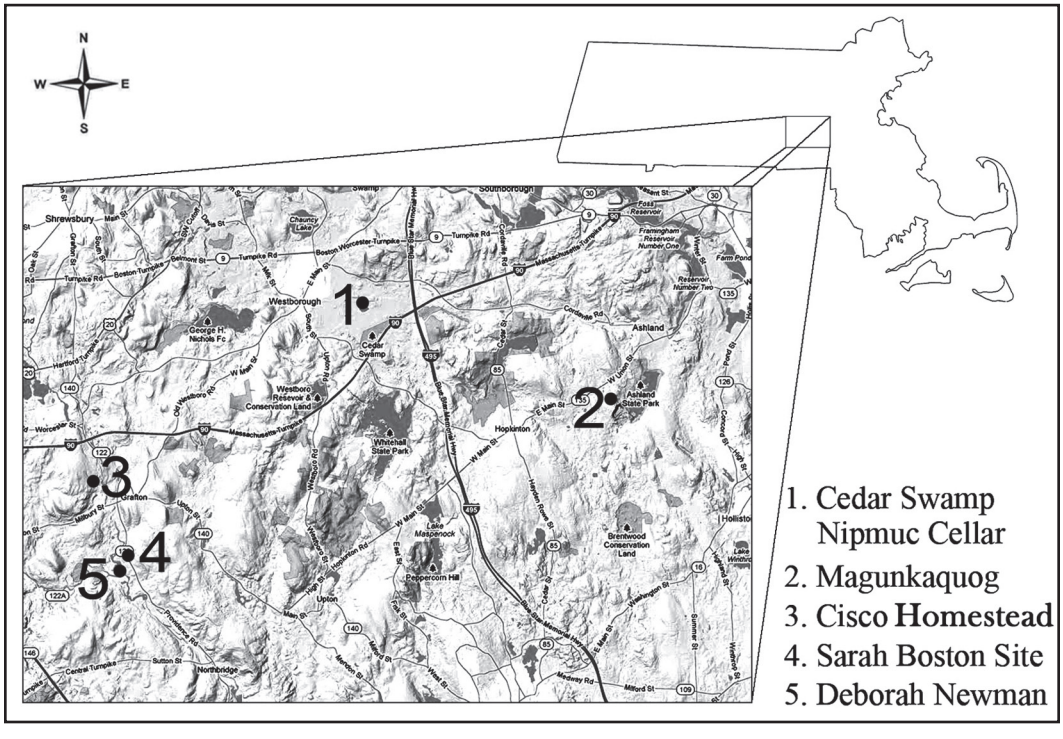

Figure 2. Central Massachusetts Nipmuc house sites with lithics in their archaeological assemblages. (Map by Joseph Bagley, 2013.)

The Cisco Homestead, also in Grafton, Massachusetts, yielded a small number of quartz flakes from its yard. This home is the oldest standing structure directly associated with a Nipmuc family. Built in 1801 on Moses Printer's 1727 allotment, the house represents the presence of Nipmuc people and identity through the occupancy of the Printer, Gimbee, Arnold, and Cisco families and their descendants (Gould 2010).

Finally, the Sarah Burnee/Sarah Boston Farmstead, discussed in detail below, contained a concentration of lithic materials within a dense sheet midden associated with a late 18th- to early 19th-century house foundation.

These six sites demonstrate the continuity of lithic practice on Nipmuc sites from the period before the arrival of Europeans through the 20th century.

The raw material for the production of lithics was readily available in central Massachusetts, either through direct access to raw lithic sources or through the reuse of older lithic deposits at native sites. The abundance of native lithic sites throughout the area could also indicate that the presence of lithics on post-contact sites indicates a general background scatter of lithic refuse in a heavily used Native American landscape. It is also possible that nonnative people could have produced or used stone tools for the same economic reasons as the abovementioned Nipmuc families, indicating that stone-tool presence on post-contact sites is either commonplace or more an indication of economic status than ethnicity.

Through use of the web-based Massachusetts Archaeological Resource Information System (MACRIS) GIS database, a review of all cultural resource management (CRM) surveys within a 15 mi. radius of the Sarah Boston site negated both of these concerns. In total, there have been 345 CRM surveys within 15 mi. of the site. Of these surveys, 102 produced no cultural materials, 92 identified only Native American materials, and 71 identified only post-contact resources. Only 80 surveys resulted in the identification to both Native American and post-contact resources, and, of these, just 13 (3.77%) identified lithic materials in close proximity of post-contact structures (Leveillee and Davin 1987; Fitch, Hoffman, and Rainey 1989; King 1989; Doucett and Davin 1994; Leveillee, Dalton, and Hoffman 1994; Decima 1995; Fragola and Ritchie 1996; Herbster and Garman 1996; Macpherson 1998; Atwood 2001; Heitert et al. 2001; Gould 2010; Bagley 2013). Of these 13, 6 are lithic find spots situated near 18th- to 20th-century domestic structures with no direct association between historical deposits and lithics. The remaining seven sites include two Nipmuc burying grounds associated with flake scatters, a 17th-century Huguenot fort attacked by natives, and the seven Nipmuc sites listed above. Based on these results, lithic scatters near historical resources are rare in the vicinity of the Sarah Boston site, and the few that exist are associated with Native American ethnicity, not a general socioeconomic status.

The Sarah Burnee/Sarah Boston Farmstead History

The Burnee/Boston Farmstead site is located on Keith Hill in Grafton, Massachusetts. In the 17th century, the majority of the land that became the town of Grafton was the location of a 10,000 ac. Hassanamisco Praying Indian town, home of the Hassanamesit Praying Indians. Numerous CRM surveys have identified 24 diverse Native American sites nearby, including rock shelters, quarries, and resource-processing sites, establishing a native presence for at least 7,500 years (Mulholland, Savulis, and Gumaer 1986; Pagoulatos 1988; Fragola and Ritchie 1996; Glover 1990; Gary 2005; Ritchie and Van Dyke 2005; Tritch 2006) (FIG. 1).

In 1654, preacher John Eliot established the Praying Indian town of Hassanamisco in central Massachusetts on rural land already occupied by a sizable population of Nipmuc Indians in order to convert the native people to Christianity and "civilize" them through English indoctrination and surveillance (Gary 2005; Gould 2005; Law 2008). This indoctrination included the requirement to abandon all native cultural practices, clear and improve the land, build European-style houses, and abide by English land practices, gender roles, and social orders (Gary 2005; Law 2008). The creation of this and other Praying Indian towns, and the desire to isolate Native American people within these borders, was a deliberate attempt to separate Native American populations from European colonists

and to limit interactions between Native American peoples across a wide region (Gary 2005; Law 2008).

During Metacom's Rebellion (King Philip's War), a late 17th-century Native American uprising against European settlement practices and mistreatment, native people throughout Massachusetts and Connecticut who sympathized with the colonists were moved to several existing praying towns, including Hassanamisco and Natick, in 1675 (Doughton 1997). While Hassanamisco refers to the name of the Nipmuc Praying Indian Town, the people of the town are identified as the Hassanamesit. Though the Hassanamesit Nipmuc people of the town of Hassanamisco were allegiant, colonists nevertheless attacked Hassanamisco, burning the crops of the native inhabitants, over fears they would switch sides. King Philip's troops also attacked Hassanamisco, resulting in the capture of around 200 Nipmuc men. The remaining inhabitants were evacuated by the colonists to Deer Island in Boston Harbor, where they faced extreme conditions and were afforded few provisions (Doughton 1997). Many of those removed from Hassanamisco, including many living in Natick, could not return to their homesteads despite their continuing claims to ownership of property (Law, Pezzarossi, and Mrozowski 2008).

In 1694, despite continued claims of Native American ownership, control over Hassanamisco and other Native American towns was transferred to English guardians (Kawashima 1969). In 1727, these guardians began to sell off much of the original Hassanamisco property, shrinking the land holdings of the displaced Hassanamesit from 10,000 to 1,200 ac. The same year, colonial guardians finally allowed the return of Nipmuc people to the remaining 1,200 ac.; however, they restricted the allotment of the remaining 1,200 ac. of land to just seven Nipmuc families, possibly limiting land to those families who could tie their lineages to a family in the 1654 Praying Indian town (Law 2008). The proceeds from the prior sale of Nipmuc land, £2,500, were kept by the guardians, with the yearly interest from this fund to be divided among these seven families (Law 2008). The story of the many Sarahs who owned one of these seven parcels begins here.

Sarah Boston's Lineage

A multigenerational Nipmuc family lived on the parcel that includes the farmstead for nearly 100 years, continuing many Nipmuc practices of matrilineality, including establishing inheritance rights from mother to daughter through the naming of the first daughter born on the family land after her mother. Peter Muckamaug and Sarah Robins were a married Nipmuc couple with possible genealogical ties (through Sarah) to Sachem Petavit, one of the original occupants of Hassanamisco (Gookin 1792; Law 2008). Sarah Robins's ties legitimized their 1727 claim to their 200 ac. allotment in Grafton (Law 2008). In 1729, both Peter and Sarah moved from Providence, Rhode Island, where their families had been living in exile since King Philip's War, to claim her inheritance (Law 2008). Peter died in 1740, and Sarah Robins's health diminished such that in 1746 their daughter, Sarah Muckamaug, moved from Providence to her family plot in Grafton to care for her ailing mother (Mandell 1991). Sarah Muckamaug met and married Fortune Burnee, an African American, and gave birth to a daughter, Sarah Burnee, in 1744 (Law 2008). Sarah Muckamaug sold 46 ac. of her 200 ac. inheritance after her mother's death in 1749 to build a homestead for herself and Fortune. Sarah Burnee, who was just seven when her mother passed away in 1751, lived in the house with her father, Fortune, until 1765, when she turned 21 and declared independence and sole ownership of the remaining 154 ac. property of her mother (Law 2008). Sarah Burnee married Boston Phillips, a Native American of unknown tribal association, in 1786.

Sarah Burnee and Boston Phillips had a daughter, Sarah Boston, around 1780. Sarah Boston lived in the house discussed here until her death in 1837. Sarah Boston's daughter, Sarah Mary Boston, was left with the remaining 20 ac. of land, her mother's house, and her mother's debt, which was paid off through the sale of the land and house in 1854. Archaeological evidence shows that the house was not used after this sale and eventually fell into ruin. There are at least two more generations of Sarahs, who did not live on the property, in the lineage of Sarah Robins following Sarah Mary Boston (Law 2008).

Archaeological Investigations at the Sarah Burnee/Sarah Boston Farmstead

Professional archaeological investigations at the site began in 2003 with an archaeological reconnaissance survey (Bonner and Kiniry 2003) of a 203 ac. parcel, known as the "Robinson property" in Grafton, by the Center for Cultural and Environmental History (now the Fiske Center for Archaeological Research) of the University of Massachusetts, Boston, on behalf of the Trust for Public Land. This non-invasive survey concluded that the parcel included land that was once part of the original Hassanamisco settlement, likely contained the location of John Eliot's 17th-century "church," and also contained the Muckamaug parcel, a lot of land owned by an 18th-century Nipmuc family (Bonner and Kiniry 2003: 62).

A 2004 invasive survey of the parcel by the Center for Cultural and Environmental History (Gary 2005) located a dense concentration of late 18th- and early 19th-century cultural materials within the original Muckamaug parcel. The University of Massachusetts, Boston's Fiske Center for Archaeological Research focused the Hassanamesit Woods summer field school on this concentration, excavating 68, 2 × 2 m units, recovering over 120,000 artifacts, and identifying numerous features, including a large fieldstone house foundation and an associated sheet midden modified through later plowing. The site can be conclusively associated with the ownership of Sarah Burnee and her daughter Sarah Boston (1765–1837) due to a preponderance of creamware, hand-painted blue pearlware, and polychrome-painted pearlware within the midden assemblage to the exclusion of nearly all other diagnostic ceramic types.

Analysis of the site's assemblage has included studies of glass (Law 2008), ceramics (Pezzarossi 2008), faunal remains (Allard 2010), and lithics (Bagley 2013). These studies thoroughly established the role of these artifacts in the continuity of Native American practices in this Nipmuc family through the 19th century.

Excavations surrounding the Burnee/Boston house foundation and the nearby kitchen sheet midden revealed a concentration of 176 lithics and knapped materials (quartz cores, quartz flakes, gunflints, ground-stone tools, and worked glass), and a general scatter of 1–3 quartz flakes per 2 × 2 m unit in the surrounding area. Only two quartz flakes within the site's assemblage can be conclusively associated with a pre-European occupation, due to their provenience within undisturbed B-horizon soil.

Lithic Assemblage

As representations of practices that predate the arrival of Europeans, lithics are a reasonable proxy for the exploration of Native American cultural identity and the continuity of native practice. The artifacts discussed here consist of 7 ground-stone tools, 169 quartz or quartzite lithics, 17 gunflints or European lithics, and one worked-glass tumbler. All of the lithics were recovered from the late 18th- to early 19th-century midden and house foundation. At just over 0.13% of the total artifact assemblage, it is clear that lithics and Native American pottery are a small, though significant, component of the assemblage.

Quartz and Quartzite Lithics

Massachusetts has a dense and diverse concentration of lithic resources. Many stone types have been used for tool production for over 10,000 years, including quartz, quartzite, rhyolite, argillite, chert, slate, and hornfels. In the case of the farmstead site, the local materials consist of quartz and quartzite, both readily available at nearby outcrops. While the local quartzite deposits consist of massive rock formations, local quartz deposits are dominated by intrusive veins formed within cracks of parent bedrock.

The two documented quartz quarries on Keith Hill (one only 500 m from the farmstead) are both located in areas where natural fluvial erosion has exposed bedrock outcrops that coincidentally included quartz veins. It is possible that there are other quartz veins not yet discovered or already lost to development. The quartzite present on the site could have come from a wide variety of nearby locations. The area east of Worcester, Massachusetts, which includes the town of Grafton, has extensive bedrock outcrops of the Westborough Quartzite formation, a type of metamorphosed sandstone. Any of these outcrops could have served as the source of this material.

The predominant lithic type on the Sarah Burnee/Sarah Boston Farmstead is lithic-production debris (flakes and cores), representing 97.6% of the quartz and quartzite artifacts recovered. Flaked tools, consisting of bifaces and unifaces (though no formal or diagnostic flaked tools were identified), are just 2.6% of the total quartz and quartzite assemblage. These numbers indicate that the site was an area where stone tools were produced, leaving behind lithic waste, or where expedient flake tools were preferred over more complicated tools.

Ground Stone tools

Ground-stone tools are created by manually pecking and grinding the surface of a dense stone. Typically, the raw materials used for these stone tools are not the same used for knapping. At the Sarah Burnee/Sarah Boston Farmstead site, seven ground-stone tools were identified (FIG. 3). While these ground-stone tools are not indicative of lithic production in the 18th or 19th centuries, their presence in the kitchen midden and apparent use indicates that these objects held meaning, either through practical function or as an historic citation for this Nipmuc family, and through their continued use contributed to the continuity of their Native American identity. These ground-stone tools included a single hammerstone from the foundation fill, distinguished by its overall smooth surface, with distinct pitting on one end where it repetitively struck a hard object. Two whetstones, both made of local schist and likely used to sharpen metal or stone tools, were identified within fills redeposited into the filled house foundation. A third schist artifact recovered from the kitchen midden north of the house foundation may be a third whetstone, though by its shape it appears to be the base of a broken stemmed blade.

Two steatite fragments (FIG. 4), which fit together to create the complete profile of a partial carved-stone bowl with a lug handle, were recovered from the kitchen midden. A partially drilled indentation on the break dividing the two fragments indicates that the bowl broke while being mended. No other portions of the vessel were found. The production and use of steatite vessels was a significant technological development which peaked during the Terminal Archaic period (3800–2800 B.P.), though these vessels were in use before and

Figure 3. Ground–stone tools from the Sarah Boston site. (Photo by Joseph Bagley, 2013.)

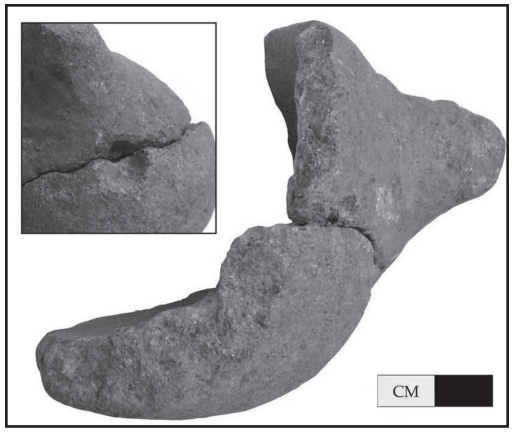

Figure 4. Steatite–bowl profile from the Sarah Boston site. (Photo by Joseph Bagley, 2013.)

after that time period at much lower intensity (Truncer 2004). The physical properties of steatite allowed it to withstand cooking on an open fire. Steatite is an extremely soft, naturally occurring stone (Mohs' scale 2), which is easily carved using stone tools. Regionally, three major areas of naturally occurring steatite were used for bowl production: the Wilbraham, Massachusetts area; the area east of Worcester, Massachusetts; and the area in and around Providence, Rhode Island (Bullen 1940; Bullen and Howell 1943; Howes 1944; Fowler 1961, 1966, 1968; Truncer 2004).

The final ground-stone tool identified at the farmstead is a stone pestle. Pestles are rod-shaped stone artifacts that are used, with a bowl-shaped mortar or flat metate, to crush, grind, or otherwise process items such as food or pigments. This pestle measures 11.4 × 5.9 × 4.3 cm, though it is broken at one end. It is made from a fine-grained, gray stone, most likely Braintree slate, a material available in glacial cobbles or at its source 30 mi. to the east. Overall it is rounded in cross section, with one side of the pestle ground flat, indicating use of the end of the pestle for vertical pounding/grinding, and the flattened length of the pestle for horizontal grinding. The pestle likely originates from the period prior to the arrival of Europeans, as similar tools are found throughout the region on earlier Native American sites, especially from the Terminal Archaic, when it and the steatite bowl were most likely in use (Fowler 1970). While these tools also are associated with the processing of agricultural goods during the Woodland Period (3,000–400 B.P.), they are, overall, non-diagnostic due to their use over multiple periods in Native American history.

Worked Glass

Europeans introduced a wide variety of new materials to Native American populations. Because this paper addresses the continuity of lithic practices. the analysis of worked glass focused on a single tumbler base first identified by Heather Law (2008), which was sufficient to establish the practice of knapping glass on the site. This tumbler was recovered from the upper levels of the kitchen midden north of the house foundation.

Casts of the clear-glass artifact, using white Sculpey III, a synthetic sculpting medium, allowed for the analysis of the flake scars along the reworked edge. The regular and evenly executed bifacial flaking along the relatively fragile glass edge indicates careful and deliberate knapping of this glass object to make a cutting or scraping tool (FIG. 5) long after the supposed end of lithic production by native people.

Gunflints

The gunflint assemblage totals 16 artifacts made from European flint, including 10 near-complete or complete gunflints, 2 partial gunflints too fragmentary for this analysis, and 4 flint flakes. Flakes may be evidence for knapping, but they also break off in use when a gunflint strikes the gun's frizzen, so these flakes cannot be used to document gunflint knapping. Categorization of the ten gunflints is made difficult due to reworking of some gunflints and does not conform easily to the four recognized gunflint style categories (biface, spall, European blade, French blade [Luedtke 1999]).

Of the ten recovered, five gunflints stand out in the assemblage, showing wear that cannot be explained by normal use as a gunflint in a flintlock gun mechanism. Gunflint MS321 is most indicative of knapping (FIG. 6). It is made from English flint and is worked bifacially with a pronounced area of chalky cortex. Barbara Luedtke (1998) describes gunflints of near identical appearance from the 17th-century site of Aptucxet on Cape Cod in Massachusetts. Those gunflints, though likely significantly earlier in date than the examples

Figure 5. Cast of bifacially retouched edge on a glass tumbler from the Sarah Boston site. (Photo by Joseph Bagley, 2013.)

found at the Sarah Burnee/Sarah Boston Farmstead, were made from ballast flint deposited nearby as an alternative to traded finished gunflints during periods when they were not available. It is likely that MS321 is also made from ballast flint, as traded gunflints would have been made in England using highly standardized and mechanized processes (Luedtke 1998, 1999). Grafton is a good distance away from the coast, where ballast dumps could have been found, though existing trade networks could have provided the gunflint or raw material used to make it. Additionally, one face of the gunflint shows evidence of more than 13 Hertzian cones, representing strikes upon the face of the gunflint that did not produce a detached flake. Failed cones often indicate someone struggling to work with a difficult material or someone without the strength or skills to remove flakes with strikes. Either way, the presence of a Nipmuc family on the site, coupled with the presence of this bifacial gunflint, indicates that this artifact may have been made by a Native American, perhaps someone with little experience knapping.

The remaining four gunflints (FIG. 7) exhibit forms that would prevent their effective use in a flintlock: wear that would not even allow striking and reliable spark production on a frizzen, bifacial flaking not associated with gunflint use, edges too dull to be used as fire flints, or a combination of all of these. While dull edges would be expected if the gunflints were used as strike-a-lights until exhaustion, the edges on these tools in particular are worn to a point where their usefulness as strike-a-lights would have ended long before their apparent end of use, indicating that they were likely used progressively for three purposes: gunflint, strike-a-light, and a third unknown purpose that caused extensive wear on the tools' edges. Unusual wear and variation in forms indicates that they were mass-produced gunflints that were deliberately reused and reworked into new tools beyond their use as a gunflints or fire flints.

These five artifacts are evidence of later-period knapping at the farmstead. Unlike other sites, such as the 17th-century Mashantucket Pequot Monhantic Fort, where Native American use of gunflints is directly associated with warfare and defense (Kelly 2011), these gunflints appear to have been used in a domestic setting primarily for hunting and food processing. The oversight of the English land guardians and the surrounding of Nipmuc families with European neighbors was a deliberate attempt to suppress uprisings and the to limit the use of the gunflints as weapons of war. This Nipmuc family continued to use lithic practices to create and modify newly available raw materials (English flint) for tools (fireflints and scrapers) as well as for use in new technologies (gunflints).

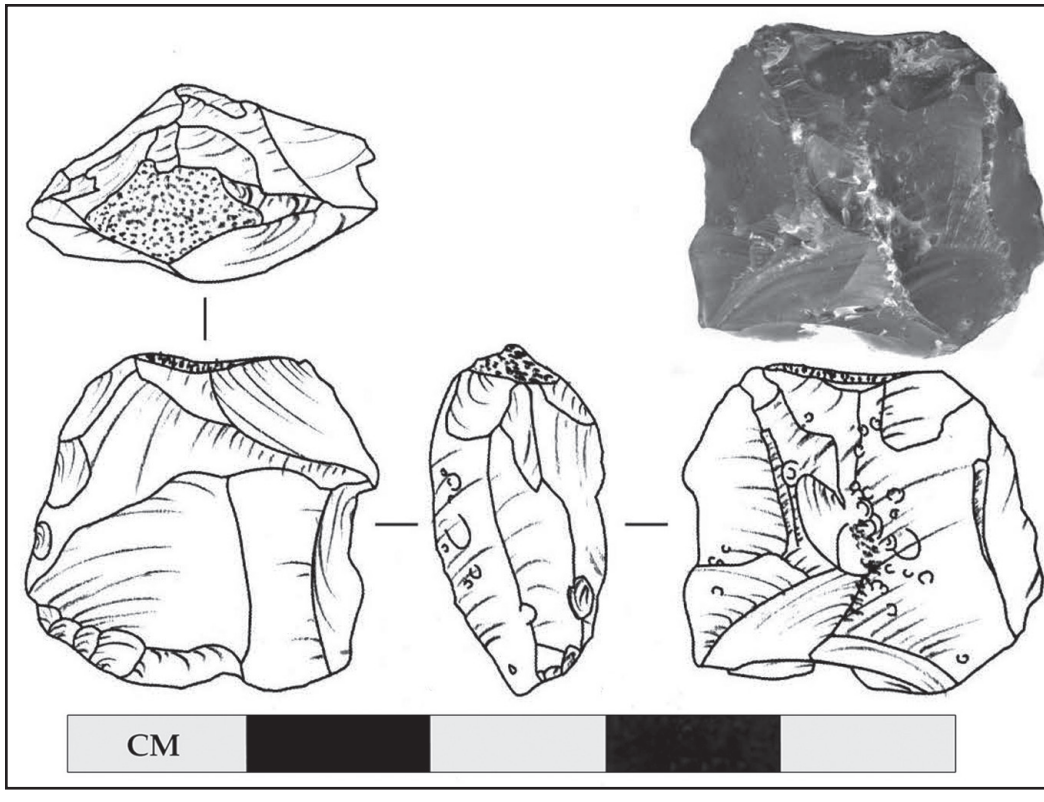

Figure 6. Gunflint MS321 from the Sarah Boston site. (Photo by Joseph Bagley, 2013.)

Lithic Distribution

A definitively early component to the site (flakes in B-horizon soils), coupled with stone tools of indeterminate age, required additional methods to determine the origin and date of use for these artifacts. A correlation study was conducted on domestic lithics found in the kitchen midden.

The percent of total flaked lithics (quartz and quartzite) was plotted against the percent of all European-made ceramics by unit within the kitchen-midden deposit (FIG. 8). A Pearson's correlation coefficient (r^2=0.544) showed a modest association (>.5) between the concentrations of quartz and quartzite lithics and the concentrations of domestic refuse in the midden. Based on this correlation, these materials appear to be temporally related, as they are found together in the same relative quantities within the same midden deposit. While this does not prove that these particular lithics were made by the Sarahs and their family, it does support the notion that these artifacts are not a background scatter of flakes mixed into the kitchen midden, but were actively made or reused before being contributed to the midden as part of the family's household refuse.

With quartz and quartzite lithics appearing alongside ancient ground-stone tools and knapped flint and glass in their domestic refuse, it is clear that Sarah Boston, Sarah Burnee, and their family actively practiced flint knapping in the production or reuse of stone tools. These ancient tools and practices held prominent places in daily household activities and demonstrate a clear continuity of Nipmuc identity and tradition in the face of colonial repression. This paper contributes to the mounting call to end the "prehistoric/historical" divide, as cultural practice. Identities continue on despite the impacts of and adaption to colonialism.

Discussion

The lithic artifacts examined here are an ideal dataset with which to study the continuity of a

specific Nipmuc cultural practice (lithic use and production) over a prolonged period of time during which the Nipmuc people experienced and reacted to the introduction of European artifacts and practices. The evidence of lithics located in an earlier deposit at the Sarah Boston site and the knapping and modification of gunflints––an artifact whose origins are associated with Europeans—demonstrate that lithic practices existed on the site both prior to

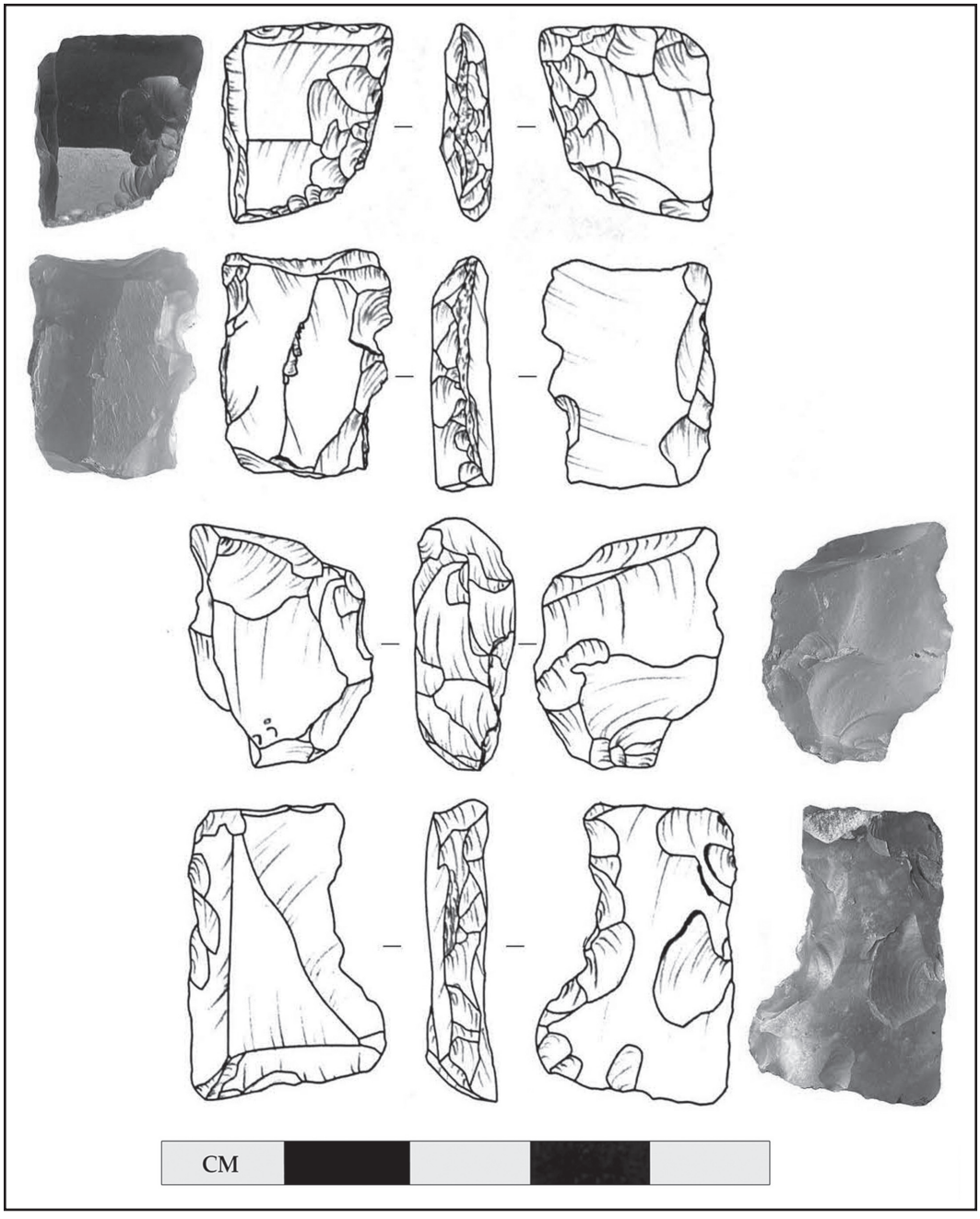

Figure 7. Gunflints MS416a, MS74, MS464, and MS416b from the Sarah Boston site. (Photo by Joseph Bagley, 2013.)

and after the construction of the European-style house. The contextual and spatial evidence of a combination of lithic use, modification and production indicates that these Nipmuc family members were producing and depositing lithics in their midden.

The lithics found within the kitchen midden can be interpreted as having been produced, not just reused; the presence of reworked gunflints and glass tools demonstrate the knowledge of knapping practices and techniques long after these practices were supposedly abandoned or lost. The Mashantucket Pequot fort site discussed earlier shows that Native American people in the region were actively producing gunflints onsite in the 17th century (Kelly 2011), and their reuse, production, and modification continued through the 19th century, as seen at the Sarah Burnee/Sarah Boston Farmstead site.

Despite this continued practice, the use of a gunflints, glass, and quartz for a cutting edge is notable due to the overall abundance of available metal cutting edges. With around 30 iron knives identified in the archaeological assemblage (Law 2008: 109), the occupants of the house chose to use and create lithic tools in addition to the tools available to them in the form of metal knives. Why were they modifying the gunflints when other cutting tools were available? Morphology likely played a significant role. In the case of the modified gunflints, they each show a form that may not have been available in the metal or other material "tool kit" at the site.

Gunflints MS464, MS416a, and MS416b each have curved, bifacially worked cutting edges, either concave or convex. Perhaps the creators of these tools desired to have a very small cutting or scraping edge that would allow them to reach into a tight space or make fine adjustments to a form through an expedient tool that would fit within a person's fingers, but would still be able to withstand use on tough materials like wood or bone. While it is not outside the realm of possibility to create a small, curved iron cutting blade, as numerous iron knives were found at the site (Law 2008), it may have been more convenient to modify a worn gunflint or strike-a-light than to reshape an iron tool. Worn-out gunflints or those too poor to sell at full price may have been a better economic choice than an iron (or other-material) tool.

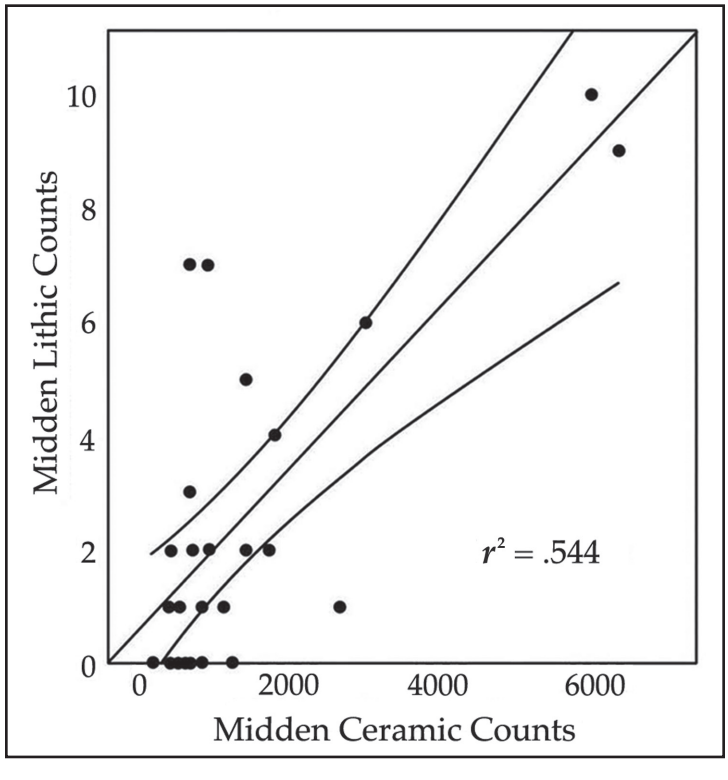

Figure 8. Graph plotting lithics and ceramics from the Sarah Boston site midden by unit. A Pearson's correlation coefficient (r^2) greater than .5 indicates a moderate positive relationship between density of ceramics and lithics within the deposit. (Graph by Joseph Bagley, 2013.)

It is possible that all lithic types used at the site may have been chosen more for their physical presence or proximity to the knapper than as a bold statement of cultural identity. Regardless, the presence of lithic technology use represents one of the many "active daily negotiations of colonialism" (Silliman 2001: 203) and cultural entanglements (Hodder 2012) that are now being identified in increasing numbers on colonial Native American sites.

Curated and reused objects, such as the steatite bowl and pestle, show that this Nipmuc family recognized artifacts from their cultural past. Stephen Silliman's examination of an Eastern Pequot site in Connecticut dating to the same period as the Sarah Burnee/Sarah Boston Farmstead site revealed diagnostic stone tools of significant age within a refuse deposit in association with a European-style home (Silliman 2009). Silliman states that these objects formed physical connections with the past that reintroduced cultural practices and memories through interaction with past objects (Silliman 2009: 224). Lithic artifacts at the homestead support the notion that this family maintained a clear connection to its cultural past while also participating in a colonial environment with European-produced consumer goods.

Artifacts with no diagnostic age or minimal reuse value, such as the numerous flakes and cores, show more practical utilization of lithic practices. Why these flakes were produced or brought to the site is difficult to determine. Though based on the extreme financial stress experienced by this family, economic reasons appear to dominate, including convenience of location, convenience of use, or relative price (free). These flakes fulfill all three possible economic reasons. First, if flakes or cores were readily turning up during regular use of the yard or while farming fields, these flakes could have been collected and used for immediate cutting needs without the user having to carry a knife. Just as likely, the abundance of quartz in the area might indicate that the cores present at the site were used as raw materials when a sharp edge was needed, using the practice of flint knapping. This, again, did not require the use of metal knives, which had to be purchased, and may represent a conscious decision to use lithics in place of metal objects whenever possible.

While the continuity of lithic practice at the farmstead site is demonstrable, the mechanisms for this continuity are less clear. The Sarahs and their family lived within a landscape of intense cultural use and modification of natural resources. Keith Hill contains several quartz outcrops and several lithic processing areas with quartz-flake scatters. Artifacts from these sites, which would include surface scatters of bright-white quartz debitage on dark soils, would have been encountered daily by family members during their daily activities, and would have served as visible evidence of past cultural practices and a reinforcement of their Nipmuc identity.

Archaeologists often associate a site or an artifact with a specific time period. But, in the same way ancient museum objects can influence art and design today, these artifacts play a role in the lives of people, both past and present, who interact with them either passively or actively. The presence of the quartz quarry south of the Sarah Boston site, within the original land claims of Sarah Robins, and the numerous archaeological sites and deposits within the immediate cultural landscape were all part of Sarah Boston's and her family's doxa (Bourdieu 1977: 168).

The Sarahs were conscious of the ancestral presence within the landscape and, also, negotiated the deliberate attempts by European settlers to sever any overt or visible practices, including flint knapping, related to the Nipmuc past. As Steven Silliman has shown at Rancho Petaluma, California, there was a jarring change in the doxic practice of flint knapping as alternative materials appeared, but the use of lithics continued as a conscious form of identity-making and political resistance (Silliman 2001). Perhaps the presence of lithics at the site are simply the family members' subtle and private means of continuing their native identity and the practical production and use of tools familiar to them, regardless of any political or social pressure to abandon these practices and the presence of alternative materials.

Conclusion: Nipmuc Continuity and the End of the Historic/Prehistoric Divide

The Sarah Burnee /Sarah Boston Farmstead site represents a rare example of a documented Nipmuc homestead used for several generations in the 18th and 19th centuries. This Nipmuc family, which named its firstborn daughters Sarah, lived in a world dominated by colonial control and oppression, where finances were restricted under laws set up to diminish their autonomy. The archaeological assemblage from the site represents a massive volume of European-made cultural items integrated and

used in daily life by the Sarahs. Within this assemblage are numerous examples of quartz tools, ground-stone tools, worked gunflints, and worked glass. Together these artifacts represent an earlier Nipmuc presence on the site, interaction with quartz materials found within primary midden deposits, and the continuity of the practice of knapping.

This continuity is not unique, as the use of quartz on other European-style Nipmuc homesteads is now documented. While the lithics show a material continuity of an earlier practice, many other practices that one would consider "traditional" (i.e., predating the arrival of Europeans) continued through this period, but are represented in less-material ways, such as matrilineal family structure and the naming of firstborn daughters "Sarah" (Gould 2010: 287).

This continuity underscores a growing issue in archaeology: the end of the prehistoric/historical divide (Lightfoot 1995; Den Ouden 2005; Gould 2010; Silliman 2012; Schmidt and Mrozowski 2013), which separates people into those with history (Europeans) and those that came before history (Native Americans). While the archaeological practice of this dichotomous categorization is meant to distinguish between periods in time before and after the written record, in reality it mostly refers to the period before and after the moment of European "contact," though even that has become a vaguely defined moment in history (Silliman 2001).

The analysis and interpretations presented here show a family led by Nipmuc women named Sarah, living their lives to the best of their abilities and conducting their own family practices, which had origins in Nipmuc and European history. While the lithic practices discussed here are given great attention and discussion for their evidence of continued Nipmuc practices, the reality of daily life on this farmstead is not dominated by acts of resistance or conscious attempts to preserve identity (though it does not exclude these as possibilities), but rather their daily practices represent a more subtle desire to persist, as a family, in the face of oppression, control, racism, and threats to their landownership, and, to the fullest extent possible, to continue a private life as this Nipmuc family chose to define it.

References

Allard, Amelie
2010 Foodways, Commensality and Nipmuc Identity: An Analysis of Faunal Remains from Sarah Boston's Farmstead, Grafton, MA, 1790–1840. M.A. thesis, University of Massachusetts, Boston.

Atwood, Kathleen A.
2001 Historic Properties Management Plan, Hodges Village Dam, Oxford, Massachusetts. Manuscript, Massachusetts Historical Commission, Boston.

Bagley, Joseph
2013 Cultural Continuity in a Nipmuc Landscape. M.A. thesis, University of Massachusetts, Boston.

Bonner, Jennifer L., and Elizabeth Kiniry
2003 Archaeological Reconnaissance Survey: The Robinson Property, Grafton, Massachusetts. Manuscript, University of Massachusetts Boston, Center for Cultural and Environmental History, Cultural Resources Management Study No. 10. Boston.

Bourdieu, Pierre
1977 *Outline of a Theory of Practice*. Cambridge University Press, Cambridge, UK.

Bullen, Ripley P.
1940 The Dolly Bond Steatite Quarry. *Bulletin of the Massachusetts Archaeological Society* 2(1): 14–22.

Bullen, Ripley P., and David H. Howell
1943 Spectrographic Analysis of Some New England Steatite. *Bulletin of the Massachusetts Archaeological Society* 4(4): 62–63.

Cassell, Mark S.
2003 Flint and Foxes: Chert Scrapers and the Fur Industry in Late-Nineteenth and Early-Twentieth-Century North Alaska. In *Stone Tool Traditions in the Contact Era*, ed. by Charles Cobb, 151–164. University of Alabama Press, Tuscaloosa.

Cobb, Charles R.
2003 Introduction: Framing Stone Tool Traditions after Contact. In *Stone Tool Traditions in the Contact Era*, ed. by Charles Cobb, 127–150. University of Alabama Press, Tuscaloosa.

Decima, Elena
1995 Intensive Survey, Windswept Estates, Framingham, Massachusetts. Manuscript, Massachusetts Historical Commission, Boston.

Den Ouden, Amy
2005 *Beyond Conquest: Native Peoples and the Struggle for History in New England.* University of Nebraska Press, Lincoln.

Doucette, Diana, and Ann K. Davin
1994 Cultural Resource Inventory and Assessment, Wenakeening Woods, Holliston, Massachusetts. Report to Massachusetts Historical Commission, Boston, from Public Archaeology Lab, Pawtucket, RI.

Doughton, Thomas L.
1997 Notes on the Nipmuc Indian Reservation at Hassanamesit or Hassanamisco and the Nipmuc People of Hassanamesit, Later Grafton, Massachusetts, Hassanamesit or Place of Small Stones. Indian History and Geneology. <http://massasoit.0catch.com/grafton1.htm> Accessed March 4, 2015.

Ferguson, Leland
1992 *Uncommon Ground: Archaeology and Early African America, 1650–1800.* Smithsonian Institution Press, Washington, DC.

Fiske, Ella M. Williams
[1900–1941] Early History of Keith Hill (Hassanamisco) and Its Part of the Old Connecticut Roadway. The Grafton History Club,Historical Papers, Records of Grafton, MA 1743–1948, American Antiquarian Society, Worcester, MA.

Fitch, Virginia A., Kirsten Hoffman, and Mary Lynne Rainey
1989 Archaeological Investigations and Management Plan, Huguenot Fort, Oxford, Massachusetts. Manuscript, Massachusetts Historical Commission, Boston.

Ford, Ben, and Duncan Ritchie
2003 Intensive (Locational) Archaeological Survey, Hill View Estates I & II, Grafton, Massachusetts. Report to Massachusetts Historical Commission, Boston, from Public Archaeology Laboratory, Pawtucket, RI.

Fowler, William S.
1961 Domestic Evidence at Steatite Quarries. *Bulletin of the Massachusetts Archaeological Society* 22(3&4): 49–55.
1966 The Horne Hill Soapstone Quarry. *Bulletin of the Massachusetts Archaeological Society* 27(2): 17–27.
1968 Stone Bowl–Making at the Westfield Quarry. *Bulletin of the Massachusetts Archaeological Society* 30(1): 6–16.
1970 Aboriginal Grinding Equipment. *Bulletin of the Massachusetts Archaeological Society* 31 (1&2): 19–25.

Fragola, Patricia S., and Duncan Ritchie
1996 Intensive (Locational) Archaeological Survey, Highfields of Grafton, Grafton, Massachusetts. Report to Massachusetts Historical Commission, Boston, from Public Archaeology Laboratory, Pawtucket, RI.

Gary, Jack
2005 Phase I Archaeological Intensive Survey of Hassanamesit Woods, Grafton, Massachusetts. Report to Massachusetts Historical Commission, Boston, from University of Massachusetts Boston, Center for Cultural and Environmental History, Cultural Resources Management Study No. 14, Boston.

Glover, Suzanne
1990 Intensive Archaeological Survey, Crescent Green Condominium Development, Grafton, Massachusetts. Report to Massachusetts Historical Commission, Boston, from Public Archaeology Laboratory, Pawtucket, RI.

Gookin, Daniel
1970 Historical Collections of the Indians in New England: of Their Several Nations, Numbers, Customs, Manners, Religion and Government, before the English Planted There. In *Collections of the Massachusetts Historical Society for the Year 1792*. Vol. 1. Towtaid, Boston.

Gould, Donna Rae
2005 Wabbaquasset: an Ethnohistorical Analysis and Methodology for Locating a 17th-century Praying Village. Master's thesis, Anthropology Department, University of Connecticut, Storrs.
2010 *Contested Places: The History and Meaning of Hassanamisco.* Ph.D. diss., Department of Anthropology, University of Connecticut, Storrs. University Microfilms International, Ann Arbor, MI.

Heitert, Kristen, Jennifer Macpherson, and A. Peter Mair, II
2001 Intensive (Locational) Archaeological Survey and Archaeological Site Examinations: Rugg/Dennett Site and Interchange 12 Site, Office/Hotel Development at Mass Pike Interchange 12, Framingham, Massachusetts. Report to Massachusetts Historical Commission, Boston. Public Archaeology Laboratory, Pawtucket, RI.

Herbster, Holly, and James C. Garman
1996 Results of an Intensive (Locational) Archaeological Survey and a Burial Verification Study, Apple Ridge III, Ashland, Massachusetts. Report to Massachusetts Historical Commission, Boston, from Public Archaeology Laboratory, Pawtucket, RI.

Hodder, Ian
2012 *Entangled: An Archaeology of the Relationships Between Humans and Things*. Wiley-Blackwell, Oxford, UK.

Howes, William J.
1944 Indian Soapstone Quarries of Western Massachusetts. *Bulletin of the Massachusetts Archaeological Society* 5(4): 49–55.
1954 Aboriginal New England Pottery (First Installment). *Bulletin of the Massachusetts Archaeological Society* 15(2): 23–26.

Kawashima, Yasu.
1969 Legal Origins of the Indian Reservation in Colonial Massachusetts. *The American Journal of Legal History* 13(1): 42–56.

Kelly, John M.
2011 Flint at the Fort: Investigating Raw Material Scarcity and Locations of Lithic Activity at Monhantic Fort. M.A. thesis, University of Massachusetts, Boston.

King, Marsha K.
1989 Intensive Archaeological Survey, Metropolitan Corporate Center Forest Street Parcels, Marlborough, Massachusetts. Manuscript, Massachusetts Historical Commission, Boston.

Law, Heather
2008 Daily Negotiations and the Creation of an Alternative Discourse: The Legacy of a Colonial Nipmuc Farmstead. M.A. thesis, University of Massachusetts, Boston.

Law, Heather, Guido Pezzarossi, and Stephen Mrozowski
2008 Archaeological Intensive Excavations: Hassanamesit Woods Property, the Sarah Boston Farmstead, Grafton, Massachusetts. Report to Massachusetts Historical Commission, Boston, from University of Massachusetts, Andrew Fiske Memorial Center for Archaeological Research, Cultural Resource Management Study 24. Boston.

Leveillee, Alan, and Ann K. Davin
1987 Reconnaissance and Intensive Archaeological Investigations at the New England Country Club, Bellingham, Massachusetts. Report to Massachusetts Historical Commission, Boston, from Public Archaeology Laboratory, Pawtucket, RI.

Leveillee, Alan, Ron Dalton, and Curtis Hoffman
1994 Site Examination of Cedar Swamp No. 1, No.2 and No. 24 in the Cedar Swamp Archaeological District, Westborough, Massachusetts. Report to Massachusetts Historical Commission, Boston, from Public Archaeology Laboratory, Pawtucket, RI.

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

Luedtke, Barbara E.
1998 Worked Ballast Flint at Aptucxet. *Northeast Historical Archaeology* 27: 33–50.
1999 What Makes a Good Gunflint? *Archaeology of Eastern North America* 28: 71–79.

Macpherson, Jennifer
1998 Intensive (Locational) Archaeological Survey Flagship Property, Hopkinton, Massachusetts. Manuscript, Massachusetts Historical Commission, Boston.

Mandell, Daniel.
1991 "To Live More Like my Christian Neighbors": Natick Indians in the 18th-Century. *William and Mary Quarterly,* 3rd ser., 48(4): 552-579.

Mrozowski, Stephen, Holly Herbster, David Brown, and Katherine Pauketat, David Brown and Katherine L. Priddy
2009 Magunkaquog Materiality, Federal Recognition, and the Search for a Deeper History. *International Journal of Historical Archaeology* 13:430–463.

Mulholland, Mitchell T., Ellen-Rose Savulis, and D. Richard Gumaer
1986 Archaeological Remote Sensing and Historical Research Survey for the Yeadon Parcel at the Hassanomisco Indian Burying Ground, Grafton, Massachusetts. Manuscript, Massachusetts Historical Commission, Boston.

Nassaney, Michael, and Michael Volmar
2003 Lithic Artifacts in Seventeenth-Century Native New England. In *Stone Tool Traditions in the Contact Era*, ed. by Charles Cobb, 78–94. University of Alabama Press, Tuscaloosa.

Noël Hume, Ivor
1962 An Indian Ware of the Colonial Period. *Quarterly Journal of the Archaeological Society of Virginia*, 17(1): 2–14.

Pagoulatos, Peter
1988 Intensive Archaeological Survey, Oakmont Farms, Grafton, Massachusetts. Manuscript, Massachusetts Historical Commission, Boston.

Pezzarossi, Guido
2008 Consumption as Social Camouflage: "Mimicry" and Nipmuc Survival Strategies in the Colonial World. M.A. thesis, University of Massachusetts, Boston.

Ritchie, Duncan, and Kirk Van Dyke
2005 Intensive (Locational) Archaeological Survey, Brookmeadow Subdivision, Grafton, Massachusetts. Report to Massachusetts Historical Commission, Boston, from Public Archaeology Laboratory, Pawtucket, RI.

Schmidt, Peter R., and Steven A. Mrozowski
2013 *The Death of Prehistory*. Oxford University Press, Oxford, UK.

Silliman, Stephen
2001 Agency, Practical Politics, and the Archaeology of Culture Contact. *Journal of Social Archaeology* 1(2): 184–204.
2003 Using a Rock in a Hard Place: Native American Lithic Practices in Colonial California. In *Stone Tool Traditions in the Contact Era*, ed. by Charles Cobb, 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 Crossing, Bridging and Transgressing Divides in the Study of Native North America. In *Across a Great Divide: Continuity and Change in Native North American Societies, 1400–1900*, ed. by Laura Scheiber and Mark Mitchell, 258–276. University of Arizona Press, Tucson.
2012 Between the Longue Durée and the Short Purée: Postcolonial Archaeologies of Indigenous History in Colonial North America. In *Lost in Transition: Decolonizing Indigenous Histories at the "Prehistoric/Colonial" Intersection in Archaeology*, ed. by Siobhan M. Hart and Maxine Oland, 113–132. University of Arizona Press, Tucson.

Tritch, Electa
2006 The History of Hassanamesit Woods. Manuscript 2nd Draft. Manuscript, Town of Grafton, Massachusetts.

Truncer, James
2004 Steatite Vessel Age and Occurrence in Temperate Eastern North America. *American Antiquity* 69(3): 487–513.

Author Information

Joseph M. Bagley
City Archaeologist
Boston Landmarks Commission
Boston City Hall Rm 709
Boston, MA 02201
joseph.bagley@boston.gov

Stephen Mrozowski
Director
Fiske Center for Archaeological Research
Department of Anthropology
100 Morrissey Boulevard
University of Massachusetts Boston
Boston, MA 02125

Heather Law Pezzarossi
PhD Candidate in Archaeology
University of California, Berkeley
Berkeley, CA 94720

John Steinberg
Research Scientist
Fiske Center for Archaeological Research
Department of Anthropology
100 Morrissey Boulevard
University of Massachusetts Boston
Boston, MA 02125