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Flint at the Fort: Investigating Raw Material Scarcity and Locations of Lithic Activity at Monhantic Fort

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FLINT AT THE FORT: INVESTIGATING RAW MATERIAL SCARCITY AND LOCATIONS OF LITHIC ACTIVITY AT MONHANTIC FORT

A Thesis Presented

by

JOHN M. KELLY

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ABSTRACT

FLINT AT THE FORT: INVESTIGATING RAW MATERIAL SCARCITY AND LOCATIONS OF LITHIC ACTIVITY AT MONHANTIC FORT

June 2011

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The Monhantic Fort site on the Mashantucket Pequot reservation in southeastern Connecticut has yielded many insights into Pequot life in the late 17th century. This fortified village, occupied during King Philip's War, has given archaeologists a glimpse of the domestic practices and organization of the people who lived within as well as details about how they engaged with military expeditions. In this thesis, I examine the lithic assemblage from Monhantic Fort. This assemblage, comprised of European flint employed to create tools like gunflints and strike-a-lights, can be used to investigate how the Pequots utilized new stone tool technologies and negotiated these technologies with pre-contact practices of lithic tool making. The first issue my thesis explores is raw material availability, as other sites have suggested that European flint was a scarce raw material in 17th century New England. The second issue concerns the retention of pre-

contact Native practices of lithic production and maintenance. By analyzing the flakes and debitage recovered from different areas at the fort, one can see whether or not the Mashantucket Pequot had adopted specialization in production and maintenance of stone tools and where these activities were taking place. The evidence from both the artifacts and the documentary record demonstrates that raw material availability was not a problem for the Mashantucket Pequot living at the fort. It also shows that production and maintenance were not specialized activities, but that some households did have a more heavy focus on lithics.

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CHAPTER I

INTRODUCTION

The 1991 testing and excavation of site 72-91 by the University of Connecticut field school and the Public Archaeology Survey Team (PAST) was focused on an eighteenth-century farmstead on the Mashantucket Pequot reservation in southeastern Connecticut. However, their efforts began turning up seventeenth-century artifacts instead of eighteenth-century ones. The notion of a seventeenth-century site in the area was initially ignored until aboriginal ceramics forced the archaeologists to acknowledge a seventeenth-century occupation (McBride 2006: 321). An unexpected find would then change their impression that this might have been only a small seventeenth-century site: linear perpendicular features that met at a corner, what was realized to be the remains of the palisade line from a fort. The focus of the excavation for the next few years became the investigation of this Native fort's architecture and interior, revealing domestic structures within and several activity areas in and around the fortification.

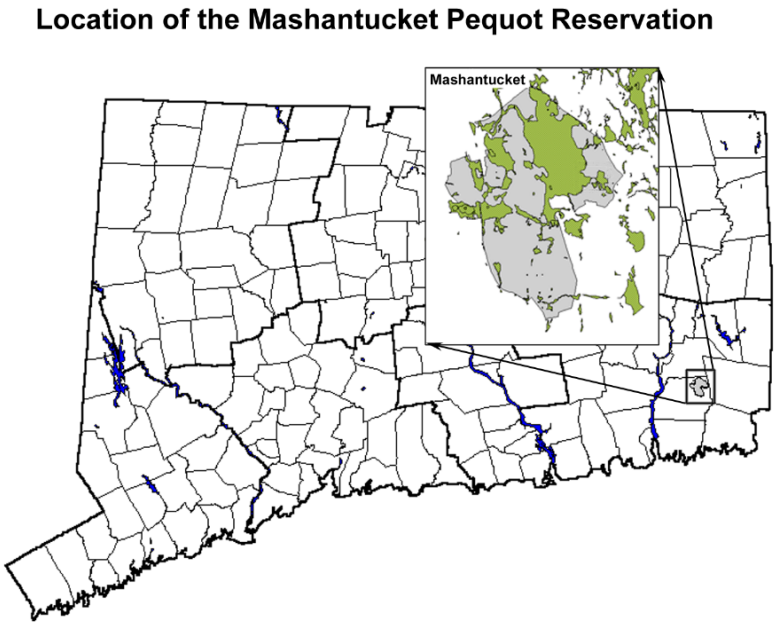

Figure 1: The Mashantucket Pequot Reservation.
Image Courtesy of the Mashantucket Pequot Museum and Research Center.

McBride (2006: 321) believes the integrity at the fort site to be excellent, citing the fact that the site was never plowed and that the original palisade trench is still visible as a continuous stain 10-15 centimeters below the surface. Only two intrusions have gotten in the way; a tree and an eighteenth-century stone wall have thus far prevented excavation of the northeast bastion. After the discovery of the fort, a search of the historical record let the archaeologists at the Mashantucket Pequot Museum and Research Center know what they were dealing with: a fort dating to King Philip's War that was associated with the sachem Robin Cassacinamon. Monhantic Fort was the name given to the fort.

Monhantic Fort has yielded a plethora of information about life for the Mashantucket Pequot in the late seventeenth century. As a fortified village, the wigwam sites within and the artifacts recovered from them have given Pequot Museum

archaeologists a clearer picture of the Pequot subsistence economy, land-use practices, and even gender roles during King Philip's War (Benard 2005; McBride 2006: 327-328). In addition, the military artifacts from the site allow insights into the ways that the Pequot utilized various weapons and how they went to war. One kind of military artifact, the gunflint, is especially important as its manufacture and use life is connected to a technology that was integral to Native life not only during the seventeenth century but also during the pre-contact era. Gunflints have thus been tied to issues like the retention of Native practices, the negotiation of new things and technologies, and in the case of the Mashantucket Pequot, the extent of European influence on Native groups (Kenmotsu 1990; Luedtke 1999b; Nassaney and Volmar 2003; Williams 2011).

Lithic Technology at Monhantic Fort

Gunflints and other stone tools from Monhantic Fort can improve our understanding of these issues. Until the early seventeenth-century, Native Americans in the Northeast had utilized a wide variety of raw materials when producing stone tools. In the case of gunflints and strike-a-lights, the two kinds of flaked stone tools recovered at Monhantic Fort and associated with European material technologies, European flint was the ideal raw material as it best produced the sparks that these tools were designed to create. However, Native people were also known to use chert and quartz, both materials that were locally available and familiar, when making these items (Calogero 2002; Luedtke 1998; Potter 1998; Williams 1973). As just one group of consumers of European flint, the Pequots would have had to traverse the colonial economy for access to it.

Scarcity of European flint in the late seventeenth-century has been theorized by Luedtke (1998) during her study of the lithic assemblage from the Aptucxet Trading Post. Studies have shown that Native people in New England were able to negotiate the new colonial economies quite well; a lack of flint scarcity may be another indicator that the Pequot were well schooled in navigating colonial Connecticut and beyond for the material goods they needed, especially in a time of war when the demand for the good in question was likely to have been high (Loren 2008: 52; Nassaney 2004: 346). A lack of raw material scarcity may also indicate that European flint was only a scarce material in certain contexts; such an interpretation would be important for archaeologists doing research on lithic assemblages that contain European flint and gunflints to keep in mind.

Additionally, the lithics at the Fort can also be utilized to investigate the continuation of pre-contact Native technological practices and the potential European effects on them. Stone tool production and maintenance were not a specialized activities for Native Americans in the Northeast, but Europeans required specialists to produce gunflints and stone tools as lithic technology was not something familiar to them (Howlett 2004; Nassaney 2004). As a result, distinguishing the identities of those who made the gunflints found archaeologically is an important research question. Archaeologists have shown the retention of pre-contact methods through the way Native peoples manufacture their gunflints; however, the practice of making them has been called into question in the case of the Mashantucket Pequot (Kenmotsu 1990; Luedtke 1999b; Williams 2011). By examining the flakes and debitage, we can see if the pre-contact practice of making and rejuvenating one's own tools, whether gunflints or otherwise, was still in play for the Pequots at Monhantic Fort, or if stone tool production

and maintenance had been turned over to specialists. In addition, the documentary record can help determine if there was a strong European presence at the Fort, and if this may have influenced whether or not specialization in lithic technology took place there and by whom. The relationship between the products of this technology, the gunflints, and objects of weaponry may also illuminate this issue. If gunflints are seen as extensions of the weapons they will become a part of, their production and maintenance may parallel the specialized production and maintenance of weapons, rather than stay linked to everyday practices of lithic production and use for household needs.

Broader Implications

The assertion that the Mashantucket Pequot may have adopted specialization in lithic technology and that this specialization was an adaptation due to intensive European influence on the reservation makes the situation at Monhantic Fort very complex. The introduction of specialized activity spaces for lithic technology would suggest an alteration in Native practices displayed through a different way of using space, with implications for the construction of identity as senses of self result from the ways people move through space. Additionally, a strong European presence and influence would indicate a more intense struggle against colonialism, since the reservation was the locus for resistance and residence for Native people in the colonial world (Den Ouden 2005: 15; Loren 2008: 59).

Lithic technology has been utilized by several archaeologists to address larger issues in the contact and colonial eras in North America. Despite the fact that metal counterparts to lithic tools were frequently incorporated by Native Americans, the decline

of lithic production and use was not immediate nor inevitable, and their persistence and the timing of their disappearance have implications for several aspects of Native cultures and have to be considered in light of economic and social variables (Cobb 2003: 2). Lithics that persist in the face of metal counterparts have been interpreted as a way of asserting Native identity and cultural practice in the colonial world; Silliman (2003: 149), for example, has shown that the continued use of stone tools in Native American homes in nineteenth-century California represented a way for the Native people, particularly men, to separate their domestic lives from their work spaces and maintain their identities in a multi-ethnic location.

Other studies have detailed how the continued use of stone tools was a way for Native Americans to resist pressures brought on by colonialism. They were able to maintain traditional symbolic practices like smoking through stone pipes and could use tools like pipes and pestles to reinforce Native notions of gender in the face of colonialism's transformative forces (Nassaney and Volmar 2003: 91; Wagner 2003: 125). These kinds of studies have shown that stone tools are a variety of material culture that could be used by indigenous groups to maintain identity, fight against the forces of colonialism, and negotiate changes taking place within. At the same time, this research reveals that the use of stone tools by Native Americans may draw out connections to their past practices, but it may also position a once-traditional practice in a new context, such as that of colonial labor (e.g., Cassell 2003, Silliman 2001) or, in this case, new firearms and their maintenance.

Interpretations have also been made by archaeologists studying lithic technology regarding identity and its expression through stone tools. The identity of the tool's creator

is seen to be expressed in the product, even if the signaling of identity was not an intentional part of the production process (Odess 1998; Wobst 1977, 1999). This is not to say that the material item itself is what signals cultural context; rather, identity can be expressed in the way a tool is produced spatially and materially. Archaeologists studying gunflints have gravitated toward this logic when making distinctions between Native and European produced flints.

As Amy Den Ouden (2005: 5) has noted, the persistence of indigenous identities is key to Native Americans and their struggles for history and autonomy. One of the major obstacles that Native peoples face is the concept that they have somehow lost their traditional cultures and become less Native, a concept which is utilized to deny the authenticity of Native identities (Den Ouden 2005: 5-6; Loren 2008: 20). It has been argued that Native identity is compromised or lost altogether when traditions, technologies, and cultural forms introduced by Europeans are integrated into Native cultures (Den Ouden 2005: 19). These arguments manifest in the discipline with the notion of the "Vanishing Indian" and with historical archaeology focusing on indigenous sites becoming historic (a.k.a. more European) ones, with the loss of the indigenous label insinuating a loss of indigenous people (Carlson 2006: 195; Den Ouden 2005: 17; Ferguson 1996: 65; Nassaney 2004: 335). A common application of such an argument usually relates to the adoption of European manufactured objects. As Chapter Two points out, Native groups incorporated several European manufactured tools and counterparts to Native tools in the seventeenth century. Gunflints were a European introduced tool tied to a lithic technology possessed by both groups, and they could certainly be used in such an argument. This is especially true of the gunflints from Monhantic Fort, considering the

perception held by some that King Philip's War was the last stand of the Indians and that they ceased to be Indians once they stopped fighting (Den Ouden 2005: 18).

However, as Silliman (2009: 214) points out, Native people did not change simply because they started using European manufactured items and technologies. In the same vein, Loren (2008: 5) has noted that overlooking and simplifying interactions and use of material culture in constituting identities in the colonial world sits at the root of the problem. The colonial world is many things, but it is not simple; things are almost always complex, even if they do not seem to be at first glance. European manufactured or introduced materiality incorporated into Native societies have come to be seen as European objects utilized in Native ways or European goods becoming Native materials (Loren 2008: 53; Silliman 2009: 225-227). Again, as will be mentioned in Chapter Two, Native peoples have been shown to have created stone tools using pre-contact methodology in the seventeenth century. They were using Native ways to make their gunflints, tools that were European introduced but were now distinctly Native in origin and practice. This thesis engages with the notion that these may express Native identity, at least in the sense of individuals applying long-standing technologies and practices to the production of weaponry for protecting a community in a militarized decade of colonial New England history.

Structure of the Study

This study attempts to answer the questions drawn from the issues above. Answering these questions will involve investigating whether or not European flint was the only raw material in use at the Fort, studying locations of lithic production and

maintenance, examining gunflints to see if they were given priority in manufacture over strike-a-lights as would have been necessary in the event of flint scarcity, evaluating the intensity of use and rejuvenation of gunflints, and evaluating lithic spatial patterns with respect to objects of weaponry. Much of this relies on archaeological data, but historical documents have been consulted as well to bring larger sets of information to bear on these questions. These questions in turn will aid in addressing larger issues of lithic tools and Native American negotiations in colonial New England.

As the Monhantic Fort lithic assemblage is explored, one can evaluate how scarcity (or lack thereof) of the raw material and how tools like gunflints were produced and maintained relate to the issues presented above. In Chapter Two, the historical context for the fort site and its lithic assemblage is established. Chapter Three then follows with an investigation of the documentary record. Pertinent documents are analyzed to see if they can provide evidence to help answer the questions addressed by this thesis. Chapter Four contains a description of the methodology employed in the examination of the archaeological material, with the data resulting from this examination presented in Chapter Five. Finally, Chapter Six discusses the results of the analysis and ties them back into the broader issues.

CHAPTER II

HISTORICAL BACKGROUND

Late Woodland Connecticut

Native peoples in southern New England were already amid a time of transition before the arrival of Europeans to the New World. Changes in subsistence strategies brought about by the introduction of intensive maize horticulture had necessitated alterations in Native settlement patterns over the last millennium (McBride 1994: 8-10). Previously, settlement patterns had reflected the seasonal movement involved with subsistence based around hunting and gathering; however, the Late Woodland period (1000 to 400 BP) saw a decline in seasonal settlements as Native people began shifting toward permanent and semi-permanent villages (Leveillee et al. 2006; Loren 2008: 31; McBride 1992: 14). This high degree of sedentism would have been essential in horticulture of key plant foods like maize, beans, and sunflower (McBride 1994: 10). This transition did not eliminate hunting activities, of course. The increase of villages went hand in hand with the increase in seasonal camps and task specific sites (McBride 1992: 14). At the same time, Native people began to orient themselves into smaller, family groups. These changes all culminated with Native groups largely living in villages centered around small seasonal camps, a settlement pattern that matches historic descriptions of Native settlements along the coast (McBride 1994: 10; McBride and Bellantoni 1982: 63).

The Late Woodland period also saw changes in stone tool production that resulted in what Jeske (1992) refers to as the "degeneration of lithic technology." There was a decline in both the diversity of stone tools and the energy Native people were willing to expend on them. Bipolar reduction techniques allowed Native people to maximize flake yields from small cores, reducing the demand for raw material. Natives also practiced intensive maintenance of lithic tools, retouching them rather than replacing them (Jeske 1992: 469, 472). These lithics consisted of tools like knives, scrapers, and projectile points, the latter especially in the case of the Pequot, who appear to have had a resurgence in hunting activities during this time (Jones 2002: 23).The other major development in the Late Woodland was long distance trade networks falling into disuse. The inhabitants of New England had in the past imported raw material like chert for use in lithic production, but as populations became more sedentary, Native people began to favor locally available stone, from which there was a wide variety to choose, although of variable knapping quality (Calogero 2002: 102; Jeske 1992: 469; Ritchie 2002: 108). The Pequots, for example, increased their use of local quartzes and quartzites to the point where nonlocal stone made up less than 5% of their assemblages, where it had been previously been 80-90% (McBride 1992: 16; McBride 1994: 14).

"A very warlike and potent people"

The Pequots were well established by the Late Woodland, having become one of the principal nations of New England. Daniel Gookin (1972: 7) described them as being "a very warlike and potent people," with control over the Connecticut Valley and the coastline from New Haven to Rhode Island (Cave 1989; McBride 1994: 13; Starna 1990: 34). This domination had apparently been gained through warfare, as the Pequots had

been engaged in hostilities with the Mohawks and Narragansetts, their neighboring tribes. Such hostilities led to both Gookin and Increase Mather giving them the reputation of being warlike and cruel (Gookin 1972: 7; Mather 1972: 24-26). At the same time, these descriptors of Natives like the Pequots as cruel and barbarous were essential to ensuring colonists regarded Indians as the enemies of civilization, and thus such adjectives are probably not completely representative of the Pequots at the time (Den Ouden 2005: 11-12). Besides, they are references to social and physical violence, not to everyday lives of households and people.

By the time Europeans arrived, the Pequots were living in both fortified and unfortified villages based around agricultural fields (McBride 1993: 65-66). The utilization of wetland resources was also extremely important for the Pequot; while subsistence strategies and settlement patterns were changing during the Late Woodland, the number of sites adjacent to wetlands had remained constant. Areas at Mashantucket like the Great Cedar Swamp were ideal for hunting activities and gathering of certain plant resources, and such places were also known to be refuges for Native people during times of crisis (McBride 1992: 14, 19; Williams 1973: 150).

In addition, the Pequot already had an established tradition of wampum production. This control over wampum boosted their power in the region when wampum became an integral part of trade with the European newcomers in the seventeenth century (Loren 2008: 86; McBride 1994: 13). The Pequot were very keen to acquire new trade goods, a desire that manifested itself partly in the acquisition of metal counterparts to tools they already possessed. Many stone tools such as knives and axes were quickly replaced by metal counterparts, brass was utilized for projectile points instead of stone,

and the Pequots found the Dutch more than willing to part with guns, powder, and shot during trade (Cobb 2003: 4; Malone 1991: 40; Mather 1972: 53, 68; Nassaney and Volmar 2003: 78). Gookin (1972: 152) remarked that "since the English, Dutch, and French have trafficked with them, they generally disuse their former weapons." Domestic lithic tools, such as scrapers, were also replaced by metal counterparts. Despite this, lithic tools persisted in the form of stone pipes and ground stone tools like pestles, and flaked stone tools persisted in the form of gunflints and strike-a-lights (Gary 2007: 109; Nassaney and Volmar 2003: 84). The technology behind such tools also persisted as Native peoples practiced working glass. For example, excavations at the adjacent and culturally related Eastern Pequot reservation have revealed that some expedient lithic flake use, as well as at least nominal "lithic" flaking of window glass, could be found as late as the final quarter of the eighteenth century (Silliman 2009, personal communication).

The Pequot War and Its Aftermath

While the Pequots were enjoying a boon from their prominence in trade with Europeans, insidious problems started to plague them as the seventeenth century carried on, the first of which was actual plague. European introduced diseases hit Native populations of New England hard, and the Pequot were no exception (Loren 2008: 61; McBride 1994: 16; Starna 1990: 44-46). The impact in disease caused a drastic reduction in population, and the Pequot could no longer raise the 4,000 men for war of which Gookin boasted them to previously be capable (Gookin 1972: 7). However, the Pequots still far outnumbered the English in the area (Mather 1972: 28).

Militarily speaking, the English were not initially a threat by themselves, but combined with other Native groups, they proved to be devastating. Tensions had been building between the indigenous groups of the region as they competed for wampum and trade dominance, especially between the Pequots and the Narragansetts. Matters for the Pequots were complicated by infighting between their sachem Sassacus and the offshoot Mohegans under Uncas (Hauptman 1990: 71; McBride 1994: 13). Conflict in the area came to a head when the Pequots were blamed for the murders of some Englishmen. The English allied themselves with the Mohegans and Narragansetts against the Pequot, and once the Pequot attacked the town of Wethersfield in 1637, war had exploded in Connecticut (Hauptman 1990: 71). The English and Native coalition decided to counterattack with an assault on the Pequot fort at Mystic. The events that unfolded were more a massacre than an assault, as the English attacked and set fire to the fort and the wigwams inside while the Narragansetts and Mohegans surrounded the area and prevented escape, all resulting in the deaths of many Pequot men, women, and children (Mather 1972: 31-32).

The rest of the war did not go well for the Pequot, and they found themselves forced to surrender. The English declared the Pequot disbanded, outlawed the use of their tribal name and the continued use of their lands, and tried to have the remaining Pequots absorbed into the Mohegan and Narragansett groups (Hauptman 1990: 76; Mather 1972: 39). These plans would not come to fruition for the English, however, and although the remaining Pequots were initially subservient to the Narragansetts and Mohegans, they were able to form two groups, re-establish autonomous Pequot communities, and gain reservation lands. The group under the Narragansetts was given a reservation on Long

Pond in North Stonington and became the Eastern Pequot in 1683; the rest of the Pequot followed sachem Robin Cassacinamon to a five hundred acre reservation at Noank and became the Western Pequot (McBride 1990: 105; Silliman 2009). In 1666, they were granted two thousand more acres at Mashantucket, and became known as the Mashantucket Pequot rather than the Western Pequot (McBride 1990: 106).

King Philip's War

The years between the Pequot War of 1637 and the outbreak of King Philip's War in 1675 were marked by tenuous relations between Native people in New England and English colonists. Tensions developed with the Narragansetts, the former allies of the English during the Pequot War, as they were upset over the distribution of wampum (Salisbury 1990: 87). Land disputes caused by colonial expansion were also a source of ongoing friction. The English believed that unless Indians improved and subdued the land, they could not rightfully claim it as theirs (Den Ouden 2005: 3; Salisbury 1990: 92; Silverman 2003: 511). To improve the land by English standards required a significant overhaul of Native social relations, especially concerning gender roles. Men had traditionally been the hunters and fishers, while women had been responsible for gathering and horticulture; the English wanted them to conform to "proper" gender roles, which meant transforming men into agricultural laborers and women into domestic specialists (Richmond and Den Ouden 2003: 184; Williams 1973). The Pequot, even as a friendly tribe with respect to English views for the latter half of the seventeenth-century, were constantly under pressure to surrender parcels of land, eventually giving up their land at Noank for a clear title to Mashantucket (McBride 1990: 106).

To put it simply, Native people were becoming increasingly unhappy with their situation. One of the ways in which they were able to resist the pressures put on them by colonialism was through violent resistance, and in 1675 such resistance sparked another war (Silverman 2003: 513). Friction between the Plymouth government and Philip (Metacomet), the sachem of the Indians at Mount Hope, was exacerbated by the death of a Christianized Indian named John Sassamon. Colonial officials suspected Philip as orchestrating the murder, and after receiving intelligence that he intended mischief, soldiers sent to prevent an uprising were attacked and war had again come to New England (Gookin 1972b: 440-441). Philip's group was joined by several other tribes, including the Narragansett, in their efforts to combat the English colonies.

Figure 2: Map of Southern New England Showing Tribal Groups in King Philip's War (Salwen 1978: 161)

At first, the colonial authorities were unable to tell exactly which Native groups were aligned against them, or perhaps they just feigned this inability to create a climate of fear of all Native peoples. Either way, to an English settler living in the colonies, it seemed like any tribe had the potential to be an enemy. In Connecticut, great care was taken to see which groups were friends and which were foes, and it soon became clear that the Pequot were in the former category. In early summer 1675, the Reverend James Fitch wrote to Secretary John Allyn that he had been "at Kossasinamun's towne" and had been assured of the Pequots' fidelity and that they would do as commanded (Trumbull 1850, vol. 2: 336). The ramifications of having friendly tribes at their disposal did not go unnoticed; soon the colonial authorities were discussing ways to utilize them. Fitz-John Winthrop wrote his brother, Captain Wait Winthrop, about the possible use of the Pequots and the Mohegans, saying that they "may be of good use if securely managed, & will be usefull to send out in partyes or march a distance from ye body to clere up any suspitious places." However, he also cautioned that "good care must be had of their faythfullness, & tis good to suspect them a litle" (Winthrop 1947: 280).

Before long, it became common for the War Council of Connecticut to send requests for Pequots and Mohegans to join military expeditions, asking those in a position to do so to "encourage the Pequots and Mohegans to fall upon the enemie" or "continue offering their services in fighting." The Connecticut authorities recognized the effectiveness of a joint English and Native force; Native warriors could scout ahead to report on enemy movements in the area and they could help English troops learn the "skulking way of war" that was so different from European warfare. Forces from Massachusetts that lacked Native warriors to fill this capacity often fared worse in battle

(McBride 2006: 326; Trumbull 1850, vol. 2). The Pequots were especially useful due to their strategic location on the frontier with the Narragansetts, acting as guards against attacks on Connecticut towns (Gookin 1972b: 437; McBride 2006: 327). By the end of the war, the Pequots had been involved in 24 expeditions against those identified as hostile Natives (McBride 2006: 325).

Monhantic Fort

The Pequot had always gone to the Great Cedar Swamp in times of crisis, and this certainly qualified. At the outbreak of King Philip's War in June of 1675, two separate communities lived on the Mashantucket reservation. One was led by the sachem Robin Cassacinamon, the other by a sachem named Daniel (McBride 1993: 66; McBride 2006: 322). Such an arrangement eventually led to dispute over Pequot leadership after Cassacinamon's death in 1692, but for now was working out amicably with Daniel following Cassacinamon's orders (McBride 1993: 68). It was one of these two communities, the one led by Cassacinamon, that went to the swamp to create a fort to protect the people on the reservation. They built their fort on a peninsula that extended into the swamp, one that Native peoples in the region had been utilizing for 10,000 years (Jones 2002). The name for this peninsula, revealed in a nineteenth-century probate record, was "Monhantic" or "at the island" (Ledyard Probate 1861, vol. 2: 56-59; McBride 2006: 322). The site is known almost exclusively through archaeological, rather than archival, information, giving it special prominence in archaeology's unique contribution to studies of Native and colonial history in New England.

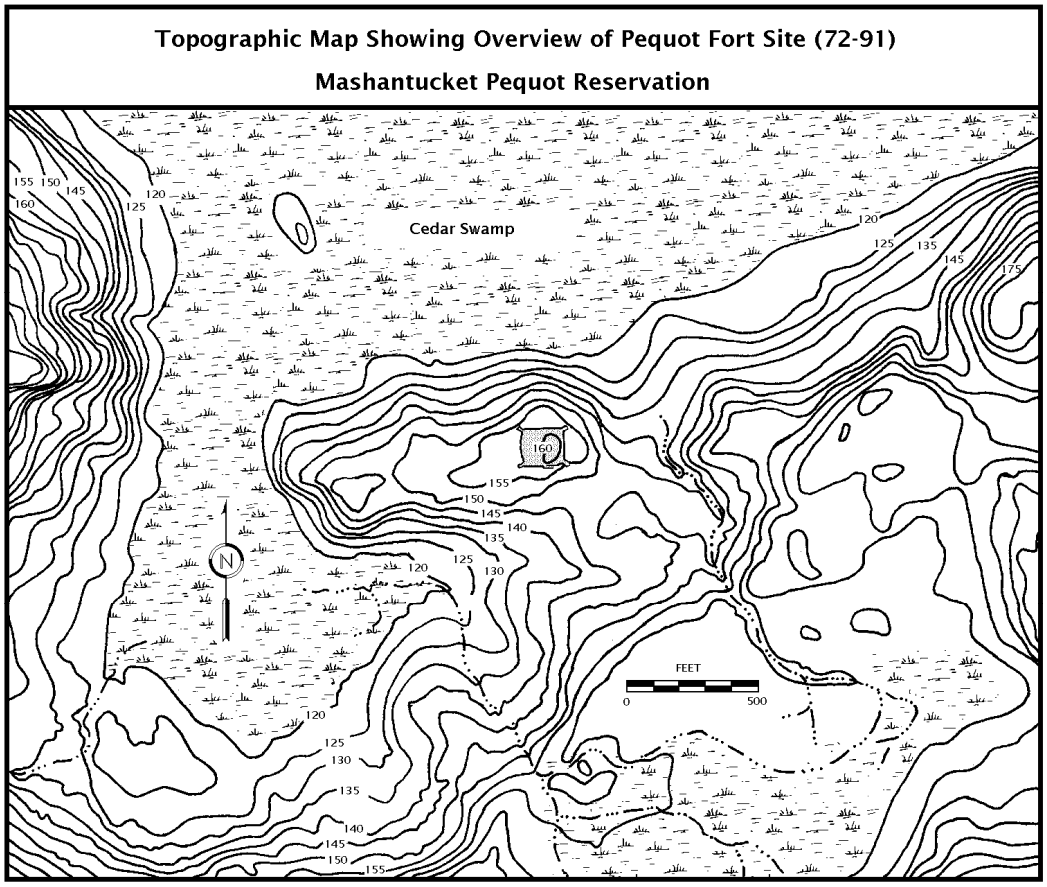

Figure 3: Monhantic Fort's Location on the Reservation.
Image Courtesy of the Mashantucket Pequot Museum and Research Center.

Fort Shantok, the fort of the neighboring Mohegan tribe in the mid seventeenth century, is representative of the more common Native fortified sites in the region (Williams 1973). Shantok and other Native forts had long-term occupations, with their intended longevities taken into consideration during construction. Monhantic Fort, on the other hand, was hurriedly constructed (McBride 2006: 323). The architecture represents a combination of European and Native elements. The design of the Fort entrance, for example, harkens back to the design of Mystic Fort during the Pequot War with its overlapping palisades (McBride 2006: 325). Other elements, such as the bastions, seem more European. This has led McBride (2006: 323) to postulate that the Pequot may have

been assisted in the design phase by the English. Based on artifact dating and stratigraphic analysis, the fort was occupied for not less than 18-24 months and not more than five years; such an occupation is more than fitting for the tribe considering King Philip's War from 1675 to 1677 and the Pequots' conflict with the Mohawks from 1677 to 1680 (McBride 2006: 322). One storage pit and later refuse pit feature, Feature 92, seems to have been used for a continuous period of three years, based on distinct disposal episodes of faunal and botanical remains seen through eighteen strata (McBride 2006: 327).

The fort was not solely a place to run to in case of an attack. In fact, it is not large enough to have housed the entire Mashantucket population, which is why it is believed to be associated with just one of the communities on the reservation (McBride 2006: 322). It was a place where most could go in the event of attack, but more than that, it was home to several family groups with multiple wigwams enclosed inside. The fort was in essence a small fortified village among the other villages on the reservation. The archaeological evidence recovered therefore is illustrative of domestic activities and daily life on the reservation in the late seventeenth century.

This is not to say that military activities were not present at the fort. Many military artifacts were recovered including brass projectile points, metal knives, gun parts, and lead shot. In addition, more than three dozen gunflints as well as hundreds of associated flakes of European flint were recovered. A forge was present at the fort outside the northwest bastion where the modification of iron objects and possibly their production and the repair of firearms took place (McBride 2006: 330). References to a Pequot named Schadaub have been found indicated that he was "something of a dealer in

smithery" (Ford 1970). Schadaub may have been employed as a blacksmith at the fort as a young man, or the Pequots may have had a new tradition of smithing of their own; either way it seems likely that they had a blacksmith on site, and if they had, the forge represents a specialized activity area (McBride 2006: 329).

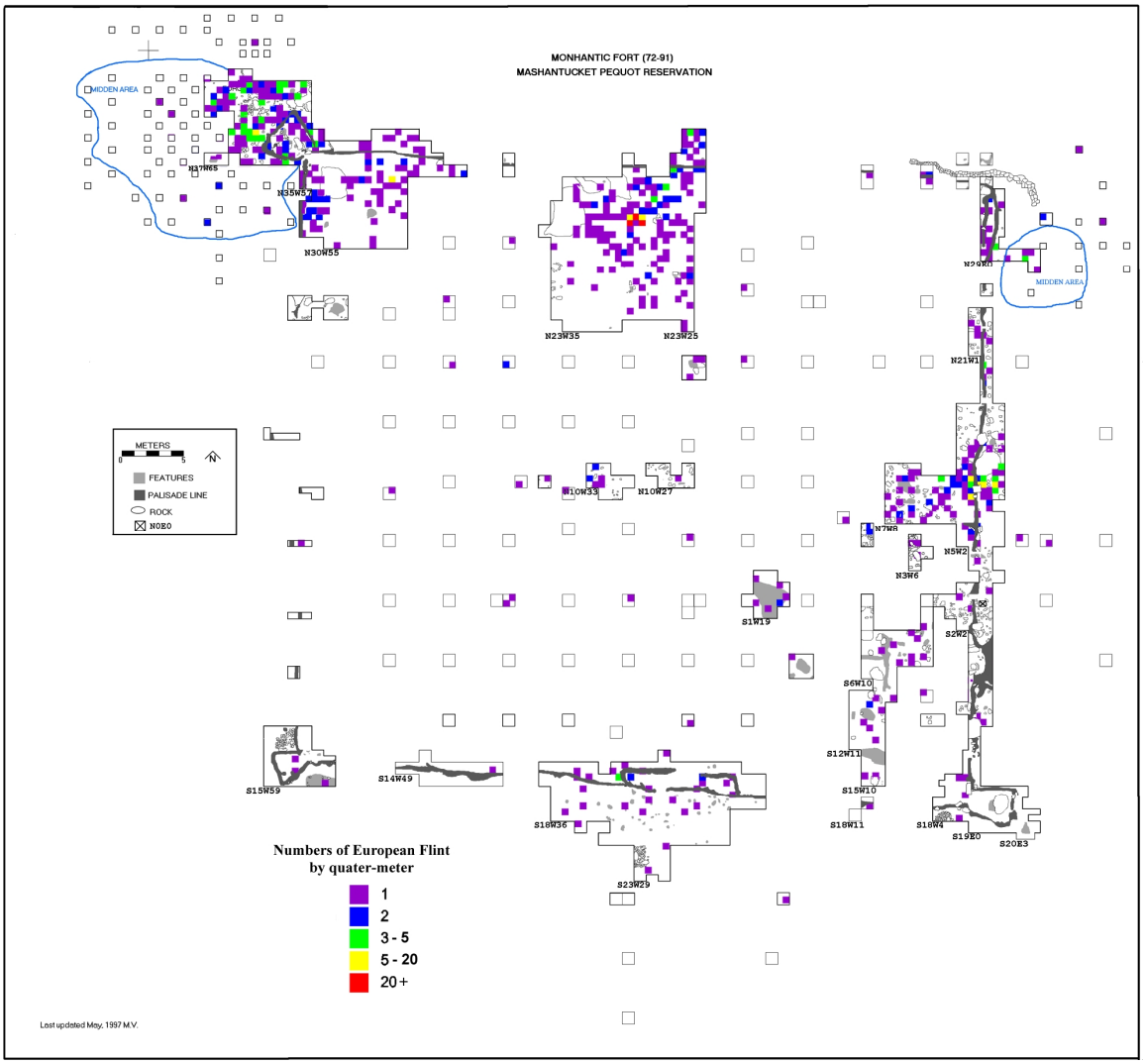

Figure 4: European Flint at Monhantic Fort, Based on Excavations up to May 1997. Image Courtesy of the Mashantucket Pequot Museum and Research Center.

Flintlocks and Gunflints in the 17th Century

It is necessary to contextualize the intersection of lithic technology and firearms in seventeenth-century Pequot life. Flintlock weapons are not very complicated. A

gunflint, a shaped fragment of siliceous stone, is screwed down into the cock, and once the trigger is pulled, it strikes the frizzen and creates the sparks that ignite the powder and fire the gun (Luedtke 1999: 71-72). Flintlocks were faster and more dependable than the popular matchlock guns, but matchlocks were simpler to use and easier to maintain, and their use continued despite the wide availability of flintlocks. However, flintlocks were much better suited to warfare and hunting in the New World, and they not only became quickly adopted by colonists but also became sought after by Native peoples (Luedtke 1998: 34). It was the weapon of choice in New England by the time King Philip's War had broken out.

Owning a flintlock necessitated having the gunflints that were required to fire it. The standard gunflint that an English colonist would seek to use in a flintlock would have been the spall type gunflint. Spalls had a wedge shaped cross section, with the ridge created by the shape of the gunflint used as the striking platform. The production of spalls was a specialized activity performed by anyone who learned the requisite flintknapping skills; they were being produced in Europe and in the colonies by 1650 (Luedtke 1999b: 34; Kenmotsu 1990). The unskilled took a different route in gunflint production. The "do-it-yourself" method involved smashing a nodule of flint and picking a piece most like a spall to chip and batter into a useable gunflint (Luedtke 1998: 41). These chipped flints, however, look very different than the spalls they were meant to emulate.

For Native Americans, flintknapping was a more familiar activity, as it was one they had used to create a wide variety of tools from the early Pleistocene until at least the early seventeenth century, if not beyond in limited capacity. They used these familiar methods of stone tool manufacture when it came time to produce gunflints. The result

was a distinct style of gunflint, one that was bifacial like projectile points (Luedtke 1999b: 33; Kenmotsu 1990). Contrary to the way an English person would, a Native person would probably not smash the nodule of flint during the production process. Rather, they would utilize soft hammer percussion and pressure flaking to make their bifacial flint (Luedtke 1998: 38). Native people were also less picky about the raw material used to produce a gunflint. Most of theirs were made on ballast flint, gathered from piles along the coast where ships once anchored, but they also would produce gunflints using chert and even quartz (Luedtke 1998: 35; Potter 1998: 62; Williams 1973: 333). Some of this seemingly more indiscriminate use may relate to the relative unavailability of English flint nodules and the familiarity with the local geological landscape.

At Monhantic Fort, the gunflints recovered are mostly bifacial flints that demonstrate the continuation of Native methods of manufacture, although a few spalls were also found. In his M.A. thesis at the University of Connecticut, Scott Williams (2011) examined these gunflints to find out if they had been produced for specific types of flintlock weapons, since the size of gunflints typically depends upon the size of the lock they are intended to fit into. Assemblages such as the one from Aptucxet, a European inhabited trading post located on Cape Cod that has produced a great deal of data on gunflints, have revealed smaller gunflints that were intended for pistols and larger ones intended for muskets and carbines (Hamilton and Emery 1988; Luedtke 1998: 41). Williams concluded that the Pequots were producing gunflints much in the same way.

In accordance with fellow University of Connecticut researcher Benard's (2005) conclusions that there were distinct activity areas at the fort, Williams also pronounced

that all three areas he examined (two wigwam sites and the forge) were areas of lithic production. However, this conclusion was based on concentrations of flint and not spatial distributions of primary flakes. When one examines the fort, one sees that flint is found virtually everywhere that was excavated. Concentrations of flint are not enough to definitively label areas of gunflint production. Areas of lithic maintenance were never investigated by Williams either, although he did believe that gunflints themselves were deposited inside the fort since personal gear discard usually does not take place in the field (Williams 2011: 64). Not many archaeologists have investigated areas of flint maintenance associated with gunflint use, since identification of resharpening flakes would be difficult in the cases of unskilled Englishmen chipping and battering the stones. Resharpening chips of flint were identified at Fort Shantok, however, where the Mohegans had taken up fortified residence earlier in the seventeenth century (Malone 1991: 70).

Finally, Williams also believed that lithic production in the forge represented "a European adaptation and specialist production" (Williams 2011: 63, 70). In the past, lithic production and maintenance were not specialized activities among Native people; individuals would make stone tools as they needed them, likely crosscutting gender lines (Howlett 2004: 75; Nassaney and Volmar 2003: 80-81). This contrasts with the way the English produced gunflints as they had them imported from specialists in Europe or had local specialists make them. They only chipped and battered their own when they had no other choice, which produced rather crude objects. Williams essentially saw the continuation of both a general Native pattern in the lithic production he concluded was present at the wigwam sites and a European-influenced specialist pattern of lithic

production he concluded was at the forge. This conclusion seems contradictory as it suggests that production of gunflints was a specialized activity and a non-specialized activity all at the same time. An analysis of the spatial distributions of the primary flakes should give more insight into this issue; in addition, analysis of spatial distributions of resharpening flakes will indicate whether maintenance of gunflints occurred, where such activities occurred, and whether or not it was a specialized activity. I consider this research question more directly in Chapter Four.

CHAPTER III

DOCUMENTARY EVIDENCE

Before analyzing the archaeological material from Monhantic Fort, the documentary record had to be surveyed to see if any insight into lithic industry or military emplacement at the site could be gained. Like most from this period, these documents all come from the Colony of Connecticut and Europeans, not the Mashantucket Pequots themselves, but by reading "against the grain" these documents can reveal information essential to this study (Green and Troup 1999: 179). In order to locate the pertinent documents, the archives at both the Connecticut State Library and the Mashantucket Pequot Museum and Research Center were examined. The records of the War Council of Connecticut during King Philip's War were also located online, as they had been scanned and assembled by archivists, historians, and archaeologists working for the State Library and the University of Connecticut. Any documents referencing supplies, especially of flint, or friendly Native groups were examined in depth to see if they might illuminate the nature of lithic supply and practice of the Pequots at Monhantic Fort.

Raw Material Availability

Investigations into assemblages of gunflints have brought up the question of whether or not flint was a scarce resource, as levels of material scarcity may have real implications for technology, use, and discard. Luedtke's (1998: 43) research at Aptucxet showed that the flint assemblage there was comprised of very small flakes that seemed to

indicate that knappers used the flint until it was too small to work further. Coupled with the notion that homemade gunflints produced from ballast flint resulted from the greater demand for gunflints than the imported supply of spalls, Luedtke was left wondering if scarcity of the raw material was a factor. Ballast flint was prevalent in the colonies, from both its status as a trade commodity and its having been left in rivers for future reuse, but its desirability was geographically widespread, to the point that Native people would go collect it and carry it back inland considerable distances (Luedtke 1998: 45-47; Potter 1998: 53, 61). For the Pequots in King Philip's War, such a scarcity would have been devastating if John Mason is to be believed. In a letter to John Allyn, he wrote that both the Pequots and Mohegans were in short supply of ammunition, and that "they are in great hazard should the enemy assault them and do not have the werewithe to defend themselves" (Mason 1924). Thus, one of the first steps in assessing production and maintenance of flint at Monhantic Fort must be investigating this issue of flint scarcity.

A good place to start is a recognition of how flint was acquired. As previously mentioned, trade provided one way to procure ballast flint, as did trips to a river or harbor and picking up any ballast flint left behind. However, an important aspect to remember when considering the Monhantic Fort is that it was constructed and occupied during a time of war, unlike Aptucxet, and it sat several miles from ballast flint deposits on the coast. This avenue to the coast would not have been a problematic one to travel, as the Niantics that lived in the area were a friendly tribe to both the English and the Pequot, and the Pequot at this point still had lands of their own on the coast at Noank (Trumbull 1850, vol. 2: 441). If Mason was right about the Pequots' supply problem, it did not last for long. The need for Pequot warriors on military expeditions meant that the War

Council of Connecticut was willing to supply them with whatever they needed to fight. A letter from Secretary Allyn to Reverend Fitch and Reverend Buckley illustrates this perfectly: “order the Commissary to furnish both Indians and English with such provisions and ammunition as you and they gauge necessary for that expedition.” Several other documents confirm that the Native groups allied with the English were being supplied by Connecticut at the colony’s expense (Trumbull 1850, vol. 2: 407).

However, being supplied by Connecticut did not mean that the Pequots had copious nodules of flint with which to produce gunflints. The notion that Indians, even friendly ones, were in possession of flintlock weapons greatly troubled the English colonists. They attempted to prevent Native people from arming in the 1620s by making it illegal to trade guns to them, arresting anyone who sold Indians arms or repaired arms for them (Church 1989: 23-24; Lewis 1893: 14). These efforts were blocked by traders willing to work outside the law, as well as by Native people enlisting the aid of Dutch traders in their quest to obtain arms and ammunition (Winthrop 1947). By the time of the Pequot War, the Pequots already had an adequate supply of guns, powder, and shot; later on during King Philip’s War, Gookin described the Connecticut Indian forces as “all being armed with guns” (Gookin 1972b: 445; Mather 1972: 28).

While the English certainly attempted to deprive their enemies of access to arms and ammunition, the colony of Connecticut had a different stance when it came to Indian tribes that had proclaimed their fidelity. They were willing to allow friendly groups like the Pequots to have guns and ammunition, but with strict controls in place to monitor what they were being given and how much. The General Court of Connecticut still maintained the prohibition on the supply of arms and ammunition to Indians with the

exception of the War Council ordering someone to do so (Trumbull 1850, vol. 2: 271). When the War Council furnished the Pequots with weaponry, they gave them what they deemed necessary but were wary about giving too much. A letter sent to Reverend Fitch asking him to encourage the Pequots to fight on an expedition came with the caveat to "be careful what ammunition is put into their hands" (Trumbull 1850, vol. 2: 387). Guns and ammunition taken as spoils in battle were allowed to be kept, and many documents reveal that the Pequots did bring in a great deal of plunder, but Connecticut did not place controls on plunder in order to use it as an incentive for the Indians to fight (Saltonstall 1676: 8; Trumbull 1850, vol. 2; Winthrop 1947).

In addition to the controls on the supplies of the Pequot warriors, the Council also sought to control Monhantic Fort's general supply of arms and ammunition. Both Robin Cassacinamon and Daniel petitioned the Governor to be permitted to strengthen themselves against the common enemy. At a meeting of the Governor and the Council, it was decided that "the Councill doe grant ten pownd of powder and bulletts or lead proportionable be lent to Robbin, to be kept in his forte as a magazeen for their necessary defence, not to be improved by them without they be assaulted by an enemie" (Trumbull 1850, vol. 2). If the Pequots were being supplied with ballast flint, either individually or as a group, then such a supply would most certainly have been controlled.

Or would it have been? None of the documents, whether about supplying or controlling the arms and ammunition of the Mohegans and Pequots, ever explicitly mention flint. In fact, the only outright mention of flint in the orders of the War Council concern the movement of general supplies, when they decide to send "three barrells of powder, seven hundred waight of lead, and a stock of flint to New London for the present

expedition" and "three barrells of powder, nine hundred waight of bulletts and stock of flint to go to defend the corne." The expedition mentioned in the document is not specified as being a joint English and Native force (Trumbull 1850, vol. 2: 383-384). However, the fact that they separate flint here from ammunition and provisions seems to suggest that flint was not lumped in with those things automatically. What does this mean for the supply of flint to friendly Natives like the Pequots? It is, without question, integral to their continued fighting in the war, as flintlocks will not fire without them. So if it were in short supply, it stands to reason that it would be mentioned when the War Council sends orders to supply ammunition like powder and shot. However, it never is.

This separation of flint from ammunition also seems to provide some insight into the attitude about flint. Ammunition is mentioned all the time, while flint hardly ever is mentioned unless it is important to the situation. The only other document thus far found that does mention it, other than account books that show how much was paid for imported flints, is Gookin's history of the Christian Indians during King Philip's War, where he tells a story about a fight that involved someone unable to fire because their flint has fallen out (Gookin 1972b: 479). While flint is certainly an essential part of the flintlock, it does not seem to be treated as such. This attitude probably means that access to flint was not being controlled as it was for guns, powder, and shot were, and it suggests that it was more available and easier to come by as well. This attitude on flint may also have translated to the Pequots; if so, such an attitude would have implications for flint and its relation to weaponry, which might distinguish it from previous Pequot experiences and attitudes toward lithic materials. The documentary evidence in total suggests that flint was not a scarce resource for the Pequots living at Monhantic Fort, and

that the acquisition of nodules of ballast flint for gunflint production would not have been problematic.

European Presence and Influence

> "Remember us to Robbin and Mamoho and tell them we well accept of theire readiness to attend our orders, and shall keep it in remembrance for their future advantage, and order them to keep in the same readiness as formerly; and when there shall be occasion to imploy them, you must endeavoure to secure their wives and children" (Winthrop 1947: 4).

This passage from a letter to Wait Winthrop from the General Court of Connecticut serves basically as a reply to an earlier letter, in which Robin Cassacinamon passed on the request to have the English secure their wives and children through Winthrop (Winthrop 1675). It has made quite an impression on McBride (2006), who has theorized that a garrison of English troops might have been stationed at or near Monhantic Fort to carry out such securing. After all, the Pequot women and children would need protection all the time, since the warriors were away on almost every expedition of the war. The close proximity of English troops at the fort would certainly explain the presence of the European influences on the fort architecture and to the specialization that Scott Williams (2011) believes can be seen archaeologically. Issues of specialization at the fort have thus been tied to the extent of English presence, and this must be investigated to provide some idea of how much and what kind of influence might have been at the fort.

As previously mentioned, the fort occupied a valuable strategic location on the frontier from which the forces of Connecticut could go forth and assault the enemy. The documents suggest that at the very least, it was used in exactly this capacity, as a staging

point for military campaigns. Thomas Minor, commander of the dragoons in southeastern Connecticut, makes specific mention that "the armie marched of from mashantuckset" in one of his diary entries (Minor 1993). Another document, a letter to Major Tallcott from the War Council, reveals that the allied Indians, who just returned from an expedition, were unwilling to go out on another until they visit home (Trumbull 1850, vol. 2: 455). The Council instructs Tallcott to take the English with them and set out from there as soon as possible.

Is there enough evidence to say that there was more than just occasional European presence at the fort, though? One War Council document mentions that Tallcott and his men were frequently at Stonington with the Pequots and Mohegans, and Minor has several other entries in his diary saying he was at Mashantucket (Minor 1993; Trumbull 1850, vol. 2: 444). Benjamin Church, in his history of Philip's War, describes the Pequot as being "protected and defended" by the English (Church 1989: 82). One must also remember that the English may have aided the Pequots in the design of the fort. The most compelling evidence for a long term English presence is Barracks Field, however. Referenced in several land title deeds from the nineteenth-century, Barracks Field is located in an area adjacent to the parking lot for the Mashantucket Pequot Museum and Research Center, in close proximity to the location of Monhantic Fort (Ledyard Deeds; Ledyard Probate 1861, vol. 2: 56-59). In Figure 5, one can see that it is also in the same probate record that reveals the name "Monhantic" for the area where the fort is located. The old Indian names are being reused to describe certain fields in these deeds; is it possible that Barracks Field denotes the location of an actual barracks? Such a place might lend credence to the notion of English troops at the fort.

Figure 5: Deed Composite of 19th Century Farmsteads on the Reservation. Highlighted Areas Show Monhantic Pasture and Barracks Field

Archaeologists from the Pequot Museum excavated the area of Barracks Field, Site 72-269, in the summer of 2008. A preliminary look at the artifacts recovered seems to suggest that Barracks Field was not the location of any long term occupation during the seventeenth-century. Figures 6, 7, and 8 show the bottle glass, European flint, and other seventeenth-century artifacts retrieved from the excavation, and these spatial distributions reveal that artifacts that might belong to an occupation from the same time as the fort are few in number. They are also spatially scattered across the site. This hardly seems like what one would expect from a site like a garrison where people would have lived on a semi-permanent basis. Alternatively, Barracks Field may have been a rallying point where English troops would have gone to meet up with the Pequots before heading off on an expedition. Of course, further excavation at the site and a more in-depth

analysis of the artifacts is required, but it seems fair to conclude that the documents demonstrate that English troops were present at and around the fort, but not for extended periods of time. This would make Monhantic Fort in as close of a proximity to the English as any other reservation community, but it does not support a conclusion that European influence at the fort was particularly intense. If the Pequots were slowly transitioning to specialized lithic activities in support of maintaining their arms instead of supplying residential activities as they once had done, it was probably not solely due to European influences.

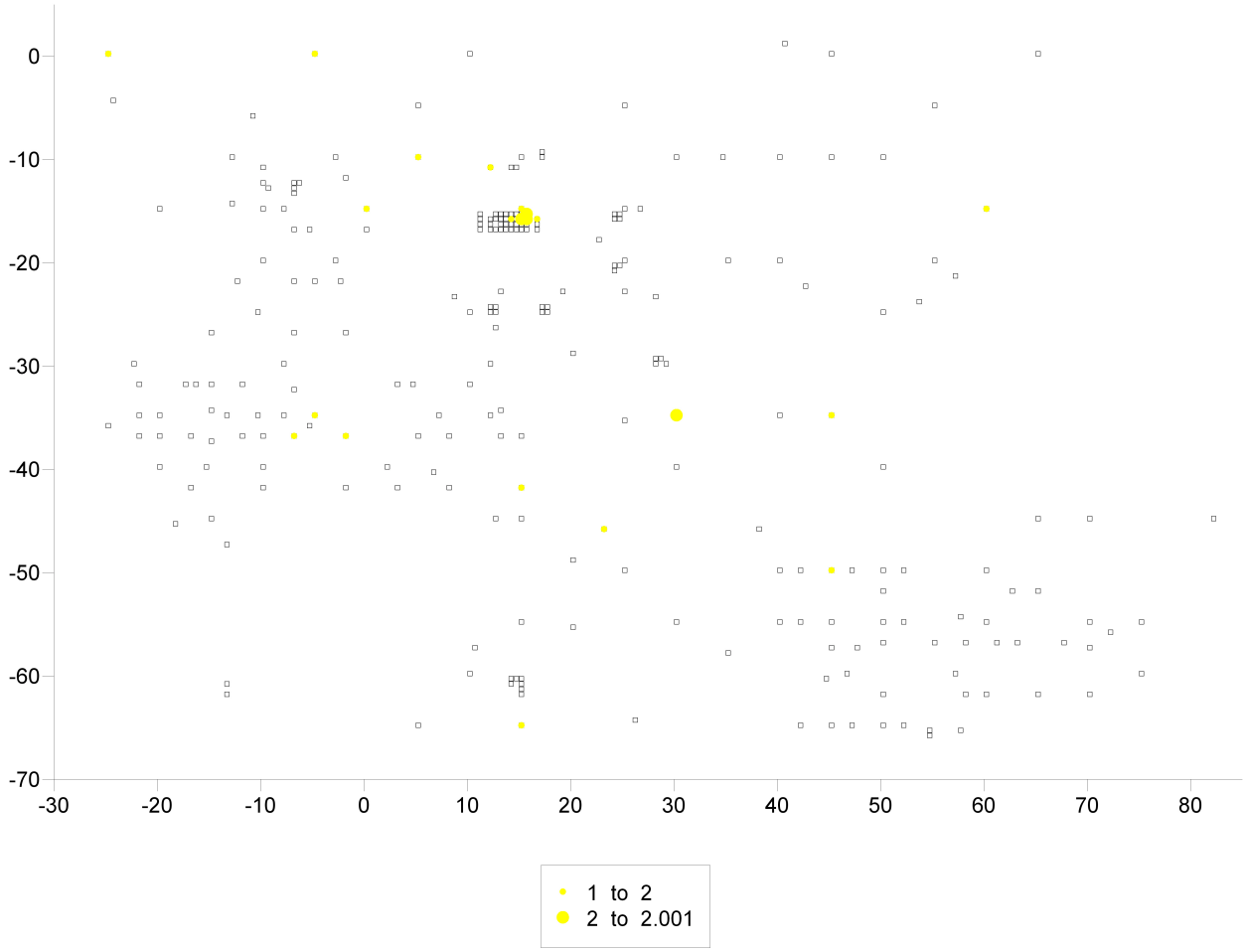

Figure 6: Bottle Glass from 72-269

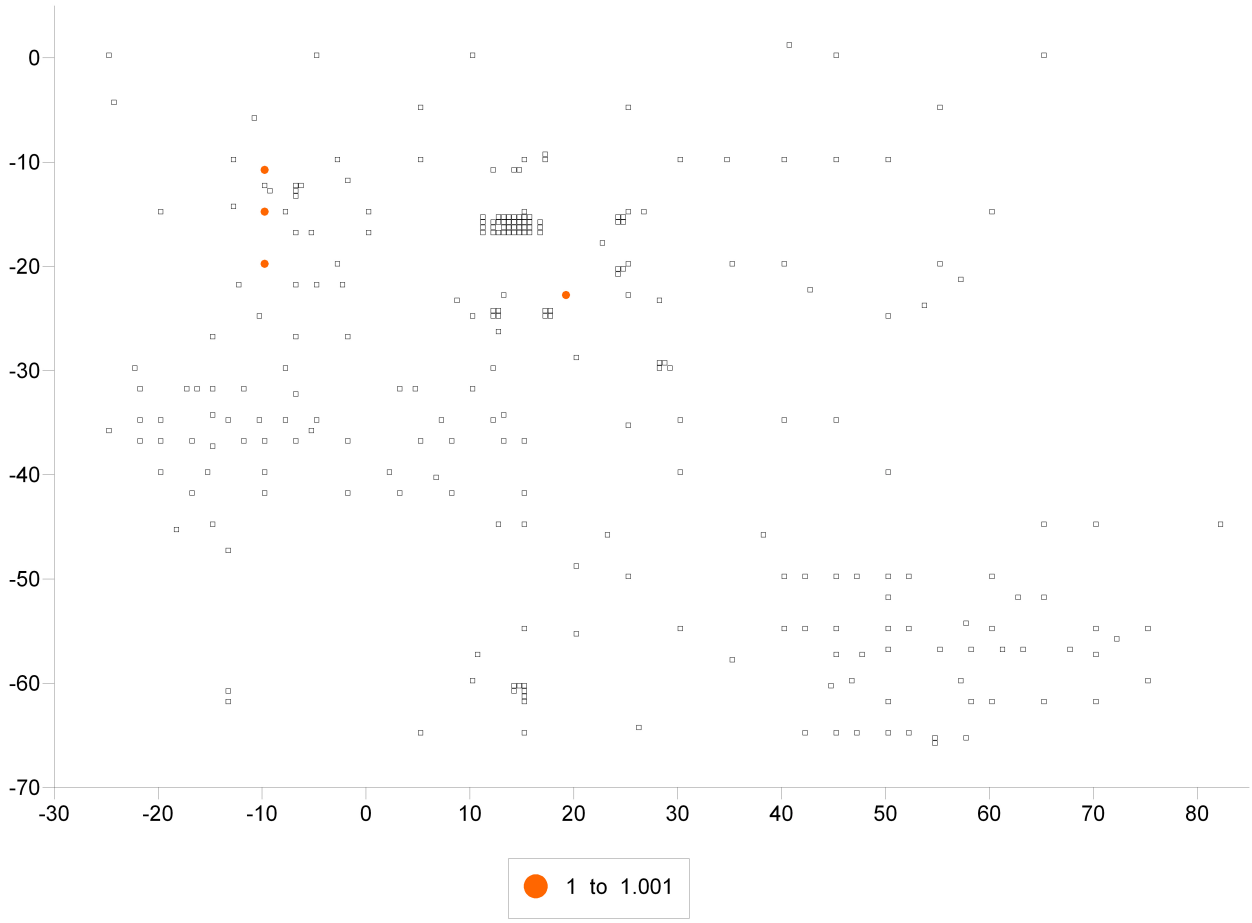

Figure 7: European Flint from 72-269

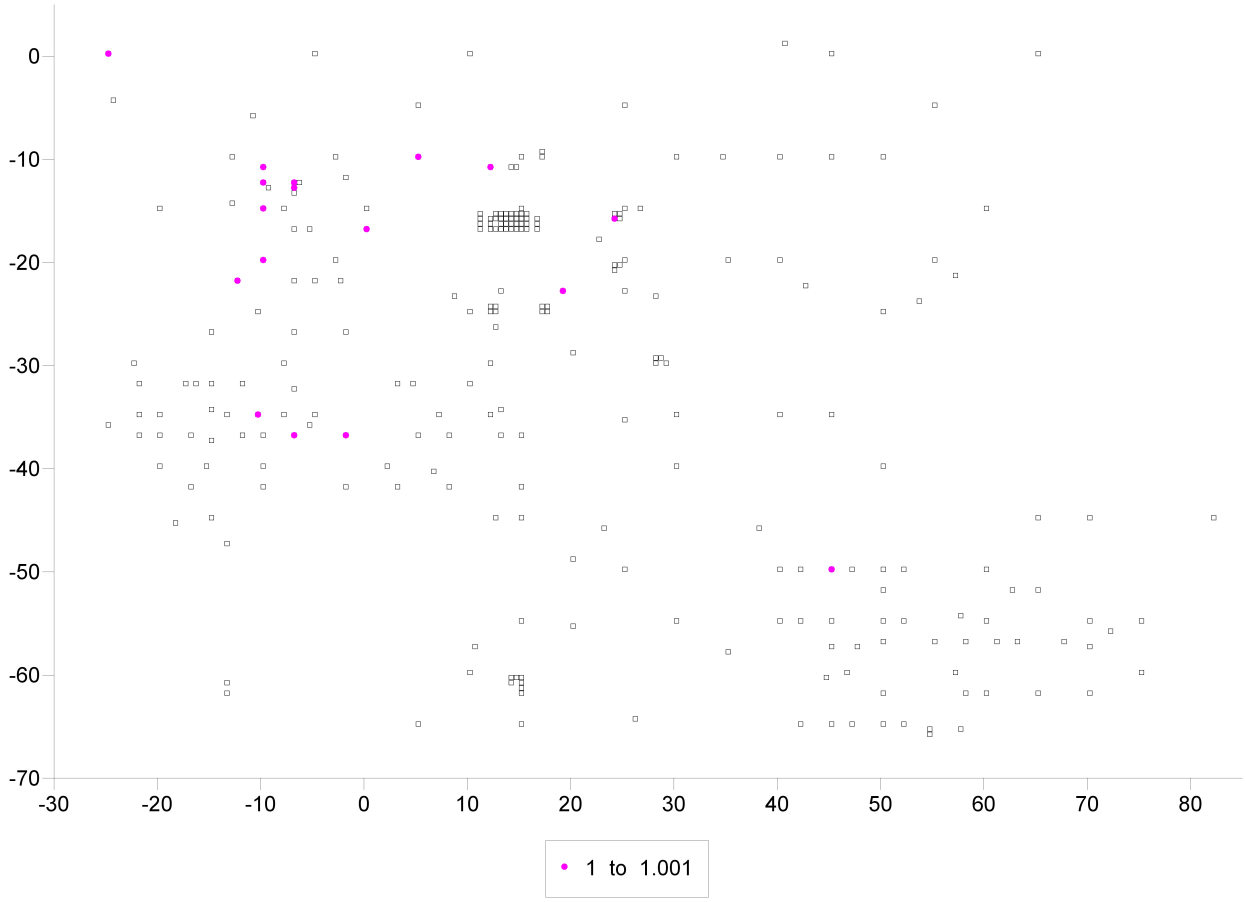

Figure 8: Other 17th Century Artifacts from 72-269

The survey of the documentary record has suggested a high degree of European presence near the Fort; however, the preliminary archaeological evidence from the Barracks Field site points to nothing more than a staging location, where there would have been only occasional European presence, and this occasional presence does not seem to support a high degree of European influence at the Fort. Documents have also suggested that flint was likely not a scarce resource for the Pequots living at Monhantic Fort, and that it perhaps was viewed as separate to weaponry. The archaeological evidence from the Fort itself must now be examined to see if these interpretations of the documents find support in the artifacts, or if they contradict what the material record is saying like in the case of Barracks Field.

CHAPTER IV

METHODOLOGY

Examining Raw Material Questions

With the documentary evidence in mind, the next step is the analysis of the flaked lithic material from Monhantic Fort. However, some methodological issues must be addressed at the outset. At first glance, the lithic material in question appears to consist solely of the European flint recovered at the site. However, as previously mentioned, Native people in the region did not solely use European flint for their gunflints; they also used chert and, less commonly, quartz raw materials in gunflint production. Also, the site poses some temporal problems that must be acknowledged. Site 72-91 is a multi-component site featuring deposits that date to the Archaic Period (9000 to 2700 BP) in Connecticut. The fort component is just one occupation of the land in the area. Besides the land having been part of a nineteenth-century farmstead, though, the fort occupation is the only one not from the pre-contact era. Therefore, it seems likely that the bulk, if not the entirety of, other lithic materials recovered from 72-91 are from pre-contact periods and not from the fort, especially considering that these non-flint materials have resulted in tools that can be diagnostically tied to said periods, such as Neville points from the Middle Archaic. However, archaeologists studying gunflints have raised some concern that Native gunflints appear to closely resemble pre-contact Native scrapers. Archaeologists more familiar with pre-contact tools seem more likely to identify tools as

scrapers based on their use wear when, in fact, these tools are actually gunflints (Hirst 1991: 64). These identification problems could be exacerbated by gunflints made from non-flint materials like chert.

Evaluating the temporal placement of lithic materials is of the utmost importance to properly contextualize research into artifacts at the fort. Assumptions about the diminution of lithic technology and its restriction to gunflints and similar objects must be carefully considered to make sure it has empirical support rather than mythical status. To assess whether European flint is the only lithic material from the Fort, an analysis of three important features was undertaken. Three features in particular were examined: Features 2, 34, and 92. These three features have all been established by Pequot Museum archaeologists as belonging to the Fort occupation. Feature 2 is the palisade trench, Feature 92 is the refuse/storage pit adjacent to one of the identified wigwam sites, and Feature 34 is a midden feature just outside the fort (McBride 2006). If they can be determined to be closed features -- that is, features containing only materials from the Fort occupation -- and if they contain other lithic raw materials, it will demonstrate that other stone sources were utilized by the Pequots for gunflint production. These results are considered below.

In order to investigate whether or not European flint was a scarce raw material, the weights of the gunflints, strike-a-lights, chunks, and cores were recorded to see how extensively flint was knapped and what tools were most important. At sites like Aptucxet, the raw material was knapped until it was too small to be used, which Luedtke (1998: 43) believed indicated a scarcity of flint. If cores and cobbles have all been reduced to sizes too small to continue to utilize, their weights should reflect this and be smaller than most

of the tools they were used to create, which would indicate raw material scarcity (Kujit et al. 1995: 117). Since the fort was occupied during a time of war and gunflints were vital to fighting, raw material scarcity would also mean that gunflints would be larger and weigh more than the less important strike-a-lights. Even with intensive tool rejuvenation, gunflints should still weigh more than strike-a-lights, as both classes of tools would show such intensive rejuvenation in the event of raw material constraints. This intensive rejuvenation of gunflints would be another indicator of raw material scarcity, with such activities reflected by a high percentage of gunflints featuring retouching. Native peoples may have also used more than one side of their gunflints as a working edge, something that would have been possible given how Native gunflints were manufactured. Thus, the presence of retouch and number of edges with use wear were recorded when examining the gunflints.

Weights and lengths of the flakes and angular debris were also recorded to see if sizes reflect raw material scarcity. If the Fort was like Aptucxet, debitage would be so small that it could not have been used further; if there were no raw material scarcity, a fair amount of debitage might be as large or larger than the gunflints. Should the debitage all be extremely small, the cores all unsuitable for continued use, the gunflints bigger than the strike-a-lights, and other raw materials exploited in addition to the flint, it would be safe to conclude that European flint was as scarce a resource for the Pequots living at Monhantic Fort as it was for those Native Americans living at places like Aptucxet. Weights and lengths of the debitage are also important when considering questions of production and maintenance, as flakes from the initial stages of production should be the largest and should weigh the most. Since the range of the balance scale used in the

analysis does not go lower than .01 g, flakes weighing less than that are counted as .01 g in order to be included.

Production and Maintenance

To sort out the issues of production and maintenance of lithic tools at the Fort, further analysis of the flakes and debitage was required. Besides the work of Scott Williams (2011) on the gunflints, the previous extent of lithic analysis on the European flint from 72-91 had been to separate the lithics into several categories: flakes, angular debris (including chunks), cores, cobbles, gunflints, and strike-a-lights. Another category of unidentified European flint was also present, the result of further excavation at 72-91. In order to answer the questions in this thesis, I identified flakes further based on the general typology outlined by Bradbury and Carr (1995: 101), taking into consideration the variations on the typology employed by the Pequot Museum. Primary flakes are defined as those flakes removed during the first stages of core reduction. These flakes usually have cortex present and should display less than two scars from prior flake removals on their dorsal surfaces (Andrefsky 2005: 18, 106; Bradbury and Carr 1995: 108). Tertiary flakes are defined as those flakes taken off during the finalization of a gunflint's working edge; they show both faces but do not display use wear or evidence of retouching. Resharpening flakes are those featuring use wear; they almost always show both faces and may contain evidence of prior retouching (Inizan et al. 1999: 81, 155). A resharpening flake may be taken from a part of the gunflint's working edge that does not contain use wear. Such resharpening flakes would look simply like tertiary flakes, and may be considered to be part of maintenance activities if found spatially with identifiable

resharpening flakes. Otherwise one must assume they are just tertiary flakes. Finally, secondary flakes are those taken off in the middle to late stages of production. For the purposes of this study, flakes that cannot be positively identified as belonging to one of the other categories are assigned to this category.

For clarification, this thesis uses the definition for retouch put forth by Andrefsky (2005: 260): retouch is the modification of a tool's working edge for the purpose of repairing or rejuvenating the tool. This is a markedly different definition for the term than is employed in Europe, where retouch is used to refer to removals taken from the blank to transform it into a tool (Inizan et al. 1999: 81). Furthermore, it should be noted that a flake that shows both faces, an aforementioned characteristic of resharpening and tertiary flakes, is one that was taken off from the working edge and retains a small lip on the end where the bifacial nature of the tool may still be seen.

To provide the data required to classify these flakes into these analytical categories, the debitage from the Fort was examined for the presence of use wear, the presence of cortex, the presence of retouch, the number of dorsal scars, and the number of faces. A microscopic analysis was employed to gauge these attributes. Positively identifying a flake as a primary flake necessitated it having both cortex and fewer than two dorsal scars; having just one these characteristics was not enough to say with certainty that it was one of the first flakes to be taken off the core. Resharpening and tertiary flakes were identified as outlined above.

Determining if a specific area of the Fort was an area of lithic production or lithic maintenance depends on several things. In addition to a high percentage of flakes identified as primary flakes, production areas would have a high percentage of flakes

featuring attributes of conclusively identified primary flakes, those being cortex and less than two dorsal scars. They should also have larger average flake weights and lengths. Another important factor in determining production areas is the presence of chunks, cores, and cobbles. As Steinberg (1996: 377) notes, the "unequivocal indicator of lithic production is the chunk." More chunks in an area means it is more likely that lithic production took place there. These blocky chunks are generally referred to as angular shatter or angular debris, and they can be small or quite large, but share the characteristic of having no identifiable flake qualities such as platforms, dorsal/ventral surfaces, and bulbs of percussion (Andrefsky 2005: 84). Obviously, the presence of cores or cobbles indicates that someone was knapping tools nearby. If an area has several of these traits and lacks evidence of maintenance activities, it can be said to be a production space.

Maintenance spaces not only have high percentages of identified resharpening flakes, but they also have higher percentages of flakes with use wear, flakes with retouch, flakes with both faces, and flakes with greater than two dorsal scars. Maintenance areas should be comprised of flakes that yield a small average flake weight and a small average flake length, as opposed to production spaces. If Williams (2011) is correct about lithic specialization at the Fort, production spaces should be limited to only a few areas, and maintenance areas should not be numerous, if present at all.

To facilitate analysis, the fort has been divided into eleven spatial areas to see which ones might be production areas and which ones contain maintenance activities. These eleven areas and their locations in the Fort can be seen in Figure 9. The zones are identified as follows: 1 and 10: midden areas, meaning areas containing one or more midden/refuse pit features; 2: the forge; 6: the fort entrance; 3, 8, and 11: bastions; 5 and

9: identified wigwam sites; and 4 and 7: currently unknown. These areas were divided based on my ideas of different locations at the fort, developed from interpretations of site maps, artifact distributions, and conversations with Pequot Museum archaeologists. Therefore, when making conclusions about a given area, any lithics recovered from units directly adjacent to them will be given consideration in the event that these spatial segregations are just "best estimates" based on excavation methodology. However, unless something is explicitly stated to be an adjacent lithic, the data only include those lithics found in a given area.

In order to provide more accurate counts for the various areas, the number of debitage per square meter was calculated for each of the areas. This figure was then used to calculate an estimated number of debitage for those areas that have less than 90% excavation. This step standardizes debitage counts in the areas and shows which areas have the most lithic activity. A strict density for the areas was not be calculated, as the volume of each unit differed since they were excavated to sterile sediments.

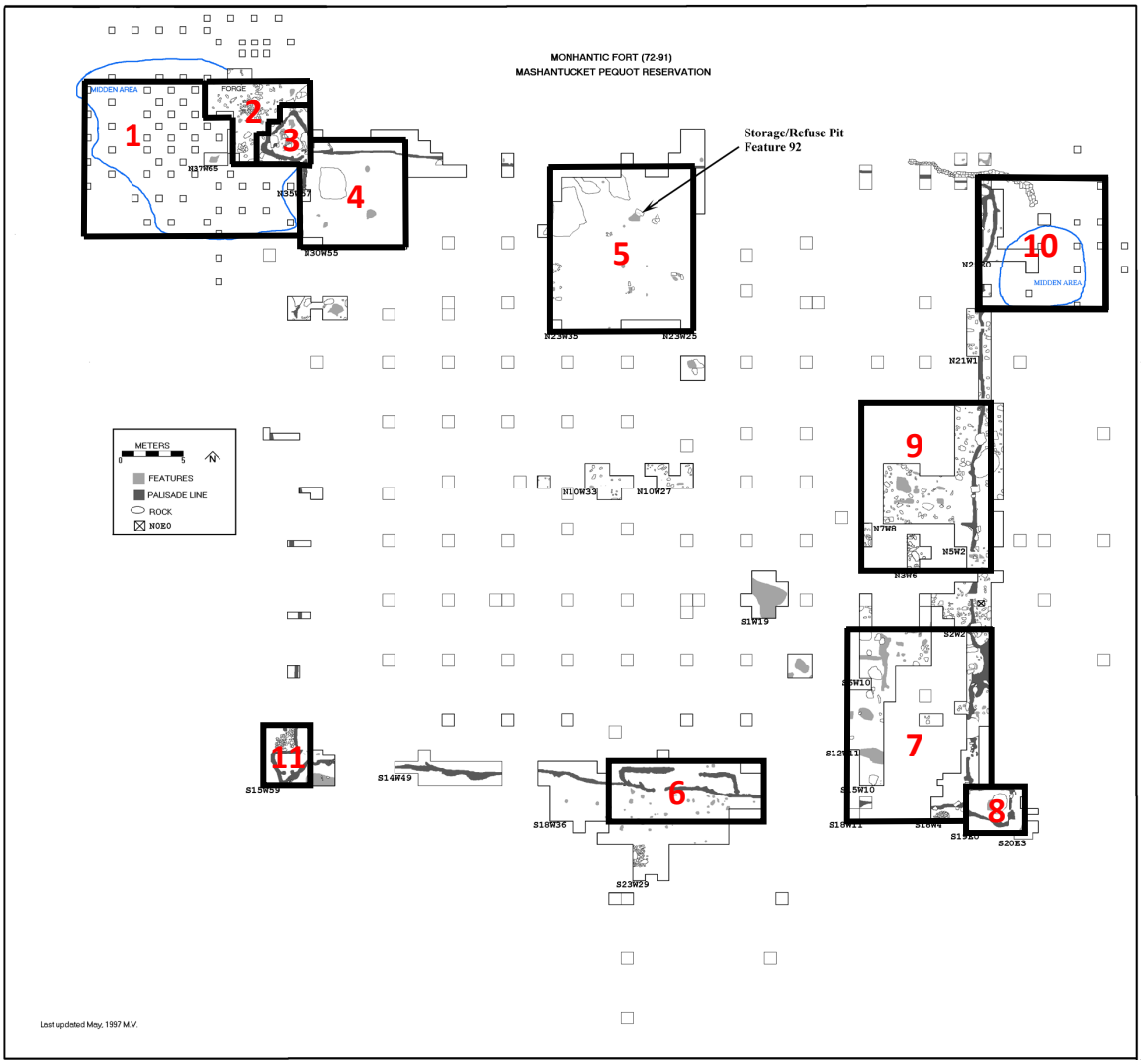

Figure 9: Site Map of Monhantic Fort with Areas Highlighted

Flint and Weaponry

The spatial locations of objects of weaponry are investigated as well to see where they occur in relation to gunflints and European flint debitage. If gunflints and flint occur in close association with weapons, they may have been viewed as extensions of those weapons. If they are spatially distributed without any pattern or are spatially separated from weaponry, they may have been viewed as stone tools first and foremost, and as

something that only became a weapon once fixed into a flintlock firearm. Alternatively, if no spatial distributions of weapons can be discerned other than being randomly scattered throughout the fort, it may be impossible to glean any further insight into Native attitudes about gunflints and their relations to weapons. However, if lithic materials other than European flint can be associated with the late seventeenth-century occupation of the fort, the distribution of these tools and debitage can be directly compared to that of flint, as a material, and gunflints, as a type, to explore these cultural and technological relationships.

CHAPTER V

THE DATA

At this point, we have seen the historical context for the Monhantic Fort site, the Mashantucket Pequot as a tribe, and gunflints in the seventeenth-century. As the Pequot were fighting with the colony of Connecticut against the Narragansetts, gunflints would have been a vital tool. Past research seems to indicate that European flint may have been a scarce raw material and that production and maintenance of gunflints and other lithic tools may have been a specialized activity at the fort. The documents do not seem to suggest that scarcity was a concern for the Pequot, and while they indicate that Europeans may have been present at the reservation, the preliminary evidence from the Barracks Field site does not support any intense English presence, but merely occasional presence when soldiers rendezvoused at the fort before heading off on expeditions. The lack of intense presence means that there would not have been any great external pressures to adopt lithic specialization.

In the previous chapter, I outlined the methodology for how the questions surrounding the fort were answered archaeologically. In this chapter, the results of the analysis are presented to facilitate an interpretation of the lithic assemblage. First, I consider whether European flint was the only raw material present through the analysis to find closed features. After that, I present the data from the lithics at the site, starting with the tools and ending with the flakes and other debitage. Finally, I provide data on the

weaponry from the site along with any conclusions about whether a relationship between the weapons and flint can be seen.

Closed Features Analysis

Three features -- 2, 34, and 92 -- were examined to see if they were closed features. Each feature contained hundreds of lithic artifacts. The table below shows the respective counts:

Table 1: Lithic Contents of Features

Feature	2	34	92
European Flint	47	25	144
Chert	0	58	0
Argillite	61	121	0
Quartz	460	137	66
Quartzite	275	37	32
TOTAL	843	378	242

Feature 2 is the palisade trench from the Fort; it contained mostly quartz and quartzite. Each raw material type had flakes and tools ranging from 10 centimeters below the surface to 95 centimeters below the surface. Features 34, a midden in Area Ten, and 92, a refuse/storage pit in Area Five, both had flakes and tools of the various raw material types ranging from five centimeters below surface to over a meter down. All three features had pre-contact projectile points and bifaces in the same levels as European flint. It seems as though lithic material from multiple time periods ended up jumbled in all of these features. Even Feature 92, with its discrete depositional episodes, had pre-contact lithics like Archaic period Neville points directly associated with flint. Whoever filled

and perhaps churned the pit in each time was obviously not taking care to ensure culturally modified rocks from the past were kept out, much to our disappointment today.

Additionally, none of the lithics from any of these features was identified as a scraper, so there is little chance that a chert or quartz gunflint has been misidentified as Hirst (1991) warns is possible. Only these three features from the site could have been called closed features with any degree of confidence, and this analysis indicates that none of them actually are. The jumbled nature of these features and the fort at large precludes any other lithic raw material from conclusively being associated with the fort occupation. Coupled with the fact that gunflints of no other material were recovered, and considering the apparent diminishing state of stone tool technologies at the time of King Philip's War, it is reasonable to conclude that Pequot Museum archaeologists were correct in their assumption that the European flint is the only raw material being used to produce flaked stone tools at Monhantic Fort. At least, it can be considered to be this way for this analysis until further refinements are possible.

Gunflints, Strike-a-lights, and More

The analysis of the lithic assemblage from Monhantic Fort yielded some interesting results. In total, 45 gunflints were identified. This total was comprised of 35 bifacial gunflints and 10 spall gunflints. Six of these gunflints could not be examined further as they had gone missing since arriving at the museum. Table 2, located on the page 50, displays the information on the gunflints. None of the gunflints displayed any evidence of use wear on multiple sides. Four of the gunflints were located in Feature 34, while Features 77 and 92 each contained one gunflint, respectively. They ranged in

weight from 0.23g to 5.62g, although the smallest whole gunflint weighed 1.16g. The average weight of all of the gunflints was 2.41g; the average weight of only the whole gunflints was 3.07g. Figure 10 shows an example of a Native bifacial gunflint, while Figure 11 shows a spall type gunflint.

Table 2: Gunflints

Inventory #	Tag ID	Unit	Area	Use Wear	Retouch	Fragment	Weight (g)
312	Gunflint	N1E0	adjacent to 9	Yes	No	Whole	1.16
948	Gunflint	N29E4	10	Yes	Yes	Fragment	1.86
2933	Spall	S12W9	7	No	No	Whole	4.21
4150	Spall	S14W29	6	No	No	Fragment	1.1
4176	Gunflint	S14W31	6	Yes	No	Fragment	2.75
5700.01	Spall	N8W5	9	No	No	Fragment	3.46
5733.02	Gunflint	N8W6	9	Yes	Yes	Whole	5.62
5733.02	Gunflint	N8W6	9	Yes	Yes	Fragment	0.8
6359.01	Gunflint	N36W5	adjacent to 10	No	No	Fragment	1.91
6727	Gunflint	S15W24	6	No	No	Whole	2.77
7157	Gunflint	N9W35	N/A	No	Yes	Whole	2.91
7394	Gunflint	N35W57	4	Yes	No	Fragment	1.94
7494	Gunflint	N37W59	3	Yes	No	Fragment	3.58
7706.01	Gunflint	N39W57	adjacent to 2+3	Yes	No	Fragment	1.67
7858	Gunflint	N32E8	10	Yes	Yes	Whole	1.87
8769	Gunflint	S16W24	6	Yes	Yes	Whole	2.4
9050	Gunflint	S18W29	6	Yes	No	Whole	3.48
9590.01	Blade	N39W61	2	No	No	Whole	1.47
9700	Spall	N37W62	2	Yes	Yes	Whole	3.5
9749	Gunflint	N38W63	1	Yes	No	Whole	2.22
11136	Gunflint	N27W28	5	Yes	No	Fragment	0.23
11402	Gunflint	N39W59	3	No	No	Whole	2
12885.01	Spall	N34W32	5	No	No	Whole	3.77
13109	Spall	N34W31	5	Yes	Yes	Whole	3.02
14370	Spall	N32W29	5	No	Yes	Whole	4.89
14514	Gunflint	N23W25	5	No	No	Whole	4.78
15570	Gunflint	N26W33	5	Yes	Yes	Fragment	1.46
16226	Gunflint	N39W24	adjacent to 5	Yes	Yes	Fragment	0.8
18976	Gunflint	N31W57	4	No	No	Whole	2.98
19444	Gunflint	N39W48	adjacent to 4	Yes	Yes	Fragment	3.25
20981	Gunflint	S16W6	7	No	No	Fragment	0.37
21001	Gunflint	S17W18	adjacent to 6	No	No	Fragment	0.89
21018	Gunflint	S17W18	adjacent to 6	Yes	Yes	Fragment	1.41
22554	Gunflint	N27E6	10	Yes	Yes	Whole	3.4
23699	Gunflint	S4E10	adjacent to 7	No	Yes	Whole	2.2
20895	Gunflint	S17W12	adjacent to 7	Yes	Yes	Fragment	0.19
7859	Gunflint	N32E10	10	Yes	Yes	Whole	3.1
8783	European Flint	S16W28	6	Yes	No	Fragment	1.96
5700.02	Gunflint	N8W5	9	Yes	No	Whole	2.77

Figure 10: Bifacial Gunflint, Inv# 8769

Figure 11: Spall Gunflint, Inv#13109

Strike-a-lights were less numerous with only three recognized (Table 3).

Table 3: Strike-a-lights

Inventory #	Tag ID	Unit	Area	Weight (g)
7316	Strike-a-light	N26W20	adjacent to 5	4.48
9965	Strike-a-light	N41W60	2	0.57
12519	Strike-a-light	N30W29	5	2.65

Two out of the three strike-a-lights, inventory #7316 and #12519, were whole. Only inventory #9965 was a fragment. It should be noted, however, that during his examination of the 44 pieces of unclassified European flint, Scott Williams believed that there were more than just three strike-a-lights. He identified thirteen other strike-a-lights amongst these 44 uncategorized pieces (Williams 2011: 34). In my analysis, I did not see any use wear on the thirteen in question to make me want to identify them as strike-a-lights. In fact, I identified some of those thirteen objects as completely different things, from Native gunflints to resharpening flakes. Williams also failed to include inventory #7316 in his strike-a-light analysis (Figure 12). This artifact was not identified as anything. The average weight of the three strike-a-lights turned out to be 2.57g; if one calculated the average weight of only the whole strike-a-lights, it was 3.56g.

Figure 12: Strike-a-light, Inv#7316

Archaeologists also recovered three cores from the Fort, one of which had broken into two pieces by the time it arrived in the museum, as well as two unmodified European flint cobbles (Table 4). Figure 13 shows an unmodified cobble and Figure 14 shows a core.

Table 4: Cores and Cobbles

Inventory #	Tag ID	Unit	Area	Weight (g)
19221	Cobble	N33W49	4	71.82
19428	Cobble	N37W52	4	176.8
589	Core	N11E1	adjacent to 9	21.1
5925	Core	N10W1	9	34.37
5925	Core	N10W1	9	6.42
10329	Core	N38W66	1	20.3

Figure 13: Unmodified Cobble, Inv#19428

Figure 14: Core, Inv#589

Flakes and Angular Debris

Flakes recovered from the fort comprised the bulk of the analysis. In total, 907 flint flakes and other debitage were uncovered, including chunks and angular debris as well. Furthermore, the previously unclassified European flint was considered here as debitage and analyzed with the flakes. If determined to be a gunflint or other tool, the artifact was examined differently, but otherwise is included in the debitage count. The only area completely devoid of any kind of lithic material was Area 8, although Area 11 yielded only a meager three flakes. Table 5 provides the results of the analysis of the debitage attributes by area. Areas 1, 7, 9, and 10 have estimated numbers of flakes calculated for them in the table along with the actual number of flakes recovered, as they all have less than 90% excavation. The estimated numbers appear in the table in parentheses with the actual number of debitage recovered from said areas. This standardization means that I have divided the total recovered flakes by the percentage of excavation to generate an expected yield had everything been excavated. Table 6 provides the data on conclusively identified flake types; it also displays information on the extent of fragmentation in each area as well as each area's average debitage per square meter. Figures 15-18 show examples of primary and resharpening flakes.

When calculating the average debitage per square meter for the areas, it became apparent that Area 2, the forge area, had a significantly higher average debitage count per square meter. To see if this higher count could indicate specialized lithic activities at the forge, additional statistics were run on the areas in the form of t-tests. Tables 7-14 show the results of these tests.

Figure 15: Primary Flake, Inv#19252.01

Figure 16: Resharpening Flake, Inv#18837

Figure 17: Resharpening Flake, Inv#19063

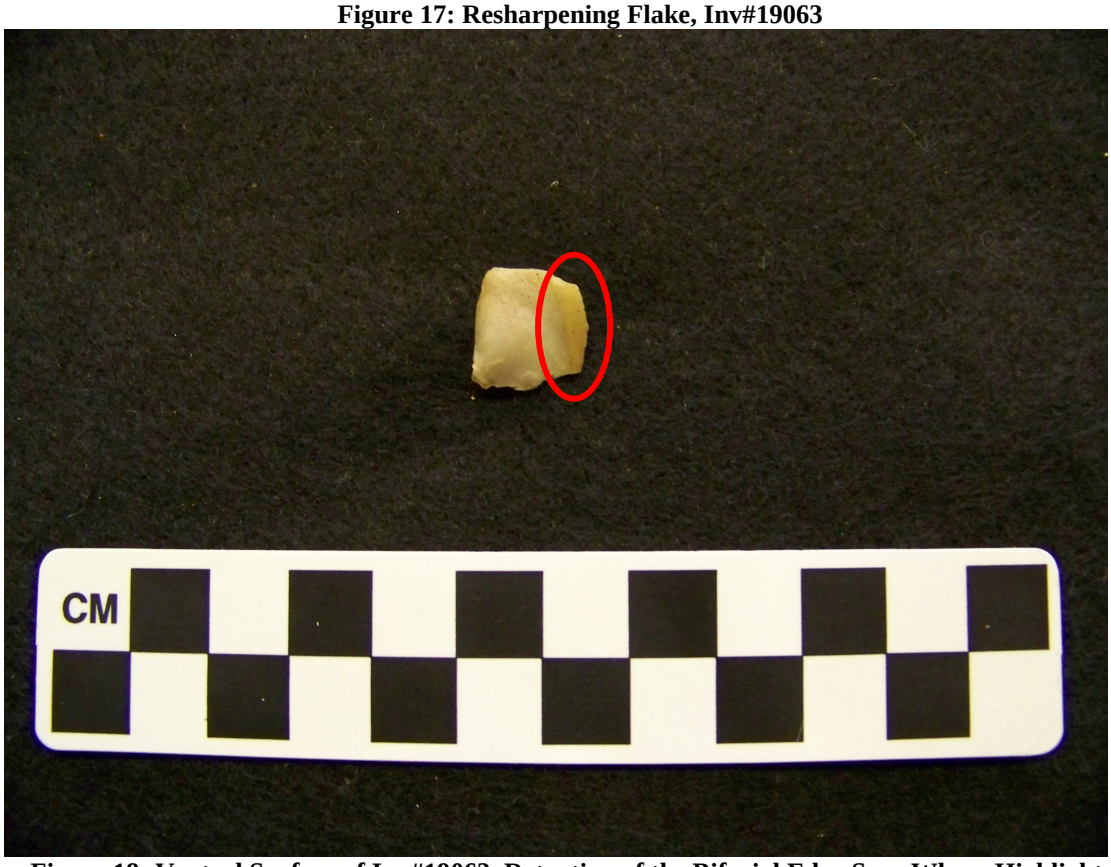

Figure 18: Ventral Surface of Inv#19063, Retention of the Bifacial Edge Seen Where Highlighted

Area	Units	% Excavated	# of Debitage	Avg. Weight of Flakes (g)	Avg. Length of Flakes (mm)	Debitage w/ Cortex	Debitage w/ <2 Dorsal Scars	Debitage w/ Use Wear	Debitage w/ Retouch	Debitage w/ 2 Faces
1	190	8%	22 (262)	0.25	11.3	38%	43%	5%	0%	0%
2	34	97%	121	0.46	12.6	45%	29%	4%	4%	4%
3	17	100%	38	0.53	13.2	26%	26%	11%	8%	5%
4	79	96%	85	0.39	12.5	26%	34%	2%	2%	4%
5	168	90%	272	0.29	10.2	29%	32%	3%	3%	2%
6	65	92%	17	1.19	17.2	47%	25%	6%	0%	0%
7	186	45%	34 (76)	1.46	15.2	42%	30%	3%	3%	9%
8	20	98%	0	0	0	0%	0%	0%	0%	0%
9	143	49%	115 (235)	0.77	13.4	41%	35%	2%	1%	1%
10	121	19%	35 (184)	0.66	13.7	31%	18%	9%	9%	9%
11	20	100%	3	0.26	14.8	33%	33%	0%	0%	0%

Table 5: Debitage Attributes

Table 6: Identified Flake/Angular Debris Types
(Based On Flakes Conclusively Identified Through Their Attributes)

Area	Avg. Debitage per m^2	Fragmented Flakes	Primary Flakes	Tertiary Flakes	Resharpening Flakes	Chunks/ Angular Debris	Cores Recovered
1	1.38	86%	18%	0%	4%	41%	1
2	3.67	82%	11%	1%	3%	40%	0
3	2.24	71%	13%	0%	8%	45%	0
4	1.12	71%	8%	1%	3%	20%	2
5	1.79	87%	8%	1%	2%	24%	0
6	0.28	75%	17%	0%	5%	33%	0
7	0.41	88%	9%	6%	3%	39%	1
8	0.00	0%	0%	0%	0%	0%	0
9	1.64	80%	12%	0%	1%	22%	2
10	1.52	63%	10%	3%	16%	35%	0
11	0.15	67%	0%	0%	0%	33%	0

Table 7: Group Statistics For Flakes And Angular Debris, Comparing Forge Area With Other Areas

Group Statistics					
Attribute	**Area**	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
Length (mm)	Forge	119	13.16	4.8249	0.4423
	NotForge	613	12.069	6.0019	0.2424
Weight (g)	Forge	119	0.684	1.00848	0.09245
	NotForge	614	0.5462	1.08411	0.04375

Table 8: T-Test Results For Flakes And Angular Debris, Comparing Forge Area With Other Areas

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Length (mm)	Equal variances assumed	6.077	0.014	1.869	730	0.062	1.0911	0.5838	-0.0549	2.2372
	Equal variances not assumed			2.163	196.128	0.032	1.0911	0.5044	0.0965	2.0858
Weight (g)	Equal variances assumed	0.221	0.638	1.283	731	0.2	0.13781	0.1074	-0.07303	0.34866
	Equal variances not assumed			1.347	175.085	0.18	0.13781	0.10228	-0.06404	0.33967

Table 9: Group Statistics For Flakes Only, Comparing Forge Area With Other Areas

Group Statistics					
Attribute	**Area**	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
Length (mm)	Forge	73	12.596	4.8028	0.5621
	NotForge	453	11.934	5.9452	0.2793
Weight (g)	Forge	73	0.4604	0.5957	0.06972
	NotForge	454	0.4983	1.12629	0.05286

Table 10: T-Test Results For Flakes Only, Comparing Forge Area With Other Areas

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Length (mm)	Equal variances assumed	4.433	0.036	0.905	524	0.366	0.6621	0.7317	-0.7753	2.0995
	Equal variances not assumed			1.055	110.87	0.294	0.6621	0.6277	-0.5817	1.906
Weight (g)	Equal variances assumed	0.944	0.332	-0.281	525	0.779	-0.03787	0.13483	-0.30274	0.227
	Equal variances not assumed			-0.433	169.65	0.666	-0.03787	0.08749	-0.21059	0.13485

Table 11: Group Statistics For Flakes Only, Comparing The Two Wigwam Areas

Group Statistics					
Attribute	**Area**	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
Length (mm)	5	206	10.194	5.3006	0.3693
	9	88	13.449	6.6885	0.713
Weight (g)	5	207	0.2889	0.47382	0.03293
	9	88	0.7723	1.76749	0.18842

Table 12: T-Test Results For Flakes Only, Comparing The Two Wigwam Areas

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Length (mm)	Equal variances assumed	5.159	0.024	-4.445	292	0.000	-3.2547	0.7322	-4.6957	-1.8137
	Equal variances not assumed			-4.053	135.797	0.000	-3.2547	0.803	-4.8426	-1.6668
Weight (g)	Equal variances assumed	24.687	0	-3.646	293	0.000	-0.48338	0.13258	-0.74432	-0.22245
	Equal variances not assumed			-2.527	92.361	0.013	-0.48338	0.19127	-0.86325	-0.10352

Table 13: Group Statistics For Non Feature Flakes Only, Comparing The Two Wigwam Areas

Group Statistics					
Attribute	**Area**	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
Length (mm)	5	131	12.443	4.7901	0.4815
	9	95	15.232	6.1738	0.6334
Weight (g)	5	132	0.4821	0.63676	0.05542
	9	95	0.9679	1.74237	0.17876

Table 14: T Test Results For Non Feature Flakes Only, Comparing The Two Wigwam Areas

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Length (mm)	Equal variances assumed	6.042	0.015	-3.823	224	0.000	-2.7888	0.7296	-4.2266	-1.3511
	Equal variances not assumed			-3.673	170.491	0.000	-2.7888	0.7592	-4.2875	-1.2902
Weight (g)	Equal variances assumed	13.089	0	-2.944	225	0.004	-0.48577	0.16502	-0.81096	-0.16059
	Equal variances not assumed			-2.596	112.195	0.011	-0.48577	0.18716	-0.8566	-0.11495

Weapons

To see if anything could be said about weapons and their relationship to flint, metal objects relating to hunting or weaponry were reviewed. Any items of hunting or weaponry in the eleven areas were noted and examined spatially; knives that had been classified as non-domestic tools were also included. Table 15 shows all of the metal artifacts of hunting and weaponry pertinent to this study.

Table 15: Objects of Weaponry

Unit	Area	Metal Type	Tag ID	Count
N40W61	2	Iron	Bird Shot	1
N40W60	2	Iron	Cock Screw	1
N41W61	2	Iron	Cock Screw	2
N37W61	2	Lead	Shot, 4mm	1
N43W61	2	Iron	Knife	1
N43W61	2	Iron	Knife	1
N38W59	3	Copper	Sheet	2
N38W59	3	Iron	Projectile Point	1
N39W57	3	Iron	Cock Screw	1
N32W56	4	Copper	Projectile Point	1
N33W52	4	Iron	Wheel Lock Pyrite	1
N36W57	4	Lead	Shot	1
N32W29	5	Iron	Fishhook	3
N32W29	5	Iron	Gun Worm	1
N26W32	5	Lead	Bullet	1
N32W29	5	Lead	Shot, 5mm	2
N28W33	5	Lead	Shot	1
N33W27	5	Iron	Knife	1
N32W29	5	Iron	Knife	1
S15W30	6	Iron	Gun Trigger	1
S17W1	7	Iron	Fishhook	1
S12W10	7	Iron	Knife	2
N8W6	9	Lead	Ball Shot	1
N7W1	9	Lead	Shot, 6mm	1
N27E3	10	Lead	Musket Ball	1
N29E6	10	Lead	Cast Shot	1

Almost every area contained some kind of weaponry. The only area that contained any kind of cluster of these objects is Area 2. Almost all of the weapons found in this area were located in a group of three units right outside the northwest bastion. However, it would make sense for a large cluster of metal artifacts to appear in this area, as it is right in the heart of the area identified as a forge.

No other area contains a significant cluster of weapons. Area Five contains the largest amount of weaponry, but this is solely due to the fact that seven of the artifacts were discarded or left in Feature 92. Even metal artifacts like the fishhooks, which relate to subsistence activities in the same way firearms relate to hunting, were located apart from everything. The spatial scattering of weaponry indicates that there was no set place where they were being stored or discarded; unfortunately, this also prevents any conclusions being drawn about their relationship with lithics.

However, when looking through metal artifacts at the fort for these objects of hunting and weaponry, there was something quite interesting in the distribution of molten lead: 34% of all the lead recovered from the fort occurred in Area Five, including two melted pieces, and two more molten lead artifacts were located very close by, within three meters of the area. No other area contained molten lead objects, but lead shot was found in several areas, Area Six had two lead items related to clothing, and a lead bar was found adjacent to Area Ten. Table 16 shows the lead from Monhantic Fort.

Table 16: Lead Artifacts

Unit	Area	Tag ID
N37W61	2	Shot, 4mm
N37W57	3	Unidentified Lead
N38W57	3	Unidentified Lead
N36W57	4	Shot
N26W32	5	Lead Bullet
N29W28	5	Molten Lead
N25W28	5	Unidentified Lead
N29W31	5	Unidentified Lead
N28W33	5	Shot
N32W29	5	Shot, 5mm
N32W29	5	Sprue
N32W29	5	Unidentified Lead
N32W29	5	Molten Lead
N32W29	5	Shot, 5mm
S14W27	6	Pendant
S14W23	6	Shoe Buckle
S9W9	7	Unidentified Lead
S17W12	7	Shot
N8W6	9	Shot
N7W1	9	Shot, 6mm
N6E1	9	Shot, 3.5mm
N29E6	10	Cast Shot
N27E3	10	Musket Ball
N24W1	adjacent to 10	Lead Bar
N20W24	adjacent to 5	Molten Lead
N20W35	adjacent to 5	Molten Lead Shot
N10W33	N/A	Unidentified Lead
S14W44	N/A	Window Came

CHAPTER VI

DISCUSSION

Readily Available Flint

It would appear that scarcity of flint was not an issue that the Mashantucket Pequots living at Monhantic Fort had to face. Both the archaeological and documentary evidence suggest that there was plenty to go around. Gunflints were certainly the most important flint tool for the Pequots living there; however, the strike-a-lights weighed more on average than the whole gunflints. Averages aside, the largest strike-a-light is almost as big as the largest gunflint, and the smallest strike-a-light is larger than one-third of the whole gunflints. Williams (2011: 65) also reported that in addition to flints for muskets and carbines, the Pequots at the fort made small gunflints specifically for pistols. Strike-a-lights would have been made from the tiniest pieces of flint that were unsuitable for even these pistol flints in a raw material constraint situation, which would have resulted in a pronounced difference between the average weights of these tools. While not as many strike-a-lights were recovered, the weights show that they were not being relegated to only the leftover pieces of flint, as would have been the case with gunflints as the priority in the context of raw material constraints.

The gunflints also do not point to the Pequots rejuvenating all of their flint tools until they could be used no longer. More than half of the gunflints from the fort lack any signs of retouching; 38% of the gunflints had never even been used. When the gunflints

did sport use wear, it was only ever on one side. This means that the Pequots were not forced into material saving measures like turning their gunflints in the lock. They did not need to gain extra use out of a single gunflint by giving it multiple working edges; it seems like they could simply just get a new one.

Additionally, many of the discarded flakes and chunks are large enough that someone could have used them to produce a serviceable flint. The data show that 6% of the flakes weigh more than the average gunflint weight, and 17% are larger than the smallest whole gunflint. As Kent (1983: 31) reminds us, "any piece of broken flint will serve to draw sparks from a hardened piece of steel." If it was large enough to be used and could be given a working edge, it could be a gunflint. It is hard to believe that so many workable pieces would be discarded if flint was in short supply. The recovered cores and cobbles also generate this reaction. One might not even expect any unmodified cobbles to be located if flint was scarce, but two were, and each probably could have been used to create several gunflints. The cores, while all worked to the point where only a small portion of the original surface remains, could also have been utilized further to produce flakes.

No other raw material types are apparently in play at the Fort, either. Unlike other Native forts, such as Fort Shantok, the Pequots did not feel the need to make use of the abundant local stone resources of chert and quartz to make gunflints. No gunflints made out of these other material types were identified, and nothing seems to suggest that any tools were made out of these non-flint materials during the Fort occupation. European flint seems to have been readily available to the point where the Pequots did not consider making even one gunflint out of local stone. Factor in that the records of the War Council

show that the Pequots were not being supplied with flint as they were with guns, powder, and shot, and that their access to flint was not being controlled like said items, and one can see that the Pequots were definitely not wanting for raw material. It was available to them not only as a trade good or a spoil of war but also in rivers and harbors as leftover ship ballast.

Looking at Production and Maintenance Across the Site

In order to clear up whether or not lithic production and maintenance at the fort was a specialized activity, and where such activities took place, focus must be turned to analysis of the flakes and debitage. One evaluated attribute was how many of the flakes in a given area were fragmented. Some archaeologists believe that a large number of broken flakes at a particular locus indicates production of lithic tools, and at the fort, almost every area contained a high percentage of fragmented flakes (Sullivan and Rozen 1985). However, it seems more reasonable in this context to side with those archaeologists who believe that a high percentage of broken flakes better indicates a high degree of trampling (Steinberg 1996: 377). One must remember that this was not a quarry site where raw material was obtained and knapped; it had people living and going about their daily activities, often in the context of a confined space provided by large fortifications. Therefore, the fort would have been a high traffic area for Pequots living on the reservation, and it is reasonable to assume a high degree of trampling as a corollary. I believe that this best explains the high percentages of fragmented flakes in all of the areas; therefore, high percentages of fragmentation can be ruled out as a sign of a production space.

The identification of production and maintenance spaces can proceed first through an examination of the rest of the attributes of the flakes in each area. Area One, the midden area next to the forge, is the least excavated area at Monhantic Fort. Only 8% of this large area was excavated by Pequot Museum archaeologists, and most of the excavation in this area was done through test pits, not excavation units. Thus it has one of the smallest amounts of flakes of any of the areas. However, the estimated number of flakes for this area is quite large, and if it reflected the reality of what was happening, would suggest a lot of lithic activity. At first glance, Area One seems like one of the best candidates for a production space. It has the highest percentages of flakes with less than two dorsal scars and identified primary flakes out of all of the investigated areas of the fort. It also yielded a core and has the second highest percentage of chunks.

However, other attributes make declaring Area One a production space a complicated proposition. While it has all those indicators of a production space, it also has the lowest average weight of flakes of all the areas, one of the smallest average lengths of flakes, and 4% of the flakes found within are identified resharpening flakes. It seems that while lithic production is certainly happening in this area, maintenance activities are also taking place. Perhaps this area is the heart of all lithic technology at Monhantic Fort, where a specialist was making gunflints and repairing damaged ones. However, turning to the other areas, this does not appear to be the case.

Area Two, the forge, is almost completely excavated. It has more flakes but presents the same problems as Area One: some attributes, like 45% of the flakes having cortex and 40% of the debitage being chunks, point strongly toward production. Still, resharpening flakes were recovered from this area, and these not only show use wear but

also both faces and retouch. The results of the t-tests (Tables 7-10) also show that the flakes and other debitage from the forge are not significantly different from the rest of the areas at the fort; the mean weights and lengths are very similar, even more so when one only considers the flakes, with a two tailed significance of .779 for the weights and .366 for the lengths. These results do not seem to champion the forge as a specialized production area, despite its high amount of debitage per square meter.

Area Three, the northwest bastion, displays evidence for both production and maintenance as well, with the largest percentage of chunks and the second largest percentage of identified resharpening flakes. Very few flakes were recovered there, but this probably has more to do with the fact that Area Three is comprised of only 17 units; as a bastion it is one of the smallest areas. However, when one looks at the average number of flakes per meter square, Area Three is second only to Area Two.

The number of flakes recovered from Area Three is also sizeable when one compares it to the other bastions, Areas Eight and Eleven. Area Eight yielded no flakes of any kind and Area Eleven only contained three flakes. As these two areas are pretty much devoid of lithic activity, Area Three becomes somewhat odd. It is the only bastion to contain substantial lithic material, to the point where one can say production and maintenance both occurred. This is equally as strange, though, since it seems unusual for a Pequot to decide to knap from atop a bastion. A more reasonable interpretation might be to say that lithics occur in Area Three because it is sandwiched between Areas Two and Four and is adjacent to a possible rear entrance to the Fort. Due to the nature of bastions, it is highly unlikely that lithic production and maintenance were taking place in these areas.

The other midden area, Area Ten, has undergone more excavation than Area One. The attributes for this midden seem to be the opposite of the other, featuring quite large average flake weights and lengths and also the highest percentage of identified resharpening flakes. Another area that samples the outside of the Fort is Area Six, the main entrance. This area seems to primarily be a production space, with the highest percentage of flakes with cortex, the largest average flake length, and the second largest average flake weight. Again, though, a few resharpening flakes were identified here. In other words, not much lithic activity happened at the entrance, but someone did produce tools and resharpen them in the vicinity. The activity here and at Area Ten is important to note because it suggests that production and maintenance occurred not just inside the fort but everywhere around it as well. The forge may have looked like a possible area of specialization to Williams, but he lumped areas One through Four into one forge area. He did not examine the lithics from Areas Six and Ten, so the fact of lithic production taking place outside the Fort away from domestic spaces led him to posit specialization. Lithic activity from outside the fort seems less odd once it is realized that it occurred everywhere outside the fort and not just in one particular location like the forge.

The two wigwam sites, Areas Five and Nine, are marked by low percentages of chunks and resharpening activities. They also have similar percentages of flakes with less than two dorsal scars and a similar average flakes per meter square. However, Area Nine did have two cores, more flakes with cortex than Area Five, and a higher average flake weight and length. The t-test comparing the two wigwam areas demonstrate that these higher flake weights and lengths make Area Nine significantly different from Area Five, with a two tailed significance for the weights and lengths at 0.000 (see Tables 11 and 12).

One might be tempted to attribute this significant difference to the storage/refuse pit feature, Feature 92, found in Area Five. Features at Monhantic Fort were excavated with finer mesh (1/8 inch as opposed to 1/4 inch), and many of the smaller flakes from Area Five were recovered from soil samples taken from Feature 92. Area Nine was also less excavated (49%, compared to Area Five's 90% excavation). The smaller flakes from Feature 92 and the greater extent of excavation in Area Five seem like they would form the perfect catalyst for creating the significant difference between the wigwam sites. However, even when one excludes the flakes from the features, the t-tests still show a significant difference of .004 (see Tables 13 and 14).

Looking at the mean flake weights and lengths, one can see that Area Nine is not just different from the other wigwam at Area Five, but also from the forge and the other areas around the fort. Area Five, on the other hand, is very similar to all of the other areas. Area Nine, then, is the outlier at Monhantic Fort; the flakes recovered from that wigwam are substantially heavier and longer than the flakes recovered everywhere else. It also is the exception that demonstrates the fact that the fort lacks specialized lithic production areas. The differences seen in Area Nine are associated with a household context, not a professional one, and thus they can be attributed to differences in household use.

It would appear that particular households were focused on particular activities. Area Nine certainly focused more on the production of gunflints, as one can see from the higher degree of these larger and heavier flakes. Area Five seems like it is focused on lead, as it had all of the recovered pieces of molten lead located in and around it, as well as the majority of lead artifacts from the entire site. This division of labor among

households was probably enacted to facilitate a supply of necessary items (i.e. shot and gunflints) for warriors so that each person did not have to produce or acquire every single thing they would need for an expedition. Admittedly, this is a provisional and rather functional interpretation to account for the differences at this time.

It, however, does not necessarily mean that lithic technology at Monhantic Fort was specialized. Certainly, the analysis of the flakes and debitage demonstrates that no individuals at the fort had the sole job to produce and maintain stone tools. The household at Area Nine was likely responsible for a good deal of the gunflints made at the fort, with its focus on lithics. One must keep in mind, though, that the other areas of the fort (besides awkward places to knap such as the bastions) all have similar densities of lithic material as Area Nine, save for the forge, but the t-tests show that the forge and these other areas are all comprised of similar flakes. Factor in also that they all have flakes with attributes reflecting production activities, such as cortex, as well as conclusive identified primary flakes from the initial stages of production. In the same vein, maintenance flakes are similarly found all over, showing people maintaining tools in the various locations of the fort. It seems that there was a generalization to lithic production and maintenance at the fort. However, certain households were focused on particular activities to provide needed items for the benefit of all. The fact that the household in Area Nine was more geared up for gunflint production does not negate the evidence that people produced and maintained tools in the rest of the fort, and its similar density of lithics does not seem to heighten its status over the other areas.

The areas around and within Monhantic Fort suggest that production and maintenance activities occurred throughout the interior as well as the exterior of the

palisaded village. The data indicate that certain households seem to have been tasked with carrying out certain activities, and the household at Area Nine was focused on lithic production, likely to help provide an excess of gunflints for Pequot warriors. However, lithic production was not restricted to this household, and one can still see a generalization to lithics at the fort. The Pequot living within were still involved in the practice of making and maintaining lithic tools the same way they had been in the pre-contact era. They made gunflints and strike-a-lights as they needed them, and this action was done seemingly wherever it was convenient at the particular moment; that is, any location in and around the fort where someone could produce gunflints easily was utilized. Judging from the amounts of flakes (or estimated amounts, as the case may be) as well as the average flakes per unit, this usually meant knapping around one's wigwam or by the middens. The need for gunflints was probably lessened due to the output of these tools from the household tasked with focusing on them, but it did not totally disappear and caused the production and maintenance one sees represented by the majority of the lithics at the site. Maintenance of tools was less common than production, although it did take place in every area of the fort, and maintenance activities were likely even more generalized as the lithic household at Area Nine had a lower percentage of resharpening flakes than most areas. The low extent of lithic maintenance activities throughout the Fort also lends more credibility to the idea that the Pequots had a steady supply of flint and did not have to resort to intensive rejuvenation of gunflints.

Lithics in a Non-Military Context

Obviously, the lithics at Monhantic Fort are situated in a wartime context. Understanding the state of lithic technology for the Mashantucket Pequot in the late

seventeenth-century necessitates a discussion of whether or not the lithics at Monhantic Fort are representative of the Pequot in general or if they are unique to the fort's military context. To examine this issue, the lithics from the non fort household at site 72-34A can be consulted. This site is a Pequot household on the reservation that is roughly contemporaneous with the fort, albeit with a longer period of occupation (McBride 2011, personal communication).

European flint is practically nonexistent at 72-34A, with only three gunflints, a strike-a-light, and two flakes recovered during archaeological investigations there. Production simply does not seem to have taken place there, although maintenance of tools is evident from extensive retouching of the gunflints. What the lithics at this site speak more to is raw material. Monhantic Fort has shown that if the Pequot were willing and able, plenty of raw material could be had in the form of ballast flint, as well as through opportunities to acquire nodules through trade. In a non-military context, however, the need for gunflints is not so severe. Guns would no longer frequently be needed for war expeditions; they would now solely be utilized for hunting activities.

This would in turn have greatly reduced the demand for gunflints, and the need for lithic production. The Pequot at 72-34A thus seem to have decided against expending the time and energy required to procure ballast flint, and instead of purchasing nodules, they skipped straight to the finished product and purchased spalls. Two out of the three gunflints are spall type gunflints that one would expect to receive from an English specialist. The other gunflint is a Native made bifacial flint, but it likely was not purchased like the other two since it is the honey-colored French flint and not the grayish

English variety that the spalls are. In comparison, the gunflints and debitage at the fort resulted from nodules of both varieties.

The people living at this household also decided against expending time and energy on strike-a-lights, utilizing a piece of angular debris instead in that capacity. They also utilized the raw material saving technique of utilizing multiple sides of their gunflints, keeping one side for gunflint use and having another side as a strike-a-light. It seems like they were unwilling to pay for two different tools when they could buy one and use it for both purposes.

It seems that when it was more efficient to make their own flint tools (like in a wartime context when demand for these tools would be high), the Pequot expended time, energy, and resources on acquiring nodules by trade or through gathering ballast flint. When they made their own tools, they would engage with production and maintenance as they had in the pre-contact era, albeit with exceptions to prove the rule like a household that concentrated on gunflint production. Individuals, not specialists, would create the tools they needed as they needed them. In a non-military, peace-time context, however, it appears that it was more efficient to simply buy the finished tool and maintain it as best as possible.

Conclusion

The lithic assemblage from Monhantic Fort tells us several things about the Mashantucket Pequot during King Philip's War. First, it reveals that the flint resource was not only accessible to them but also available in large enough quantities that no special considerations had to be put into place to conserve it or to substitute other raw materials. Either the colonial government in Connecticut did not feel the need to control

access to flint as they did with guns, which seems likely given the lack of attention flint received in the records of the War Council and other documents, or the Pequots were skilled enough to maneuver the politics governing weaponry and acquire flint with ease, either through trade or the acquisition of ballast in rivers, to the point where the War Council decided it was useless to try to control access to the raw material. Whatever the case, at this point in time they were in a sound place economically speaking with regard to European flint, and the raw material scarcity that probably affected those living at places such as Aptucxet posed no concerns for the Mashantucket Pequot.

It is well established that Native peoples retained pre-contact methods of manufacture when it come to the production of stone tools like gunflints in the seventeenth century. The Monhantic Fort site shows that they also retained their pre-contact practices of bifacial manufacture, with the production and maintenance of European flint tools remaining a non-specialized activity on the whole. Production of tools comprised the majority of lithic activity at the site, with maintenance employed occasionally, probably based on how much time a particular Pequot had, given that Native people before colonial intrusion had increased retouch activities while scaling back on the amount of time and energy they had to give to lithics (Jeske 1992: 469). Lithic activities mostly occurred around the home, or by a midden where flakes and debitage could be out of the way and easily disposed of, but production and maintenance of tools did happen everywhere in and around the fort. With only occasional European presence at the fort, any influence that might have altered the way the Pequots practiced lithic tool making was virtually non-existent.

How, then, do these interpretations speak to the larger issues discussed in Chapter One? The fact that the Mashantucket Pequot were able to procure flint in quantities that assured no scarcity would have to be dealt with can be related to several things. First and foremost, it shows how savvy they were when it came to traversing the colonial economy. They could acquire this important material through several avenues, and they knew these avenues well enough that they did not have to obtain flint from the War Council in the same way that they had with regards to powder and shot. Mason was wrong about the Pequot being ill equipped to fight the war, at least where flint was concerned.

The lack of control that the War Council had regarding the supply of flint and its acquisition by the Pequot also speaks to another issue: the desire of the colonial authorities to keep the Pequot subordinated. Controlling Native groups was a chief concern in New England, and in areas where they did not have direct control, colonial governments made sure to place officials like overseers on the reservation in order to monitor and influence the way things were (Den Ouden 2005: 5). Keeping the amount of real Native threats to a minimum was of paramount importance to the colony of Connecticut, which was why they and other colonies enacted legislation and directives to prevent Native peoples from receiving weaponry and ammunition unless under the most controlled of circumstances. The lack of controls on flint, a vital component of flintlock weaponry, is interesting to note.

The lithic activities at Monhantic Fort also seem to express Native identity in the same way that the bifacial nature of the Pequot gunflints signals their identity. The concept of specialization was not something new and alien to the Pequot. After all, they

had a specialized activity area for the production of metal tools in the forge, perhaps with their own blacksmith working there. This was obviously a seventeenth-century development for a people who had no previous knowledge of or access to metal at all. Gunflints were a new tool that they similarly had no previous knowledge of, and in the arms of European settlers gunflints were a tool made by specialists. It might have been simple for the Pequot to adopt this specialized practice when producing gunflints. However, the Pequot did have knowledge and skill in lithic technology, and they negotiated the introduction of this new tool by attaching to it these traditional ways of producing and maintaining similar tools of stone material. In this way, gunflints made on the reservation ceased being solely European and became a Native tool. Like making gunflints bifacially, the application of non-specialized traditions of lithic production and maintenance to gunflints is an expression of Native practices tied both to their past and to their current circumstances.

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