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Editor's Note

This issue of the Bulletin focuses on the re-analysis of collections and records from old excavations, and what we can learn from them. The first two articles discuss features that relate to the complex mortuary traditions of the Transitional Archaic. Gene Winter provides a detailed review of Feature 14 at the Call site. Although excavated in 1957, Gene reports several aspects of this significant feature for the first time. In his article, Bill Taylor reviews the long and complex history of the Susquehanna-related mortuary features at the Seaver Farm site. Since much of his own work has been published previously, this report focuses on other related excavations, such as those of Gerald Dun in 1937 and Jim Deetz in 1969, which have not. Taken together, these excavations allow us to piece together an overview of one of Massachusetts' largest and most important pre-Contact mortuary sites. Jeff Boudreau and I continue our exploration of PaleoIndian sites in Massachusetts with a re-assessment of the Wapanucket site. First reported in 1964, the Paleo component at Wapanucket (Locus 8) has strong similarities with the well-known Bull Brook site. However, like the rest of this large multi-component site, the PaleoIndian presence turns out to be multi-component as well. Finally, Bernard Otto reminds us that artifacts other than projectile points are significant, even when their exact function remains unclear. New England archaeology lost a good friend and founding father with the passing of Doug Jordan in late July. Since Doug played an important role in the archaeology of both Massachusetts and Connecticut, both Gene Winter and State Archaeologist Nick Bellantoni remember Doug as a friend and mentor. Finally, this issue contains the index for volumes 61 to 66 of the Bulletin covering the years 2000 to 2005. Many thanks to Kathy Fairbanks, Freddie Dimmock and Susan Jacobucci for their efforts in preparing this author, title and subject index. Finally, my thanks as always to Shirley Blancke and Kathy Fairbanks for proof reading, and to Margaret Bradley for her assistance with editing and formatting.

James W. Bradley
An Atlantic Phase Mortuary Feature at the Call Site, Billerica, MA

Eugene Winter

Introduction

In 1954, the Willoughby Chapter of the Massachusetts Archaeological Society excavated a portion of the Call site (19-MD-37), a large Native American site on the east bank of the Concord River at the falls in North Billerica. Walter Vossberg directed this excavation and published a brief account of the findings (Vossberg and Mansfield 1955). Through the efforts of a small group of volunteers, work continued on the site through 1957. Except for a brief article by one of the participants, Bradford S. Brennon, no final report was ever produced.

Although I was not a member of the Chapter, Vossberg invited me to visit the project. Vossberg also realized that Brennon, a new member who had not excavated before, might have some trouble and asked me to help him record an unusual feature that he was uncovering. While Brennon did not have much field experience, he was an organized person and was eager to record information correctly. As a result, field drawings were made and the location of all artifacts, complete and fragmentary, was recorded. All the artifacts were also numbered. This allowed fragments of broken and burned artifacts to be fitted back together later without loss of the archaeological context. This turned out to be important since the feature that Brennon had found was a small burial pit (Feature 14) that contained cremated human remains as well as many broken and burned artifacts. Although Brennon did write a brief report for The New Hampshire Archeologist (Brennon 1960), this important site and its assemblage deserve a more thorough description. That is the purpose of this article.

Feature 14

Feature 14 was located in unit N15W5 and did not become visible until excavations reached eleven inches below ground surface. The upper levels were a dark brown loam that contained ceramic sherds and Woodland Period lithics between 4 and 6 inches deep and a layer of quartz debitage that included a scraper and small stemmed point between 9 and 11 inches. At 11 inches deep, the tip of a large granite slab was also encountered. Excavations around this slab continued to reveal disturbed soils and at fourteen inches below grade, the outline of a circular pit became evident, the dark mottled soil within the pit contrasting sharply with the light colored sand into which it had been dug.

The pit itself was about two feet in diameter at the top and broadened out slightly to become 35” wide near the base. In the center of this pit was the stone slab. It was roughly triangular in shape and measured 6 inches across at the top and 10 inches across at the bottom. This granite slab stood upright in the center of the pit and was supported by two smaller stones at the base (Figure 1). Feature 14 contained at least fourteen

Figure 1. Schematic profile of Feature 14.
has suggested that small sheets of bark could have been used to transfer the hot material from the crematory to the burial pit and then thrown in as part of the fill (Thomas 1972).

Another unusual aspect of Feature 14 was that it had been dug through a thick level of quartz debitage, yet none of this material was present within the feature. This dense level of quartz, designated Feature 15, was composed largely of flakes, blocky shatter and a few scrapers, and extended beyond unit N15W5 into all the adjacent squares. Within the unit, Brennan recovered 467 pieces of quartz outside the boundaries of Feature 14, providing an indication of how dense this quartz level was. Even though Feature 14 must have been dug through this earlier level, no quartz was recovered from the feature fill. Clearly, the people who built this mortuary feature were very particular about how it was constructed. Did they leave the tip of the granite slab visible? Did it serve as a marker? That we cannot know.

Artifact Assemblage

One purpose of this article is to provide good illustrations of the materials associated with this mortuary feature. Figure 3 (see next page) illustrates two groups of these burned artifacts. The upper portion (3.1) shows a sample of the incinerated biface fragments recovered from within the feature. Some of these are recognizable as sections of projectile points or knives. The lower portion (3.2) shows three Atlantic points heavily damaged by fire. The example on the left is a felsite point split from tip to base and further broken into three blocky
Figure 3. 3.1. A sample of burned and shattered biface fragments from Feature 14. 3.2. Three Atlantic points heavily damaged by fire.

Figure 4 shows a series of Atlantic bifaces recovered from Feature 14. Numbers 4.1 and 4.2 are performs. The larger example (4.2) is made of felsite; the smaller one (4.1) is made from unidentified dark gray, fine-grained material that has split along a cleavage plane. Number 4.3 is a large Atlantic point made of felsite and broken into more than three pieces. The fragments shown are heat discolored. Number 4.4 is a large chert point comprised of eight fragments. This point appears to have shattered in the cremation process since different pieces show different degrees of thermal alteration. Number 4.5 is a felsite point base with a ragged fire-shattered edge. Number 4.6 is another fractured chert point with multiple small “potlid” fractures on both faces. Number 4.7, which lacks its basal section, is made of an unidentified volcanic material. It is unclear whether its high glassy luster is a trait of the lithic material or a result of incineration.

Figure 5 shows several of the remaining artifacts found in Feature 14. Number 5.1 is a felsite Atlantic point with a dull blue-gray surface that has been reassembled from five pieces. Number 5.2 is a finely made chert Atlantic point in two pieces with fire spalled along the right side. The source of this chert is uncertain, in part because of the discoloration caused by fire. Number 5.3 is another felsite Atlantic point complete except for a missing tip. This point shows no obvious fire damage. Number 5.4 is a small complete chert point. This point as well as number 5.5 (a chert base) were found in the dark brown loam directly above the Feature 14. Numbers 5.6 and 5.10 are bifaces that show the extreme effects of being burned. Number 5.6 is another Atlantic point refitted from five pieces. Although made of felsite like numbers 5.1 and 5.3, it is
Discussion

In her study of cremation cemeteries in eastern Massachusetts, Dincauze mentioned the Call site, based on Brennon’s work, and suggested that these small burial features appeared to date from the beginning of the Susquehanna tradition (Dincauze 1968:81). Dincauze also noted that while the bifaces from these features were similar to the Lehigh Broad points of Pennsylvania and Snook Kill points in the Hudson Valley and western New England, there were differences as well. As a result, she proposed a distinct “Atlantic phase” for these sites in eastern New England and suggested that this dated between 4,100 and 3,600 years ago (Dincauze 1972:57).

In subsequent work, Dincauze refined her ideas about the Susquehanna tradition further, proposing that it contained three different phases. Sites of the first, or Atlantic phase, appear without clear antecedents in the early centuries of the fourth millennium B.P. These sites represent an intrusive population moving into the region from the southwest, one that brought its own distinct traditions and lithic preferences, one that favored fine-grained volcanics and argillite. The subsequent Watertown phase appears to have been a time of adaptation and social consolidation. Soapstone vessels become important during this phase. Sites of the final Coburn phase reflect a strong regionalism that appears to represent the amalgamation of neighboring peoples. By 3,000

chalky and nearly white in appearance. Number 5.10 is a chert preform or point that shows extensive exfoliation. It was split into at least seven laminar fragments and has multiple “potlid” fractures. The drill shown in number 5.7 was found in two pieces in different portions of the feature. It is made of argillite and has an Atlantic-style base. Number 5.8 shows the mid-section from another large chert drill found within the burial pit. While the tip and base were not recovered, a very similar base was found in a nearby unit, N10E0. Both are made from the same blue-gray chert. One other artifact was found that had fragments in two distinctly different places. The strike-a-light made on the basal section of an Atlantic point (5.9), was found in two pieces. One was in the charcoal at the bottom of the feature, the other was near the top of the pit in the mottled fill.

In addition to what was found within the burial pit, it is also important to note what was not present. There was no evidence that soapstone vessels, shell ornaments, native copper or red ochre were associated with Feature 14.

Figure 5. Additional artifacts from Feature 14. See text for specific descriptions.
to sixty more Atlantic-style bifaces have been recovered from across the site area. Walter Vossberg, for example, reported finding ten Atlantic points in his excavations at Call (Malhstedt 1985:4). Figure 6 shows a sample of the non-mortuary bifaces from the site. They include performs and finished points of chert and felsite as well as broken, re-sharpened and discarded examples. Whether it was the fishing potential at the falls or some other kind of resource, it is clear that the people who constructed Feature 14 also used the area for a wide range of other, non-mortuary activities.

Although the concentration of Atlantic phase material at the Call site is unusual, it is not unique. At the nearby Shattuck Farm site, located on the Merrimack River, Luedtke inventoried twenty-four Susquehanna tradition points of which sixteen were Atlantics. These included twelve examples of felsite, two of argillite, one of chert, and one (surprisingly) of quartz (Luedtke 1985:287). Shattuck Farm is perhaps a two-hour walk from the Call site.

In addition to these surface indications, several caches of Atlantic phase bifaces have been reported along the Concord River and adjacent portions of the lower Merrimack Valley. C. C. Ferguson reported several caches of “blanks and partially finished implements” from the Heard Pond site. The largest of these contained twenty-seven pieces (Ferguson 1945). Another cache containing at least thirteen points and performs was found by Arthur Hofmann near the outlet to Foster’s Pond (Hofmann 1943). A more complete analysis of material from the Hofmann site indicated that more than twice that number of Atlantic points were found at the site (Bullen and Hofmann 1944:190). An even larger cache of forty-six Atlantic performs was found at a farm on the Ipswich-Rowley border in 1888 (Hadlock 1947; Jones 1948). It is likely that further research will document additional examples.

B.P., the Orient phase emerges as a product of this assimilation (Dincauze 1975:26-7).

From this perspective, Feature 14 at the Call site fits most comfortably in the Atlantic phase. The lithics from the feature are almost equally divided between cherts, possibly from the Hudson Valley, and felsites from eastern Massachusetts. However, given the discoloration and distortion caused by burning, it is difficult to identify the sources of these materials more precisely. The lack of soapstone and other mortuary offerings also argue that Feature 14 represents an Atlantic phase burial.

However, the Call site was more than a mortuary location for Atlantic phase people. Beyond the examples found in Feature 14, fifty

Figure 6. Atlantic Phase bifaces from occupation levels of the Call site. Numbers 6.1-4, 6.7-9 and 6.11-13 are gray to black felsite; numbers 6.5-6 and 6.10 are dark gray chert.
Conclusion

Although many sites in eastern Massachusetts show evidence of early Susquehanna tradition, Atlantic phase, occupation, only a few mortuary-related features have been reported. To date, Feature 14 at the Call site is perhaps the best documented example.

Acknowledgements

I want to thank Barbara Brown and Don Slater for their help preparing the photographs for this article.

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A Review of Transitional Archaic Mortuary Features at the Seaver Farm, Bridgewater, MA

William B. Taylor

Abstract

During the Transitional Archaic Period (ca. 3,800 to 3,000 B.P.), the Susquehanna tradition spread rapidly throughout what we now call southern New England. Evidence for this transition includes a distinctive range of Atlantic and Susquehanna-style projectile points as well as elaborate cremation burials. These burial features are characterized by calcined human bone fragments, red ochre and fire-damaged artifacts, usually ground stone tools and large bifaces. These are often made from lithic material that originated from outside the region. One of the largest known burial features was found on the Seaver Farm in 1937. Although not scientifically excavated, this feature along with the secondary burials that surrounded it provides important information on the Transitional Archaic in southeastern part of Massachusetts.

Excavation of Dunn’s Feature

During the fall of 1936, a large area of charcoal was exposed by plowing on Russell B. Seaver’s farm in Bridgewater, Massachusetts. The area was “some twenty-four feet in diameter and three feet in depth” and produced a large amount of broken material including “axes, arrow and spear points, pestles and rubbing stones” (Dunn 1942). Knowing that Gerald C. Dunn, the county agricultural agent, was an ardent collector of Indian relics, Mr. Seaver invited him to come and investigate. This site was located on the western boundary of the Seaver Farm, adjacent to the Titicut site (Figure 1).

While few details of Dunn’s excavation have survived, it is clear that he dug a large portion of this feature during the spring and summer of 1937 with the help of three young men from the neighborhood (Figures 2 and 3). Digging was done with shovels and the fill was screened. Unfortunately, no records were kept and we have only the brief description contained in Dunn’s 1942 Bulletin article. Among the details he noted was that at least four distinct caches of “knife blades” were found, one of which was three feet below the surface. He also observed that pieces of bone, which he identified as deer, were scattered through the charcoal. In fairness to Dunn, this type of large mortuary feature had
that it is possible to make a fairly complete report on this important site. That is the primary purpose of this article.

The Assemblage

Dunn estimated that more than 400 artifacts were recovered from this mortuary feature. These included both ground stone implements and flaked bifaces. In terms of the ground stone tools that can be documented, they include: four complete grooved axes (plus fragments from at least three more), four celt, three gouges, and one adze (plus fragments from at least eleven other edged tools), seven pestles (plus fragments from at least two more) and several rubbing stones or hones. Also present are: a plummet, the fragment of a winged atlatl weight and a piece of a ground slate gorget. Finally, six apparently unmodified cobbles, possibly intended as hammer stones, and a piece of hematite complete the list.

Figure 2. Gerald Dunn’s 1937 crew. From left to right: Russell Seaver, Frank Green, Charlie MacKinnon and Roy Richmond.

not been documented in 1937, so it not surprising that Dunn thought he was digging through a series of “fire pits”.

While much remains unknown about the feature, or features, that Dunn excavated, it is clear is that a huge amount of material was recovered. Dunn estimated that all together, some 400 pieces, whole and broken, were found. I have spent many years trying to reconstruct this assemblage. Dunn eventually sold all his material from the crematory to Karl Dodge, an early and active member of the MAS. Unfortunately, Karl sold or traded away nearly all of the ground stone tools. However, after his death I purchased the remainder of the collection from his wife Mildred. I also have had the opportunity to examine seventeen photographs by the Seaver family taken during the dig. Two of these are reproduced here. One unknown is how many artifacts were kept by two local boys who raided the site. One told me that his father made him return all the things he’d recovered. The other boy apparently kept what he found. This included “a green axe in excellent condition” that Dunn described as 7.25 “ in length, 4” wide and “the finest piece in the whole collection” (Dunn 1942:33). This axe was subsequently taken to California. Such uncertainties aside, I now feel
I find it interesting that no evidence of soapstone bowls was recovered. This makes the Seaver Farm burials very different from those at the Hawes site in nearby Lakeville (Lord 1962). Also, while I assume that all of these ground stone artifacts came from the mortuary feature, some may have been accidental inclusions or come from the occupational levels on the site. As we will see below, this was certainly the case with projectile points.

While the inventory of ground stone implements is impressive, the array of chipped stone tools is more dramatic. Even if a few pieces have been lost, I can account for 148 complete bifaces plus an additional 335 fragments. While most of these fit within the accepted range of Transitional Archaic styles, some earlier and later points are also present. The following five figures illustrate most of the complete bifaces that came from Dunn's excavation.

Figure 4 illustrates an unusual set of bifaces, a group of twenty-nine small side and end scrapers. These represent one of the caches reported by Dunn. Twenty-five are made of fine semi-translucent gray chalcedony, possibly from a Pennsylvania source. Several of these still have red ochre embedded in the cracks. The remaining four are made from brown jasper.

Figure 5 illustrates nine Wayland Notched points, bifaces more typical of Susquehanna tradition burials. Eight of these came from Dunn's excavation. The exception is the example in upper row, center, which was found in one of the secondary burials (Pit #12) discussed below. All are made of eastern Massachusetts felsites; the example in the upper row, left, is Attleboro red felsite.

A second cache recovered by Dunn is pictured in Figure 6. This group of thirty-one Mansion Inn blades includes Watertown, Dudley and Coburn varieties. The largest of these is four inches in length. All but three are made of Attleboro red felsite. The others are eastern Massachusetts felsite, probably from the Lynn series. Many of these specimens show heat damage and were badly fractured. Fortunately, however, Dunn appears to have recovered most of the pieces and was able to reconstruct most of these bifaces.

Figure 7 illustrates another twenty-five Mansion Inn blades from this large mortuary feature. It is not clear whether these were recovered together or were found during the course of Dunn's excavation. All are made from various regional felsites. Figure 7 also includes one Eared
Triangular point (top row, left) and four Orient Fishtail points (bottom row, left). These seem out of place in a Susquehanna tradition burial and may be an example of later inclusions.

Figure 8 (see next page) shows the remaining thirty-four points from Dunn’s excavation.

Here again, while the Wayland Notched blades probably did come from the mortuary feature, some of the other side-notched, stemmed and even triangular points probably from occupational levels of the site. These points also range widely in terms of material and include felsite, chert, hornfels and argillite.
As indicated in Table 1, Mansion Inn blades are the most frequently occurring biface, 40% of the sample. These are followed by scrapers and Wayland Notched points (16% each), drills (4%) and Boats blades (2%). Projectile points accounted for only 22% of the bifaces. Of these, Orient fishtails are the most frequently occurring style, 10 of 41 or 24%, while only a small number of Atlantic and Susquehanna points are present. The majority of points appear to represent other time periods from Middle Archaic through the Woodland period.

Table 2 summarizes the lithic materials represented from Dunn’s feature. Most frequent are felsites from the Lynn series, 35% of the 231 identifiable lithics. Surprisingly, the second most common lithic is the purple to black Lockatong argillite that originates in northern New Jersey and eastern Pennsylvania, 19% of the identifiable pieces. Nearly tied for third and fourth are cherts, possibly from the Hudson Valley, 13%, and Attleboro red felsite, 12%. Other lithic materials are present only in small amounts. These include other regional felsites, argillites and quartzite as well as a few exotic materials we were not able to identify. However the vast majority of fragments, 218 pieces or 65% of the total, had been heavily burned and difficult to identify with confidence. For example, only thirty-five of the 335 fragments, or 19%, could be identified in terms in style. We fared a little better with lithic materials and were able to identify 117, or 35%, of the 335 fragments. While this will not give a complete picture of the assemblage, it does provide our best guess about which point styles and lithic materials were most common in the feature.
Table 2. Summary of artifacts from Dunn’s excavation by lithic material.

<table>
<thead>
<tr>
<th>Material</th>
<th># of complete pieces</th>
<th># of fragments</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lynn felsites</td>
<td>44</td>
<td>37</td>
<td>81</td>
</tr>
<tr>
<td>Chert</td>
<td>1</td>
<td>28</td>
<td>29</td>
</tr>
<tr>
<td>Chalcedony</td>
<td>25</td>
<td>0</td>
<td>25</td>
</tr>
<tr>
<td>Lockatong argillite</td>
<td>10</td>
<td>34</td>
<td>44</td>
</tr>
<tr>
<td>Attleboro red felsite</td>
<td>22</td>
<td>6</td>
<td>28</td>
</tr>
<tr>
<td>Boston Basin felsites</td>
<td>5</td>
<td>12</td>
<td>17</td>
</tr>
<tr>
<td>Pennsylvania jasper</td>
<td>4</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Kineo rhyolite</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td><strong>Subtotals</strong></td>
<td><strong>114 (77%)</strong></td>
<td><strong>117 (35%)</strong></td>
<td><strong>231 (48%)</strong></td>
</tr>
<tr>
<td>Other</td>
<td>34 (23%)</td>
<td>218 (65%)</td>
<td>252 (52%)</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>148</strong></td>
<td><strong>335</strong></td>
<td><strong>483</strong></td>
</tr>
</tbody>
</table>

The lithic material was not possible.

**Dunn’s Feature re-visited**

In April 1969 the Seaver Farm was sold to a local builder and, over the next eighteen months, seventeen new houses were built along Beach and Vernon Streets. Fill for this housing development was obtained from a three-acre alfalfa field on the west edge of the farm, adjoining the Titicut Site. First, the loam was bulldozed into a large pile on the east side of the field. Then five feet of subsoil, down to the white sand, was excavated and trucked around to the various buildings sites. This operation destroyed part of the old Seaver Farm site and also left a steep bank at the edge of the property. Each night after work I examined this bank for artifacts, charcoal or red ocher. This led to the re-discovery of Dunn’s feature, the edge of which I found exposed in the bank later that summer. With the assistance of my sons, we re-excavated the remaining portion. In addition to large amounts of charcoal and small patches of red ocher, we recovered several artifacts that Dunn had missed. These included thirteen projectile points, primarily Wayland Notched and Susquehanna style, as well as pieces of hematite, graphite and many fire burned and broken fragments of both ground and chipped stone tools (Taylor 1972:2 and figure 2). We also discovered that the actual size of Dunn’s feature was twelve by fifteen feet, much smaller than Dunn’s original estimate.

**Secondary Burials**

In exploring the area south of the crematory, I discovered several other deposits of charcoal, red ochre and calcined bone fragments. Careful investigation led to the discovery of four smaller pit features (#1-4) south of Dunn’s feature and one more (#5) to the west (Figure 1). These appeared to be a series of secondary burials located around the edge of the large mortuary pit Dunn had discovered. Since these burial pits have been described in detail in a previous article (Taylor 1970) so I will summarize them here.

**Pit #1** was thirty by forty inches in diameter and twenty-four inches deep. At the base were three pockets of red ochre each about twelve inches in diameter. One of these ochre deposits contained a small quantity of calcined bone. No artifacts were associated with these deposits although a quartz scraper and three points (a quartz small stem, a Stark and a Wayland Notched) were found in the pit fill.

**Pit #2** was thirty by thirty-six inches in diameter and twenty-four inches deep. The base of the pit was filled with a three-inch deep level of yellow sand and red ochre which contained one large Watertown variety Mansion Inn blade made of Kineo rhyolite (Figure 9f, see next page). No charcoal or calcined bones was present.

**Pit #3** was forty by forty inches in diameter and twenty-seven inches deep. Once again, there were three pockets of red ochre, each eight inches in diameter, at the base of the pit. Although these deposits had neither charcoal or
calcined bone, one contained a Susquehanna point. Another Mansion Inn blade was found between ochre deposits (Figure 9c).

**Pit #4** was thirty-six by forty inches and diameter and twenty-seven inches deep. It had two ochre pockets, each twelve inches across. Although small pieces of charcoal were scattered throughout, no bones or artifacts were present.

**Pit #5** was twenty-two by forty-six inches in diameter and twenty-five inches deep. Like Pit #4, it had fine charcoal in the fill and two pockets of red ochre at its base. These were eight inches in diameter. One contained three small fragments of burned cranial bone.

Given this pattern of these secondary burials, we continued our explorations around Dunn’s pit the following summer. Sure enough, as we dug along the west and northwest sides, we discovered five additional mortuary pits. These are described in greater detail (Taylor 1972) and are summarized below.

**Pit #9** was thirty inches in diameter and twenty-seven inches deep. It contained three pockets of ochre towards the bottom that merged into a single layer two inches deep. No bone or charcoal was present and only a single felsite flake was found.

**Pit #10** was larger and more complex than any of the previously discovered pits. It was fifty-four by sixty inches in diameter and forty-three inches deep. In addition to a twelve inch in diameter deposit of red ochre on the northwest side and similar deposition of pulverized charcoal ten inches in diameter on the northeast side, this pit contained four distinct burial deposits. The first contained several pieces of calcined bone and a finely made Susquehanna point. The second contained a stemmed knife of felsite (Figure 9e), three large felsite flakes and an argillite scraper but no bone or charcoal. The third included a stemmed knife of quartzite, three felsite Mansion Inn blades and a small cobblestone hammer. All the bifaces showed the effects of burning. The fourth deposit contained the largest amount of material: a broken Mansion Inn blade, the base of a Susquehanna point, two performs and two large worked flakes. All were felsite and showed fire damage. A flat pebble with a slightly pecked surface and a large pestle broken in two pieces
Pit #11 was thirty by thirty-five inches in diameter and thirty-five inches deep. Charcoal was scattered through the fill along with eight pieces of calcined bone. At the base was a two-inch thick layer of red ochre in which a small hammer stone and a large Susquehanna point were found (Figure 9a).

Pit #12 was forty-two by sixty-six inches in diameter and thirty-three inches deep. Like Pit #10, there were several (six) distinct ochre deposits at different levels within the larger pit. The first deposit contained a fire-making kit composed of a felsite striker and largely disintegrated pyrites. The second produced only a small felsite scraper. The third contained a small quantity of calcined bone, a grooved adze, another fire-making kit and a fire damaged Susquehanna point. The fourth deposit included three Susquehanna points, one of Pennsylvania jasper, the other two of felsite and showing fire damage. The fifth contained a few pieces of calcined bone but no artifacts. The last deposit within Pit #12 contained only an additional fire-making kit.

Pit #13 was twenty-four by forty-six inches in diameter and forty-three inches deep. Like Pit #11, it had charcoal flecks and small fragments of calcined bones scattered through the fill. Three inches of red ochre covered the bottom. Near the bottom was a fire-making kit and five Susquehanna points, all made of felsite and fire damaged.

The following figures show the similarity between the artifacts recovered from these secondary burials and those found during Dunn's excavation. Figure 9 illustrates six important bifaces. From left to right these include: 9a. large Susquehanna Broad point from Pit #11 made of bluish-gray rhyolite possibly from a Pennsylvania source, 9b. Boats blade from Dunn's feature. This knife was broken in four pieces and glued together. It is made of felsite that has been burned to a kaolin color, 9c. Mansion Inn blade, Dudley variety, of purple felsite from Pit #3, 9d. Susquehanna Broad blade from Dunn's excavation made of gray chert and still coated with red ochre and a yellow pyrite encrustation, 9e. stemmed knife of purple felsite from Pit #10 (deposit 2) one corner of which was "killed" and restored by William S. Fowler, and 9f. large Mansion Inn blade, Watertown variety, from Pit #2 made of Kineo rhyolite.

Figure 10 shows the four Mansion Inn blades, Dudley variety, and two stemless knives found in Pit #10 (deposits 3 and 4). Five of these are made of regional felsite; the example in the bottom row, right, is a one brown quartzite. Also shown below are the five flake knives of purple felsite from Pits #9 and #10.

Figure 11 (see next page) shows the nine Susquehanna Broad points from Pits #3, #10, #12 and #13, plus two from Dunn's feature. All are made of local felsite except for one (top row, left) which is of brown jasper. Also pictured in the middle row, right, is a felsite striker and below that, the block of hematite from Dunn's excavation. The bottom row also contains the
We will probably never know for sure. The secondary burials may represent later interments. Perhaps this location was used over a long period of time like the Millbury III site in Central Massachusetts that was used as a mortuary site for nearly 1,000 years between 3,985± to 2,870±150 B.P. (Leveillee 1999).

Why were so many of the secondary burials ‘empty’?
While all the secondary burials had red ochre, some contained calcined bone, charcoal and artifacts. Others had artifacts but no evidence of remains. Do these differences reflect status? Or was the body not present and lost in battle or at sea? Perhaps this was only a symbolic ceremony performed on the anniversary of an event or death.

Was Dunn’s feature a crematory?
In spite of the charcoal and obvious evidence of burning, it may be that the cremations occurred elsewhere on the site, and that the still-hot ashes, charcoal and burned objects were transported to the burial pits for final interment. Dincauze has suggested that this was the case at Locus 1, Mansion Inn, a large funerary pit similar to the one Dunn excavated (Dincauze 1968:51). In addition, there was no evidence of fire-reddened subsoil at either Dunn’s feature or the secondary burials. Such evidence would certainly have been present if the cremations had occurred in place. Another unreported excavation from the site has a bearing on this. In July 1969, Jim Deetz and a crew from Plimoth Plantation spent three weeks excavating at the Seaver Farm site. While a report of their findings was never completed, I did have the opportunity to observe one important feature they discovered. In Figure 1, Adelphi Knob points and drills from Dunn’s feature and the related secondary burials. See text for details.

Discussion
The combination of the large burial feature excavated by Dunn and the secondary burials we discovered provide important information about Susquehanna tradition mortuary practices. They also raise a number of questions.

Were there additional secondary burials present?
It seems likely that the bulldozing on the east side of Dunn’s feature destroyed other burials. As Figure 1 shows, there was certainly room for six or more secondary burials on that side. Dunn’s description that “rows of fire pits” could be traced as the tractor turned over the sod also hints that other burials were there. (Dunn 1942:33).

What was the relationship between Dunn’s burial pit and the secondary burials that surrounded it?

Figure 11. Additional Susquehanna Broad-style points and drills from Dunn’s feature and the related secondary burials. See text for details.
soapstone bowl before the area was backfilled.

**Was this a mortuary location only?**

Although Susquehanna tradition people used the Seaver Farm site for mortuary purposes, they appear to have lived in the area as well. Susquehanna-related points and large bifaces have been found not only at the Seaver Farm site but also at nearly every site along this portion of the Taunton River as well as its tributary brooks. Figure 12 shows a sample of these points. They are made from a range of regional lithics.

**Conclusion**

Although Dunn's excavation at Seaver Farm was not done or reported properly, it still represents a significant contribution to our understanding of Susquehanna tradition mortuary practices. Like Mansion Inn, it appears to be an important burial site that may have been used over a period of time. The artifacts indicate the presence of a large amount of exotic material – chert, argillite and jasper – from New York, New Jersey or eastern Pennsylvania. The presence of a large burial feature, secondary burials and a likely crematory is unusual and has not been reported in Massachusetts before. Unfortunately, we will never know how much more information has been lost.

**Acknowledgements**

I would like to thank Jeff Boudreau for his assistance in sorting out the fragments from Dunn's excavation as well as for his help with photography.
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Re-Assessing Wapanucket: PaleoIndians in Southeast MA

James W. Bradley and Jeff Boudreau

Abstract

Since first reported in American Antiquity (1964), Wapanucket has been one of the best known PaleoIndian sites in southern New England. The site is located in Middleboro, MA and contains components that span virtually all of the region’s long and complex cultural history. Given its artifactual similarities to the Bull Brook site, Wapanucket has usually been assigned to the Early Paleo (Gainey) period. Recent re-examination of the assemblage indicates that, with its preponderance of non-local lithics, Wapanucket is one of the region’s early PaleoIndian sites. However, the range of projectile point styles recovered suggests that PaleoIndians also used this location at several times during the period 13,000 to 10,000 years ago.

Background

The Wapanucket site is located along the northeastern shore of Assawompsett Lake in the town of Middleboro, Plymouth County, Massachusetts. An initial environmental reconstruction suggests that the Paleo component was situated on a large dune formed from windblown sands that originated in the adjacent proglacial lakebed. During the 1960s, the Massachusetts Archaeological Society under the direction of Maurice Robbins excavated much of the site. PaleoIndian material was recovered from two parts of the site. The primary component, referred to as Locus 8, occurred along the crest of the dune and was spread over an area roughly 160 by 28 meters (Robbins 1980:272). A second but poorly defined locus of Paleo material, known as the Beach component, was located several hundred meters to the west along the lakeshore (Figure 1). Robbins and Agogino published an initial description of the site in 1964. Robbins provided a more detailed report in 1980.

The Paleo component at Locus 8 appears to have had little internal organization. Robbins notes that no evidence of stratification was found and that Archaic and Paleo artifacts were frequently intermixed. Although Robbins reported six concentrations of debitage, labeled A through F, he cautioned that these...
were "purely arbitrary" and not intended to represent living floors or workshops like the "hotspots" at Bull Brook (Robbins 1980:272). See Figure 2. Robbins also observed that, although poorly documented, the Paleo artifacts from the Beach locus "differ radically from those found at Locus #8" (ibid., p. 306). Thus, it appears that at least two different PaleoIndian components were present at Wapanucket.

Robbins and Agogino included an initial description of the Locus 8 assemblage in their article reporting six fluted points (of which only one was complete), eleven channel flakes, fifteen scrapers and five gravers (1964:512). Robbins compiled a more complete inventory as part of his 1980 report on the overall site. His summary included ten fluted points (two of which were complete), twelve end scrapers, nine gravers, eight knives and one drill (1980:272-76). Unfortunately these totals do not agree Robbins' with the more detailed, area by area inventory of artifacts that followed (ibid. pp. 276-83).

The changing nature of the artifact inventory illustrates much about the nature of the excavation. Fieldwork continued off and on over a period of at least ten years. Volunteers did most of the excavation and, as a result, record keeping was variable. By tradition, excavators could keep the artifacts they found. This, as well as unauthorized digging and collecting around the site, make it impossible to know how much PaleoIndian material was actually recovered. Even now, material from the site continues to surface.

**Methodology**

Our goals in this article are twofold. The first is to compile as accurate and complete an inventory of the Paleo-related material found at Wapanucket as possible. In order to reconstruct the assemblage, all the surviving records have been examined. These include cards completed by excavators in the field, paper and computer catalog records and the notes from past surveys of the collection, notably the 1980 MHC inventory conducted at the Bronson Museum in Attleboro (Carty 1980). This written record was then compared with the surviving artifacts. The results are summarized in Table 1. In general,

<table>
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<th>Locus 8</th>
<th>Beach component</th>
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<td>4*</td>
<td>15</td>
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<tr>
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</tr>
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<td>6</td>
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<td>8</td>
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<tr>
<td><strong>Totals</strong></td>
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<td>15</td>
<td>62</td>
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*reported but not seen; **primarily debitage

Table 1. Inventory of PaleoIndian Artifacts from Wapanucket.
most of the diagnostic Paleo artifacts appear to have survived, although some pieces are missing. The situation is less clear in terms of debitage and non-diagnostic objects. Of particular interest are several artifacts not mentioned in either of the earlier reports; these provide important new evidence for interpreting this site. That is our second goal - to offer a current assessment of Wapanucket and its relationship to other PaleoIndian sites in Massachusetts and the broader New England-Maritimes region.

### Assemblage from Locus 8

#### Fluted Bifaces

Robbins and Agogino report six fluted points, five of which were gray-green chert; one of these was "complete". The sixth was a fluted point base 'red jasper'. These points were described as resembling "small Clovis points" and characterized by "deep concave bases", lateral and basal grinding, multiple fluting and prominent basal ears on five of the six examples (1964:512). Robbins lists ten fluted points in his Wapanucket report, eight of "marine chert", one of red jasper and one of white quartz (1980:274).

We found documentation for eleven fluted points from Locus 8 although two of these (8-348, 8-1749) are currently missing (Table 2). We also determined that the white quartz base reported by Robbins (8-3842) was not of PaleoIndian origin. In addition, one fluted perform from the surface of Locus 5 was recorded. However, it is not included in this total. Contrary to the previous reports, there are no complete fluted points; all are fragments or reworked fragments. These include six bases, three tips and two fragments of points that were split longitudinally (Figure 3, see next page). These are small points ranging from 1.7 to 2.9 cm wide with an average of 2.4 cm. Bases are only slightly concave, between 2-3 mm in deep. Although the previous reports termed these "Clovis", the points from Locus 8 were fluted from an isolated, prepared platform rather than a beveled edge. All appear to have single flutes on each side. Of the eleven, two have straight sides, three have slightly projecting basal ears and one has prominent basal ears. The remaining five examples are too fragmentary to determine the shape of the sides and base.

Technically and stylistically, these points most resemble the Early PaleoIndian Gainey and Butler points of the Great Lakes region (Ellis and Deller 1997; Simons 1997). Fluted points from the Gainey site are generally large and characterized by parallel sides, simple arc-shaped basal concavities of moderate depth and broad, short flutes that extend between 1/3 and 1/2 the length of the point. At the nearby Butler site, the fluted points had a slightly different shape - one with more incurvate than parallel sides and slightly projecting basal ears. Don Simons has argued that the Butler site represents an intermediate time period between the Early PaleoIndian Gainey and the Mid Paleo-Indian Parkhill type sites, an argument supported by the observation that the

<table>
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<td>8-249</td>
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<td>C?</td>
<td>Mt. Jasper rhyolite?</td>
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<tr>
<td>2</td>
<td>8-343</td>
<td>base with slight ears</td>
<td>C</td>
<td>Normanskill chert</td>
</tr>
<tr>
<td>3</td>
<td>8-348</td>
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<td>4</td>
<td>8-822</td>
<td>re-worked tip</td>
<td>B</td>
<td>dark gray chert</td>
</tr>
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<td>5</td>
<td>8-1223</td>
<td>re-tipped base with slight ears</td>
<td>C</td>
<td>Normanskill chert</td>
</tr>
<tr>
<td>6</td>
<td>8-1519</td>
<td>split longitudinally</td>
<td>B</td>
<td>Normanskill chert</td>
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<tr>
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<td>?</td>
<td>Normanskill chert</td>
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<td>Munsungun red chert</td>
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<td>8-3415</td>
<td>tip</td>
<td>?</td>
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<td>tip</td>
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<td>8-7367</td>
<td>split longitudinally</td>
<td>C</td>
<td>Normanskill chert</td>
</tr>
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</table>

Table 2. Fluted Points from Locus 8.
mean width of channel flakes from Butler falls between those from the Gainey and Parkhill sites (Simons 1997; 2002). Within the New England-Maritimes region, points of both styles have been termed “Bull Brook” points (Spiess et al. 1998:235-36).

In terms of lithic material, the majority of these points (seven) are made from a gray/green to tan chert that is a visual match to the Normanskill cherts of Hudson Valley. Two others are a gray chert, possibly Eastern Onondaga. Of the remaining two, one is a dull red chert, probably Munsungun, while the other is a heavily weathered, banded rhyolite, possibly Mt. Jasper. Lithic materials are discussed in greater detail below.

Unfluted Bifaces

We recorded three unfluted bifaces from Locus 8 (Figure 3). These include a large, asymmetrical (or ear-shaped) knife (8-6870-1) of Normanskill chert, a small ovate knife of red jasper (8-1758) and finely made knife or unfluted point of a high grade, translucent brown chalcedony (8-377) that is visually similar to the Knife River chert of North Dakota. Although this unusual piece is not listed in earlier reports, a field record of its recovery does exist verifying this biface as a legitimate part of the Locus 8 assemblage. With the exception of a “possible drill” mentioned by Robbins (1980:272), the previous investigators did not report other bifaces from the site.

Cores

In their inventory, Robbins and Agogino listed “two small cores with multiple flake scars [that] indicate that blades were removed and used” (1964:512). Robbins notes only one “polyhedral core” from Area C in his site report (1980:278). We located two artifacts that appear to meet the definition of polyhedral or wedge-shaped cores (Figure 4, left and center). One (8-416) has a
polyhedral shape with six to seven facets from blade removals and appears to have been re-used as a piece esquillée which shattered the distal end. This piece is made from a high grade, lustrous light gray chert that is visually similar to the Vanport chert of eastern Ohio. The second artifact (8-655) is a more irregular, six-sided wedge-shaped core that has also seen considerable battering. It is made of a dark gray chert that is visually identical to the Onondaga cherts of central and eastern New York.

Unifaces
Robbins and Agogino report fifteen chert scrapers, thirteen of which were sufficiently complete to describe. Although they did not differentiate between side scrapers and end scrapers, most appear to be the latter (1964:512). Robbins used the same basic description in his site report (1980:272).

Side scrapers. We identified three side scrapers in our inventory, one complete and two fragmentary. The complete example (8-1406, 1373-4) has a typically asymmetrical, or ear-shaped, form with well-defined edge wear on all sides. Second example (8-2832) is the basal portion of a similarly shaped side scraper. The third piece is un-numbered and too fragmentary to characterize further. All three are made from tan to gray/green Normanskill chert (Figure 5, see next page).

End scrapers. We identified ten end scrapers in our inventory. With one exception (8-1734), these are all small in size, roughly 2 cm wide by 3 cm long. All have one or two “graving spurs”. Seven (8-917, 8-1254, 8-1336, 8-1595, 8-1696, 8-1717, 8-1734) are made from tan to gray/green Normanskill chert, two (8-914, 8-1271) are of gray chert and one (8-1445) of brown jasper.

Flake knives. One artifact (8-1811) is best characterized as a flake knife. Made from a large bifacial thinning flake of yellow jasper, this piece has well-defined edge wear on all sides.

Spokeshaves. One artifact (8-747) is identified as a “spokeshave” in the records. This is a bifacial thinning flake of light gray chert that shows some evidence of edge use.

Limaces. Although we did not observe any limaces in our inventory, Robbins (1980:276) mentions a re-used channel flake (8-1269, 8-1522) under “Knives”. If verified, this piece would now be considered a limace. At present, only one of the two fragments (8-1522) could be located.

Gravers. Robbins and Agogino include five “gravers” in their inventory (1964:512). Robbins listed nine examples in his report (1980:272). In our inventory, we found five artifacts identified as “gravers”. All are small bifacial thinning flakes with one spur. Three (8-660, 8-2360, un-numbered) are of tan/green Normanskill chert, one (8-1102) is of light gray chert, and one (un-numbered) is of brown jasper.

Utilized flakes. Robbins noted that ‘a large number’ of marine chert and red jasper flakes were utilized but did not quantify this (1980:272).

Debitage
Robbins reported that Locus 8 “contained hundreds of flakes, both large primary flakes and smaller secondary flakes, of marine chert and jasper”, and observed that none of this distinctive debitage was found elsewhere on the site.

Figure 4. Cores from Locus 8 and the Beach.
Four of the six show some evidence of edge use, the other two do not. We did find one unlabelled bag that contained several hundred small trim flakes but were unable to count them. The vast majority of these flakes were tan to gray/green Normanskill chert with a few red jasper examples also present. Although it is impossible to obtain a reliable quantitative assessment, we feel that Robbins’ estimate of 80% tan/green chert and 20% red jasper is a good approximation.

Channel flakes. Robbins and Agogino listed eleven channel flakes from Locus 8 and suggested that these were evidence that points were fluted on the site (1964:512). Robbins noted ten channel flakes in his report but does not discuss them in any detail (1980:276-80). We were able to locate only five examples in our inventory (Figure 5, third row, center). All are fragments. Four of these (8-397, 8-743, 8-1516, 8-1522) are gray/green Normanskill chert and came from small to medium size points. They average 3.1 cm in length and 1.7 cm wide. The fifth channel flake (8-1089) is a glossy dark gray chert and came from a much larger point; it is 4.1 cm long and 2.2 cm wide.

Assemblage from the Beach Component

The Beach component is difficult to assess from several reasons. It was never excavated or even systematically collected. The published accounts were based on what the authors had which have catalog numbers. Of these, four are gray/green Normanskill chert, one is a slightly glossy black chert and one is Mt. Jasper rhyolite. Four of the six records tell a different story. For example, the field cards for area A report “41 large flint chips”, substantially more than the thirteen listed by Robbins. However, here again, different records tell a different story. For example, the field cards for area A report “41 large flint chips”, substantially more than the thirteen listed by Robbins. More significant, the field cards for area B indicate that “92 flint and 123 jasper chips” were recovered, a completely different number than reported by Robbins.

We were unable to locate much of this debitage in our inventory. Only six medium to large bifacial thinning flakes were found, five of (Robbins 1980:305-6). Robbins also provided debitage counts by area although these do not differentiate flakes by size or type (ibid. pp.276-83). These counts indicate a total of 1,230 flakes of which 1,0356 (84%) are chert and 194 (16%) are jasper. However, here again, different records tell a different story. For example, the field cards for area A report “41 large flint chips”, substantially more than the thirteen listed by Robbins. More significant, the field cards for area B indicate that “92 flint and 123 jasper chips” were recovered, a completely different number than reported by Robbins.

We were unable to locate much of this debitage in our inventory. Only six medium to large bifacial thinning flakes were found, five of
been shown. Their assumption was that these artifacts found on the Beach had eroded from the high bluff in front of Locus 6, however, since summer cottages had been built along the top of this bluff, no testing was done. Robbins does note that most of the artifacts from the Beach were made from “brown-red-amber chert” and that only “a few examples of gray-green-black chert” were present (Robbins 1980:283). Our re-examination of the material from Wapanucket produced eleven artifacts that appear to be from the Beach component. While these all have “B” labels or catalog numbers, there are no records that identify them or how they were obtained. We also found that many of the artifacts initially reported from the Beach actually date from other, later cultural period (ibid., pp. 284-85). Only the PaleoIndian-related materials are discussed here.

**Unfluted Bifaces**

Four unfluted bifaces, all broken, appear to be from the Beach component. One (8-B) is the distal section of a large, finely made point broken at both the tip and midsection. Although this, superficially, appears to be fluted on the obverse side, the rings of compression indicate that this was not an intentional flute but the probable result of an impact fracture. The material is a high-grade, dark gray chert with white fossiliferous inclusions, similar to the Clarendon chert on the Champlain Valley. Two other biface fragments are the basal ends of Late PaleoIndian points. The larger example (8-B46) is made from a dark gray, banded chert probably from Munsungun, ME while the smaller one (8-B33) is of gray Onondaga chert. Traditionally, these parallel-sided points have been called “Eden” points in Massachusetts (MHC 1984:58-59; Hoffman 1991:11-12). However, with the identification of single component sites in Maine and the Canadian Maritimes, these are now termed Ste. Anne/Varney points (Doyle et al 1985; Petersen et al 2000; Dumais 2000). These two bases are illustrated in Figure 6, right side. The final piece is a small, nondescript biface fragment of Saugus jasper.

**Cores**

One wedge-shaped core (B7) appears to have been recovered from the Beach component. It is quite similar to one of the examples from Locus 8. It is made of Saugus jasper and has a semi-hemispherical shape with five distinct blade removals. It is 3.8 cm long, 4 cm wide and 1.7 cm thick (Figure 4, right).

**Unifacial Tools**

Five unifacial tools have catalog numbers that suggest they came from the Beach component (Figure 6). These include two endscrapers, one of dark red jasper (B10)

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Figure 6. Artifacts from the Beach Component.
and the other of yellow jasper (B28). The former has been fire shattered and is heavily spalled on both the dorsal and ventral sides. The latter also shows heavy use and has a distinctly narrowed proximal end that may have been used as a drill. Two additional unifaces (B1 and B48) have been identified tentatively as spokeshaves. Both are bifacial thinning flakes of brown jasper and show slight edge wear. The final uniface (B32) is identified as a graver. This too is a thinning flake of brown jasper that shows some slight signs of use.

Debitage
No debitage from the Beach component was located in our inventory. The possible exception is a large bifacial thinning flake (B-) of Saugus jasper that show much the same kind of edge wear as the two jasper ‘spokeshaves’ described above.

Lithic Material

There has been considerable confusion over the lithic materials recovered from Wapanucket. Robbins and Agogino reported that the PaleoIndian artifacts were “made almost entirely from gray-green chert” that were “rich in marine organisms, principally radiolaria”. They noted that these were “almost identical” to samples of the Deepkill and Normanskill cherts from the Hudson Valley and speculated that this was the source of the material.

The exceptions were a few artifacts of gray chert and a group of artifacts made from red or “honey-colored” jasper. A sample of this material was submitted to Clifford Kaye of the U.S. Geological Survey in Boston who determined that it did not resemble typical marine cherts and may have been formed in association “with volcanism” (1964:512). Robbins continued to pursue sources for “the marine flint and thermal chert” with Clifford Kaye for several years. These efforts focused on possible offshore sources for the “marine flint” and sources in northeast Rhode Island for the “amber/red cherts from the Beach component” (Robbins 1980:290-91, 283).

Our re-examination indicates both a more diverse set of lithics and clearer sense of their origin. For Locus 8, the predominant material is a tan to green chert that is visually identical to the Normanskill chert of the mid Hudson Valley. This Ordovician chert is widely distributed in Greene, Columbia, Rensselaer and Washington counties and known by several names including Coxsackie, Flint Mine Hill and Pleasantville. Technically, these are part of the Mount Merino formation (Funk 2004:133; Holland 2004:25). Based on personal observation, the artifacts of this chert from Wapanucket are virtually identical to those from Hudson Valley PaleoIndian sites such as West Athens Hill, King’s Road and Swale, a conclusion also reached by Robert Funk (Funk 1976:224).

The second most common group of lithics from Locus 8 is a series of light gray to very dark gray/black cherts. The majority of these are visually similar to central and eastern varieties of Onondaga chert. This Devonian chert described by Holland as the “most ubiquitous... and widely used chert” in New York (Holland 2004:25). Although usually a minority lithic, these gray cherts are also widely distributed on Paleo sites in New England.

The third most common set of lithics from Locus 8, and the predominant material at the Beach component, is jasper (yellow, brown and red) that probably originated in eastern Pennsylvania (Hatch and Maxham 1995). There has been much discussion about possible local sources for this material. For example, it has been suggest that these jaspers had a regional origin as glacial cobbles (Moeller 2002:92). However, the lack of decortification flakes or any evidence of cobble reduction argues against this. Robbins also suggested that the Conklin quarry in Rhode Island was a likely source of the Wapanucket jasper but, to date, a convincing case has yet to be made. Indeed, if one plots the percentage of jasper in the artifact assemblages from the quarries in the Reading Prong to Gainey-related sites in the Delaware valley sites such as Plenge, 76% jasper, (Kraft 1973:64) and Zierdt, ‘mostly jasper’ (Kraft, personal communication 4/12/96 ), to Hudson Valley sites
such as Swale, 44% jasper (Funk 2004:107) and on into New England, the distribution of jasper appears to provide a useful way to model the movement of Early PaleoIndians into the region.

Taken together, these three lithic groups – Normanskill chert, Onondaga chert and Pennsylvania jasper – account for the vast majority, 80 to 90%, of all the Paleo material from Wapanucket.

Two of the Locus 8 artifacts are of an even more exotic origin – a blade core of Vanport chert and a biface of Knife River chert. Although rare on PaleoIndian sites east of Pennsylvania, artifacts of Vanport (Flint Ridge) chert have been reported. Artifacts of this material were recovered from both the Swale and King’s Road sites in the mid Hudson Valley (Funk 2004:107). Flint Ridge might also be the source of the ‘white chalcedony’ channel flake and debitage reported by Binzen from the Turners’ Falls site in the Connecticut Valley (Binzen 2005:55). While Knife River chert, which originates in, North Dakota (Clayton et al. 1970), is a very unusual lithic material in the Northeast, other examples have been reported. These include an unfluted biface and three end scrapers from Warren County, PA (Lanz 1984:213), a large fluted biface and debitage from the Lamb, Genesee County, NY (Gramly 1999:40-41, 103), and two artifacts, a flake knife and a large spall, from the mid-Hudson Valley (Ted Filli, personal communication, 1/13/2005).

What is most surprising is how scarce regional lithics are in the Wapanucket assemblage. There are only three examples from Locus 8 – a fluted point base (#8-249) and a thinning flake that appear to be Mt. Jasper or Israel River rhyolite, and a fluted point base (#8-1816) of Munsungun red chert. While both these materials occur on other Paleo sites in the region, they usually occur as a much larger percentage of the total lithic assemblage. Mt. Jasper rhyolite occurs at Bull Brook and on several Paleo sites in New Hampshire (Boisvert 1998), while Munsungun red chert occurs on many PaleoIndian sites in the New England-Maritime region, notably Bull Brook and Spiller (Pelletier and Robinson 2005; Pollock et al 1999). Distribution of this distinctive material also extends to the edges of the region and possibly beyond. This may be the “maroon jasper” described by Ritchie from the Davis site on Lake Champlain (Ritchie 1965:21) and by Funk from Kings Road and Swale sites in the Hudson Valley (Funk 2004:107).

The only other regional lithics from Wapanucket are three artifacts of Saugus jasper, a biface fragment, a wedge-shaped core and a thinning flake, all from the Beach locus. This material is well represented in Gainey-related Paleo assemblages in eastern New England such as Bull Brook (Grimes et al 1984:168, Plate 6, #2-5) and the Hedden site in Maine (Spiess and Mosher 1994). Although often called “jasper”, this material is actually a fine-grained felsic rock that occurs as part of the Lynn volcanic series. Given its visual similarity to the red variety of jasper from eastern Pennsylvania, it becomes easier to see why Clifford Kaye termed this an atypical “thermal chert”.

In sum, the two Paleo components at Wapanucket have substantially different lithic assemblages. The Locus 8 artifact assemblage (n=47) is dominated by Normanskill chert (62%) with other gray New York cherts second (19%), and Pennsylvania jasper third (8%). True exotics such as Knife River chert (2%) and Flint Ridge chert (2%) as well as regional lithics (6%) are present only in small quantities. By contrast, the Beach component (n=15) contained no Normanskill chert and is dominated by Pennsylvania jasper (60%) with small amounts of other cherts (20%) and Saugus jasper (20%).

Discussion

Comparisons with Bull Brook

Locus 8 at Wapanucket has often been compared with the Bull Brook site and for good reason. The two sites share many of the same artifactual traits, especially in terms of fluted points. On both sites, the points are a mix of Early PaleoIndian Gainey and Butler styles, and share the same basic shapes (Figure 7). As
discussed above, the latter have more prominent basal ears and longer flutes, some of which extend the full length of the point. However, there are many differences between Locus 8 and Bull Brook, aside from the obvious size of the sites and their assemblages. The points from Locus 8 are substantially smaller than those from Bull Brook and more like the “stubby” fluted points from the Port Mobil sites (Kraft 1977). Locus 8 also has produced only broken and discarded point fragments whereas the Bull Brook assemblage contains a substantial number of complete and usable points. Locus 8 has no points with deeply indented bases (Debert-Vail style points) whereas Bull Brook does. In terms of other artifact classes, Locus 8 does not have drills, limaces or piece esquillée, all of which are well represented at Bull Brook. Conversely, Locus 8 has small blade cores, a form not reported from Bull Brook. Finally, Locus 8 has a different set of lithics, one dominated by cherts from the Hudson Valley, in contrast to Bull Brook’s mix of Munsungun chert, Mt. Jasper rhyolite and other materials from the region (Pelletier and Robinson 2005:163). In this regard, Locus 8 is more like the Turners Falls site where 97% of the lithic assemblage was one material, jasper (Binzen 2005:55) and probably from Pennsylvania. However, in spite of their differences, we believe the assemblages from Locus 8 and Bull Brook have a similar feel, and perhaps represent different phases of the same pattern of movement within the region.

Where did they come from?
Based on the lithic composition, we would argue that Locus 8 represents the movement of a band of PaleoIndians who came from the mid-Hudson Valley, bringing with them a stock of Normanskill chert (both as large bifaces and finished tools) plus other New York cherts and Pennsylvania jasper as well as a few objects of more exotic material that had been acquired through exchange or long term curation (Vanport chert and Knife River chert). This hypothesis is supported by the strong similarities in both tool forms and lithic preference on the sites of the West Athens Hill cluster (Funk 2004).

Where were they going and why?
While it is impossible to know, there are several possible hypotheses:

1. Locus 8 was the site of an early group of PaleoIndian migrants into the New England-Maritime region. The predominance of lithics from the Hudson Valley, and even farther west, supports this. Stylistically, however, the fluted points are more typical of the late Gainey, or Butler phase. Like Bull Brook, Locus 8 also has a few points with what are generally considered Parkhill, or mid-Paleo, traits such as flutes that run the complete length of the point and the presence of prominent basal ears. These traits suggest that Locus 8, and perhaps Bull Brook as well, cannot be among the region’s earliest sites.

2. A second hypothesis is that Locus 8 was the site of a slightly later group of migrants into the region. This would explain both the lithic and the later stylistic traits. However, the presence of a few artifacts made from regional lithics (Munsungun chert and Mt. Jasper rhyolite) suggests that these were not new comers. Also,
there is no natural or intuitive route from the mid-Hudson Valley to the interior of Southeast Massachusetts. This suggests that the people who went to Locus 8 had some idea of where they were headed.

3. We prefer a third hypothesis - that Wapanucket 8 was part of a specific, possibly band-related, pattern of movement in what is now southeastern New York and southern New England. This pattern of mobility was anchored in part by the rich lithic (and other) resources of the Hudson/Champlain Valley on the west and those of the Gulf of Maine to the east. This zone of movement appears to have extended south down the Hudson and possibly upper Delaware to include sites such as Port Mobil and Plenge, and east to include Long Island, Martha's Vineyard, Nantucket and Cape Cod as well as now inundated portions of the coastal plain (Figure 8). This area also fills some of the gap between the New England-Maritimes region, as originally defined by Spiess and Wilson (1987:134, Figure 7.1) and a proposed pattern of PaleoIndian settlement on the Mid-Atlantic coastal plain (Custer et al. 1983).

Evidence in support of this hypothesis includes not only the strong similarities in lithics and artifacts forms between Locus 8, the mid-Hudson Valley and Port Mobil sites, but the probable presence of Munsungun red as exhausted tools at the Swale and Kings Road sites as well as at Locus 8. If confirmed as Munsungun, this would provide evidence of east to west movement, something currently not documented in the New England-Maritimes region. The depleted quality of the Locus 8 lithic assemblage also suggests that, while this group of PaleoIndians had replenished their supply of material in the mid-Hudson Valley, it was time to restock. If this assumption is correct, then perhaps the tool fragments of Munsungun chert and Mt. Jasper rhyolite were the remnants of lithics acquired earlier in the cycle of movement.

When were they there?
No radiocarbon dates have been obtained from Locus 8, so it is not possible to know with any certainty. Nor have acceptable date been reported from Bull Brook. However, the dates from the Younger Dryas climatic event are well established. That event occurred between 12,900 and 11,600 cal yr BP and appears to correlate with the use of fluted points in the New England-Maritimes region (Newby et al. 2005). In addition, two radiocarbon dates have been reported from the Hedden site: 10,500±60 and 10,580±60 BP (Spiess et al. 1995). These calibrate to 12,478 and 12,744 years ago respectively and provide a reasonable guess for when Locus 8 was occupied.

Conclusion

Consistent with the rest of the site, the PaleoIndian presence at Wapanucket is multi-component. The primary occupation occurred at Locus 8. With its late Gainey/Butler style fluted points and diverse, non-local lithics, this appears to be a single, brief occupation and very
similar to Bull Brook. The Beach component represents some other PaleoIndian presence. Unfortunately, with its "different" but undefined fluted points and unusual lithic assemblage, this component remains a mystery. The presence of two Ste Anne/Varney point bases indicates a Late PaleoIndian presence on the site as well.

We suggest that the Gainey/Butler phase occupation represents the movement of a band of PaleoIndians who came from the mid-Hudson Valley, bringing with them a stock of Normanskill chert plus other chert and jasper tools as well as a few objects of more exotic material. They also may have continued to carry a few artifacts made from lithics that originated in the New England-Maritimes region (Munsungun chert and Mt. Jasper rhyolite) acquired earlier in the cycle of movement. At Locus 8 they made new fluted points from Normanskill chert leaving large thinning flakes as well as trim and channel flakes behind. They also re-sharpened their existing points discarding the tips and bases that were no longer usable. This suggests that, wherever they were headed next, replenishing their supply of lithic material was a priority. Our guess is that they may have been headed towards the Boston Basin, or even Bull Brook.

Acknowledgements
The authors would like to thank Ted Filli for information on PaleoIndian sites in the mid-Hudson Valley. We would also like to acknowledge the late Herb Kraft for his observations on the Zierdt site and the written comments made by the late Fred Carty on the Wapanucket assemblage during the MHC Survey of the Bronson Museum in 1980.

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Hoes, Digging Implements or Heavy Scrapers?

Bernard A. Otto

Most contributions to the Bulletin focus on projectile points in one form or another. This article discusses something different – the rough stone tools that rarely get much attention. While these artifacts are anything but classy, they were an important part of the tool kit used by Native people in Southeast Massachusetts during the Late Archaic period.

Early excavators in the region called these rough stone tools “hoes”, largely for want of a better name. Generally these tools are ovate in shape and range from small examples, 2” by 3” to large ones up to 12” long. They were chipped to shape by direct percussion with special attention paid to the sharp rounding of the front edge (Figure 1). The majority of examples are made from metamorphosed sandstone or arkosite, a very tough and durable material. A few are made from slabs of traprock or basalt.

While most collectors would not give these tools a second glance, I find them interesting because they were everyday tools, like hammer stones, and essential for a variety of tasks. My sense is that these were used primarily as digging tools, for excavating hearths and earth ovens as well as pits for storage, the disposal of refuse, and other necessities. They were probably used for digging roots and tubers as well. While it is possible that some of the smaller examples were hafted and used as hide scrapers, I believe that most of these artifacts were digging implements and used unhafted with a two-handed grip.

In sum, these stone tools were the equivalent of our shovels and hand trowels. As such they are an important part of the archaeological record and are certainly worthy of more detailed study.

Figure 1. A sample of rough stone digging tools from sites in Plymouth and Kingston, MA.
In Memorium: Douglas F. Jordan, 1925-2006

I met Douglas F. Jordan in 1954 at a meeting of the Northeast Chapter of the MAS. He was a graduate student at Harvard, studying archaeology and interested in New England prehistory. We became friends almost immediately and, soon after, he became my mentor. During our long discussions on local and regional archaeology, he provided me with course outlines and reading lists from his classes at Harvard and introduced me to books and journals, such as American Antiquity. Before I even knew what “a collector” was, Doug cautioned me not to become one and explained what I might do instead.

Doug lived in Wakefield and introduced me to others with a serious interest in archaeology - men like Dr. Ernest Tyzzer, Bill Eldridge, the Vaccaro brothers and the rest of the “Bull Brook boys”. He told me about previous research that had been done in the area, especially by Ripley Bullen, who had left Massachusetts for a job in Florida, and the huge impact that his departure had had on the Northeast Chapter and the MAS in general. In many ways, it was Doug who filled the gap left by Bullen’s absence.

As a result of his friendship with Bill Eldridge and the Vaccaro brothers, Doug decided to study the PaleoIndian artifacts from Bull Brook for his doctoral dissertation. Many Wednesday evenings were spent in Beverly talking with the “Bull Brook boys” about the site and what it might mean. I was often allowed to sit in and learned a great deal during those meetings.

As Doug began to produce chapter drafts, he would bring them over to my house in nearby Stoneham so that my wife, Pearl, and I could review them. We read them with pleasure and talked, even argued about certain points. Pearl was an excellent editor and also reviewed each draft for spelling and word choice. Doug would listen to our comments then make the changes he felt were appropriate. In this way, the dissertation was completed, a chapter at a time. Doug successfully defended his dissertation entitled The Bull Brook site in relation to “Fluted Point” manifestations in eastern North America in 1960. That work continues to serve as a classic in our understanding of PaleoIndians in the Northeast.

Once he received his degree, Doug began to move on to other things. However, this did not mean he forgot his friends in the Northeast Chapter. In fact, when hired to do survey work outside the area, Doug left four pages of instructions on how to run the Chapter in his absence, just in case we forgot anything. We could also count on Doug to give really interesting talks upon his return. This was especially the case after he worked on an excavation near Point Barrow, Alaska.

Doug was the kind of person everyone liked because he was so generous and always willing to share his knowledge. He was a great friend and teacher and although I will miss him, I will never forget him.

Eugene Winter
Douglas F. Jordan received his BA from Dartmouth College in 1949. He later earned his MA and PhD in anthropology from Harvard University. Prior to his appointment to the University of Connecticut in 1963, he was an archaeologist for the National Park Service, and at the Florida State Museum. At the University of Connecticut, he accepted a position teaching in the Anthropology Department, and was also appointed the first State Archaeologist of Connecticut. In addition, he served as Curator of the University’s anthropological collections and played an important role in helping them grow. For example, Doug was responsible for bringing the Norris L. Bull Collection of pre-Contact and Contact Native American artifacts to UConn.

He was a prominent and active instructor of undergraduates and graduates. He was personally responsible for the education of an entire generation of archaeologist, many of which are active professionally in the field today. Doug directed the UConn summer field school teaching archaeological techniques and methods for more than a quarter of a century.

His intellectual and research interests fell into two distinct categories. The first is the prehistoric archaeology of eastern North America, and New England in particular. He excavated and conducted research at the Bull Brook, Schwartz, Woodchuck Knoll and Hollister Sites among many. His second, but not lesser, interest was in primitive technology – from stone tools to ceramics to metallurgy, from watercraft to weapons to cooking vessels.

Doug served for more than two decades as the Connecticut State Archaeologist, and was the most visible leader of the professional and amateur archaeologists in the state. He served the Archaeological Society of Connecticut consecutively as Program Chairman, Newsletter Editor, and President. He also continued his longtime membership in the Massachusetts Archaeological Society. Doug’s work with the amateur community set the stage for both archaeological societies to develop good working relationships between professional and avocational archaeologists in New England.

Nicholas F. Bellantoni
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