Fall 2009

Bulletin of the Massachusetts Archaeological Society, Vol. 70, No. 2

Massachusetts Archaeological Society

BULLETIN OF THE MASSACHUSETTS ARCHAEOLOGICAL SOCIETY

VOLUME 70 (2) FALL 2009

CONTENTS:

THE MASSACHUSETTS ARCHAEOLOGICAL SOCIETY, Inc.
P. O. Box 700, Middleborough, Massachusetts 02346-0700

THE MASSACHUSETTS ARCHAEOLOGICAL SOCIETY, Inc.
Robbins Museum of Archaeology
Web Site address: www.massarchaeology.org
phone: (508) 947-9005
email: info@massarchaeology.org

The ***BULLETIN OF THE MASSACHUSETTS ARCHAEOLOGICAL SOCIETY*** is published semi-annually, with a Spring issue, Number 1, and a Fall issue, Number 2. Individual memberships in the Society that include receiving the Bulletin are $30. For information on institutional subscriptions and other special rates for membership, as well as requests for back issues of the Bulletin, please visit the web site or con-tact the Massachusetts Archaeological Society, P.O. Box 700, Middleborough, MA 02346 (508-947-9005). Publication in the Bulletin is a privilege of membership. Manuscripts and comments may be sent to the editor, Curtiss Hoffman, 58 Hilldale Road, Ashland, MA 01721 or emailed to c1hoffman@bridgew.edu.

Printed by DigiPrint, 389 West Center St., West Bridgewater MA 02379

Editor's Note

Welcome to the Fall 2009 issue of the *Bulletin of the Massachusetts Archaeological Society*! This issue contains four main articles: our first look at an important new acquisition for the Robbins Museum, the William W. Whiting Collection, by Society photographer Jeff Boudreau; two articles by long-time MAS member and *Bulletin* author Bill Taylor, one on pottery from the Titicut area and the other on whetstones, and an overview of my 2009 field investigations of the Middleborough Little League site. I want to thank our two loyal copy readers, Bill Moody and Kathy Fairbanks, for taking the time to review these articles and for suggesting emendations.

In addition, we were saddened to learn last Spring, through MHC staff member and Cape Cod MAS member Lenny Loparto, of the passing of George Stillson. George was a former student of mine in Public Archaeology at Bridgewater State College, and he served for several terms as Recording Secretary on the MAS Board. He is best known in the archaeological community for his work for the National Park Service during the early 1990s at the Carns Site on Coast Guard Beach, where swift action by a dedicated team of amateur and professional archaeologists under his supervision saved a major portion of this site from destruction by storm surges. A copy of his obituary from the Cape Cod On-Line news service is accompanied by a picture of George at the site, supplied by our President, Frederica Dimmick.

I must report on a number of errors in the Spring 2009 issue of the *Bulletin.* In part, these were due to the typesetting program I was using, which reverted to a previous version of the text during the printing process. Thanks to our Society's Technology Committee Chair, Tom Largy, I am now working with a much more stable and flexible program, InDesign CS4, and hopefully errors of this sort will not occur again. The editor thanks the authors for bringing these errors to his attention, and apologizes for any confusion this may have caused for readers of the *Bulletin*.

The major problem was with the order of the figures in the article on Mount Tom lithics by Driver and Calogero. Many of the images did not match the figure numbers or captions. I have provided thumbnails of the images in their correct order, with their correct captions, on the next three pages of this issue. Figure 5, a map, was correctly labelled and correctly positioned in the text.

Copyright notices were inadvertantly omitted from all of the articles. There were also some errors in the text. Some text boxes disappeared behind images or were shifted from one section to another. In the Dudek article, the corrections are as follows:

- p. 14: Figure 7 should be labeled "Figure 6".
- p. 14: There is missing text between the bottom of the right-hand column and the top of the left-hand column on p. 15. The last sentence on p. 14 should read, "Fine screening (1/8") by quadrants was conducted for the top two 5-cm levels of the B horizon in EUs 3 and 4, with few pieces of calcined bone recovered, except for a moderate increase in the NW quad of EU 4. As a result, EUs 6 and 7 were located north of EU 4 and west of EU 2, encompassing test pit FG-5. Fine screening (1/8") by quadrants was conducted for the top two 5-cm levels of the B horizon in EUs 6 and 7, with numerous pieces of calcined bone and micro flakes recovered, except for a decrease in the NW quad of EU 7."
- p. 16: The words "Patches or streaks of yellowish brown (10YR 5/6) soil sometimes ran be tween strong brown patches, probably the result of bioturbation." are repeated twice.
- p. 24: The section in the right column of p. 24 starting with the second line of the first full paragraph ("found. Artifacts which remain at the site . . .") to the end of the column ("a hearth, tool modification/maintenance activity"), is misplaced. This section belongs after the right-hand column of p. 25.

In the Driver and Calogero article, the text corrections are as follows:

- p. 29: The abstract ends in mid-sentence. It should continue as follows:
  " . . . used by prehistoric toolknappers in the Connecticut Valley north and south of Mount Tom."
- p. 29: The last line of Introduction: misspelling of the word "intermixed".
- p. 35: In the left column second paragraph, a sentence is interrupted with the extra phrase "

Finally, in Taylor's article on fire-making kits, the caption for Figure 1 incorrectly states that there are eight bone and antler points plus a shark's tooth, while the figure actually only shows seven points.

Curtiss Hoffman

Figures from the Driver and Calogero article:

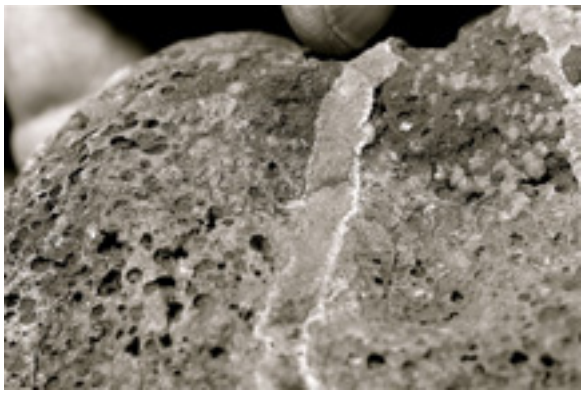


Figure 1. Basalt breccia veined with orange-brown very fine-grained chert, Goat's Peak, Mount Tom. (photograph: J. Calogero)

Figure 3. Chert deposit above basalt pillow, Mount Tom west face. (photograph: J. Calogero)

Figure 2. Basalt pillow in Holyoke flow, Mount Tom west face. (photograph: J. Calogero)

Figure 4. Cavity in Holyoke flow left by a basalt pillow that has rolled downhill, Mount Tom west face. (photograph: J. Calogero)

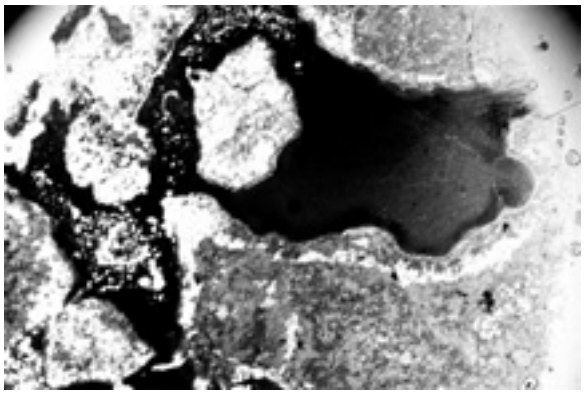


Figure 6. Chert/ basalt thin section in geological sample, Mount Tom west face:. mag. x15, field of view 3 mm (photomicrograph: B. Calogero).

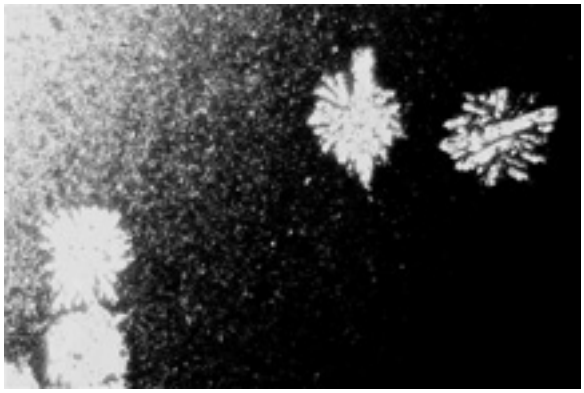


Figure 7. Chert thin section with clusters of needles in geological sample, Mount Tom west face: mag. x25, field of view 1 mm (photomicrograph: B. Calogero).

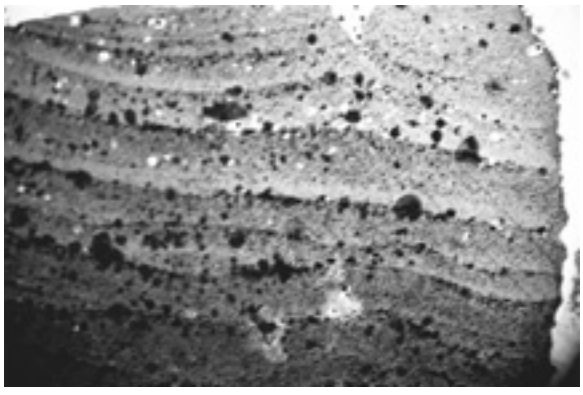


Figure 8. Bedded chert thin section with amethyst crystals in geological sample, Mount Tom: mag. x15, field of view 3 mm (photomicrograph: B. Calogero).

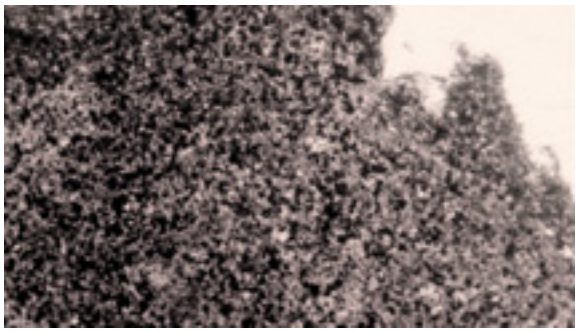


Figure 9. Chert thin section with opaques and carbonate crystals in geological sample, Mount Tom: mag. x25, field of view 1 mm (photomicrograph: B. Calogero).

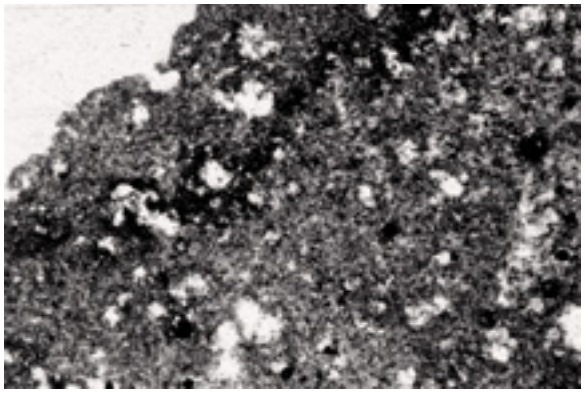


Figure 10. Anciparch's Piggery site chert artifact thin section is Mount Tom chert with opaque minerals and eroded carbonate crystals, Northampton Meadows, MA: mag. x25, field of view 1 mm (photomicrograph: B. Calogero).

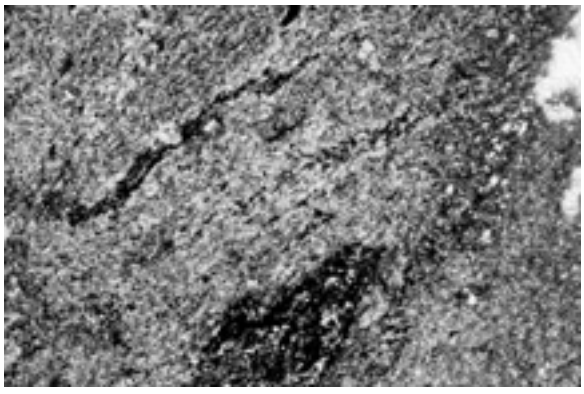


Figure 11. Artifact thin section of hornfels with remnant bedding, Northampton Meadows, MA: mag. x25, field of view 1 mm (photomicrograph: B. Calogero).

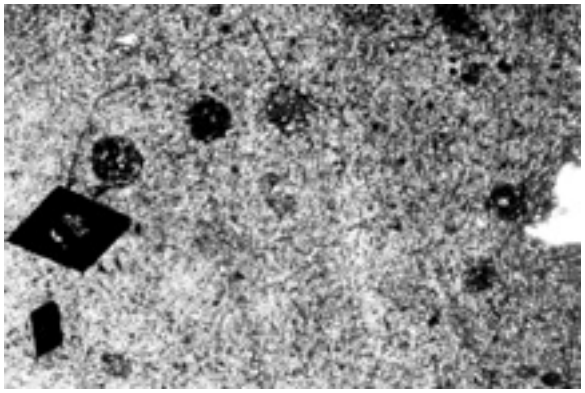


Figure 12. Artifact thin section of non-local radiolarian chert, Sugarloaf site, Whately, MA: mag. x25, field of view 1 mm (photomicrograph: B. Calogero).

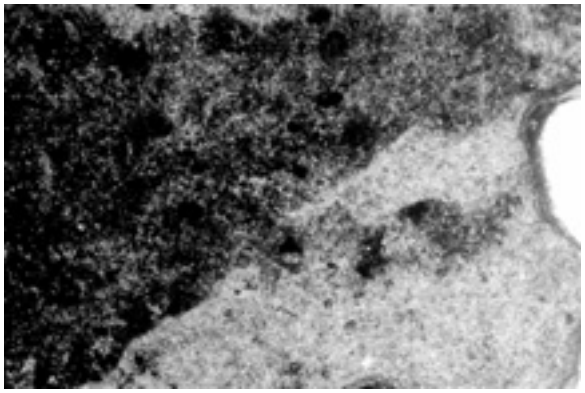


Figure 13. Artifact thin section of hornfels, Sugarloaf site, Whately, MA: mag. x25, field of view 1 mm (photomicrograph: B. Calogero).

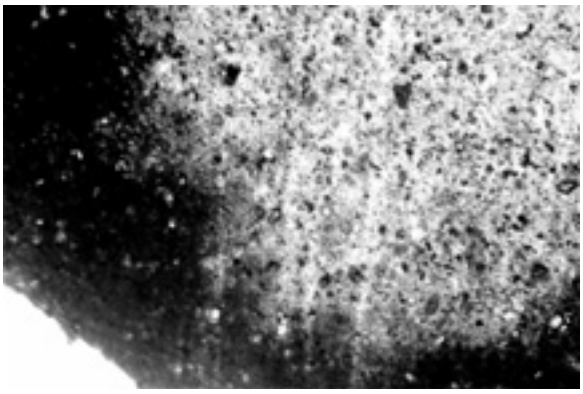


Figure 14. Artifact thin section of weathered hornfels, Long Plain Delta site, Sunderland, MA: mag. x25, field of view 1 mm (photomicrograph: B. Calogero).

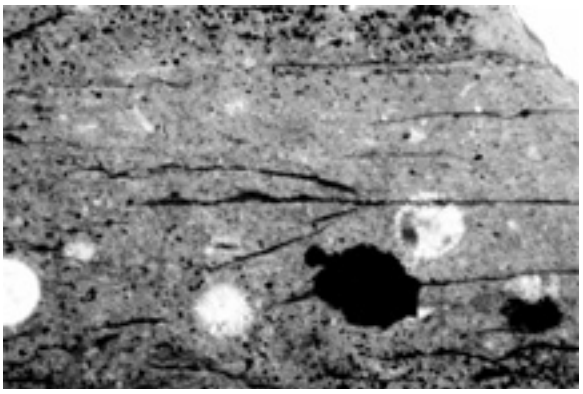


Figure 15. Artifact thin section of hornfels, Nelson collection, Northfield, MA: mag. x25, field of view 1 mm (photomicrograph: B. Calogero).

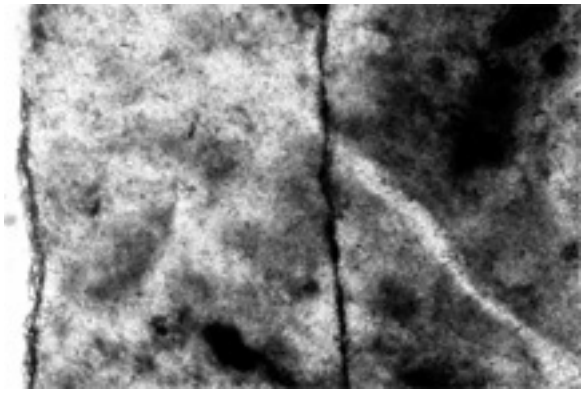


Figure 16. Artifact thin section of local chert from collection, Montague, MA: mag. x25, field of view 1 mm (photomicrograph: B. Calogero).

In Memoriam
George H. Stillson

(excerpted from Cape Cod On-line)

George H. (Terry) Stillson, of Hyannis, devoted husband, father, and grandfather, oblate at Glastonbury Abbey, and parishioner at St. Francis Xavier Church in Hyannis, died at home on Wednesday, March 25, 2009, surrounded by his family, after a battle with cancer.

Born in Tallahassee, Fla,, he was the son of George Hamilton Stillson Jr., and Ellen L. Lawler. He lived in many areas of the country with a home base in Greenfield, and joined the Air Force in 1962. When he left the Air Force in 1965, he met his wife, Nancy Erwin, at UMass Amherst. archaeology work for UMass Amherst and the After their wedding in 1967, they moved to Cape Cod. He worked at John Hancock Life Insurance, Conway Real Estate, and earned his degree in Anthropology in 1982. He did contract archaeology work for UMass Amherst and the National Park Service, including the excavation at Coast Guard Beach.

He taught Anthropology and Archaeology at Cape Cod Community College for many years. He worked for Catholic Social Services as an ESL instructor and became an advocate for immigrants. He made several trips to Brazil, including a trip to the Amazon, where he lived with the Deni tribe for a month.

He will always be remembered for his enthusiasm for all the good things life had to offer, and he will be greatly missed.

Figure 1. George Stillson at Coast Guard Beach, 1991.

A Preliminary Report on The William W. Whiting Collection

Jeff Boudreau

Introduction

The collection of William W. Whiting was acquired by the Robbins Museum of Archaeology in March, 2009. The donation was made by his daughter Charlotte A. Beale (*nee* Whiting) and her sons Donald, William and Kenneth Beale. Mr. Whiting, born in 1881, raised both rainbow and brown trout at Nook Farm in Plymouth, MA and sold fertile roe throughout the United States. It's possible that there remain populations of rainbows and browns, across the country, whose heritage could be traced back to Nook Farm. Mr. Whiting (Figure 1) had an avid interest in local archaeology and became a charter member of the Massachusetts Archaeological Society, founded in 1939.

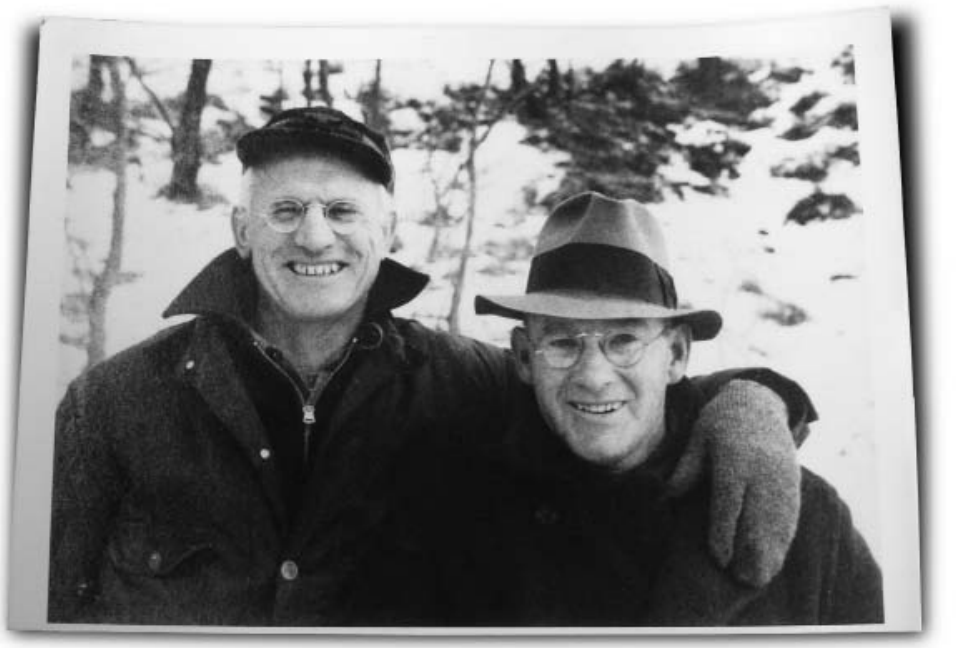


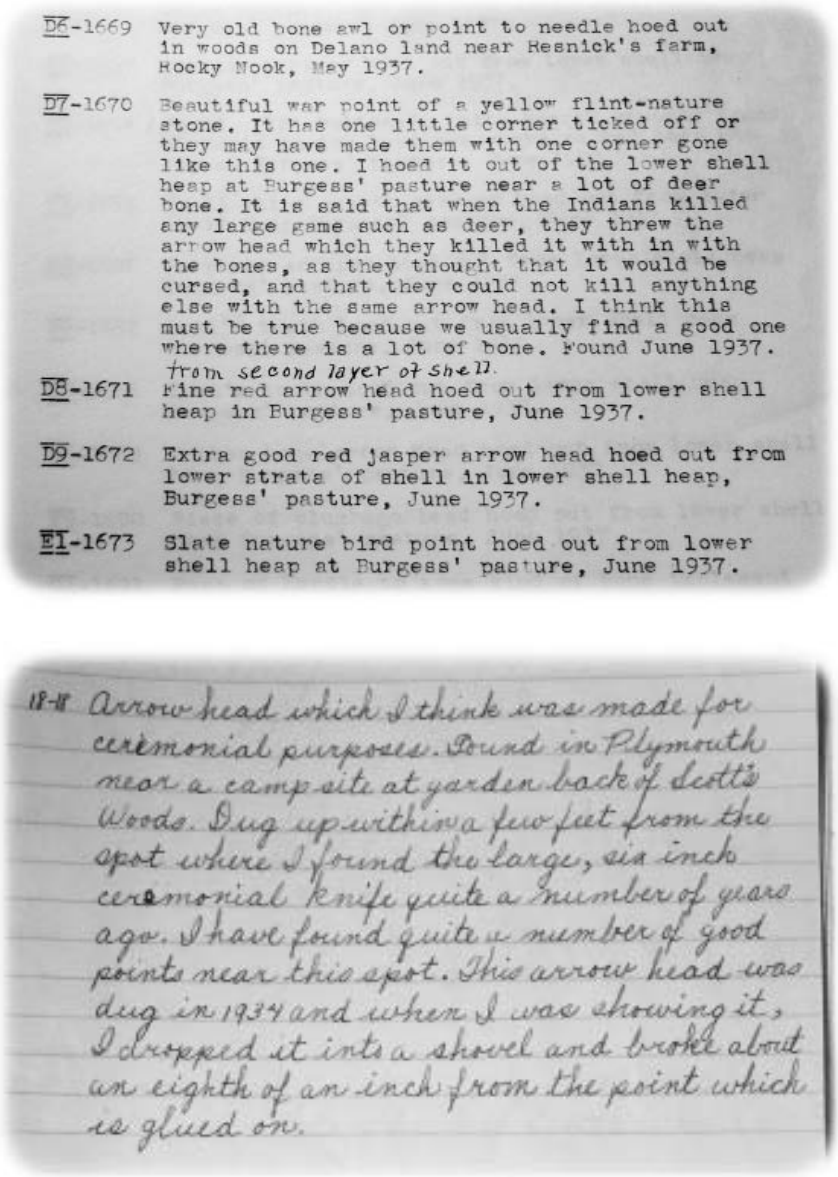
Figure 1. William W. Whiting (right) and Jesse Brewer circa 1930.

Mr. Whiting's collection is comprised of approximately 5,000 cataloged pieces. The number isn't exact as there were some artifacts whose identification had been rendered indecipherable over the years. There is also a similar number of broken pieces that were not recorded. During the time he was collecting, very little was understood about the archaeology of this region. In fact, at that time, the same may be said for the entire continent. Because of this lack of understanding, the importance of some pieces went unrecognized. One example is a channel flake from a large fluted point of Paleo age. However, he did record the tip of a fluted preform made of Saugus jasper. Thus, we did learn the location of a site where fluted points were being manufactured.

After receiving the collection and after considerable discussion, it was decided that the best course of action would be to sort the artifacts by site. It was thought that this would be the most expeditious way to acquaint ourselves with the collection and the location of the sites explored by Mr. Whiting. It wasn't long before we realized the remarkable nature and importance of this collection. This is a pure collection, primarily from Plymouth County, MA. Mr. Whiting had no interest in acquiring artifacts from outside the region. He did visit well known sites along the North River, some along the Taunton River and a few on Cape Cod. There are a significant number of sites in Duxbury and Kingston, but his primary focus was Plymouth, with more than 40 sites identified. There are a number of points from New York. Mr. Whiting wrote that while driving through New York he noticed an "Arrowhead Farm". He stopped, asked for and received permission to hunt, and indeed found some arrowheads.

The sorting of artifacts by site was largely completed in late August. We are now in the process

of compiling a trait list for each site with an initial focus on the larger sites. This will be a time-consuming task. Some sites are represented by a single artifact, while the larger assemblages are composed of hundreds of pieces. In all, more than 100 sites have been identified. Some of these are well known; others are not but have geographic identities such as ponds, lakes, creeks, bogs, etc. Some sites may not be able to be located, as they are referred to only, for example, as "Jones Farm". An examination of town records may help to locate sites in this category. Once the sites are plotted, we will be able to determine which sites were coastal, riverine, lakeside, bogside, etc. We will then be able to compare the diagnostic traits associated with each site setting. This has the potential of revealing a vivid portrait of how land use changed through time, and what activities can be inferred from the assemblages. At the least we will be able to compare and contrast coastal and interior assemblages. It may also reveal the context in which certain artifact types appear. The occurrence of scraper types is an interest, and in particular, quartz steepedge scrapers. Patterns of lithic preference or exotic lithic distribution may emerge. It seems the research potential of this collection is limited only by the imagination.



D6-1669 Very old bone awl or point to needle hoed out in woods on Delano land near Resnick's farm, Rocky Nook, May 1937.

D7-1670 Beautiful war point of a yellow flint-nature stone. It has one little corner ticked off or they may have made them with one corner gone like this one. I hoed it out of the lower shell heap at Burgess' pasture near a lot of deer bone. It is said that when the Indians killed any large game such as deer, they threw the arrow head which they killed it with in with the bones, as they thought that it would be cursed, and that they could not kill anything else with the same arrow head. I think this must be true because we usually find a good one where there is a lot of bone. Found June 1937. from second layer of shell.

D8-1671 Fine red arrow head hoed out from lower shell heap in Burgess' pasture, June 1937.

D9-1672 Extra good red jasper arrow head hoed out from lower strata of shell in lower shell heap, Burgess' pasture, June 1937.

E1-1673 Slate nature bird point hoed out from lower shell heap at Burgess' pasture, June 1937.

18-8 Arrow head which I think was made for ceremonial purposes. Found in Plymouth near a camp site at yarden back of Scott's Woods. Dug up within a few feet from the spot where I found the large, six inch ceremonial knife quite a number of years ago. I have found quite a number of good points near this spot. This arrow head was dug in 1934 and when I was showing it, I dropped it into a shovel and broke about an eighth of an inch from the point which is glued on.

Figure 2. Photo vignettes from Whiting's two books.

The artifacts were recorded in two books (Figure 2). The larger of the two books is typewritten; the smaller volume is handwritten. These catalogs appear to have been written over a period of many years, though the exact range is yet to be determined. Many entries are as simple as, "[Artifact description] found prior to 1934 in Plymouth." Others are more detailed and suggest an emotional connection to the discovery. For example, the apparent Hardaway Side-Notched point (Figure 5, F) was found by his 5 year old grandson Donald on Boot Pond while the owner was creating a beach at the base of the hill where his camp was located.

Here is what Mr. Whiting had to say about a cache found in Berkeley (Figure 3).

"A cache from Dick Perry's grandfather's lawn in Berkeley, Mass., near Taunton River. The Dighton Rock is only about a mile down the river from this place. This cache is composed of 22 knives of good workmanship, all in the neighborhood of

3" long, and all of the same pinkish shade stone from the same stock. I do not know what kind of stone it is. There is also a gouge, and one of the knives is 6 1/2 " long of which I do not know the use." "There is a field stone with a bronze tablet on it placed on the edge of the sidewalk about 30 feet from the place where the cache was found. This tablet is marked 'In memory of Edward Bobbet slain here by indians June 23, 1675 and buried near this spot.' The indians were chasing Bobbet so he climbed a large tree, but his little dog stayed at the foot of the tree and barked which gave him away, and they shot him out of the tree."

"Dick Perry says he remembers when they took that old tree stump out."

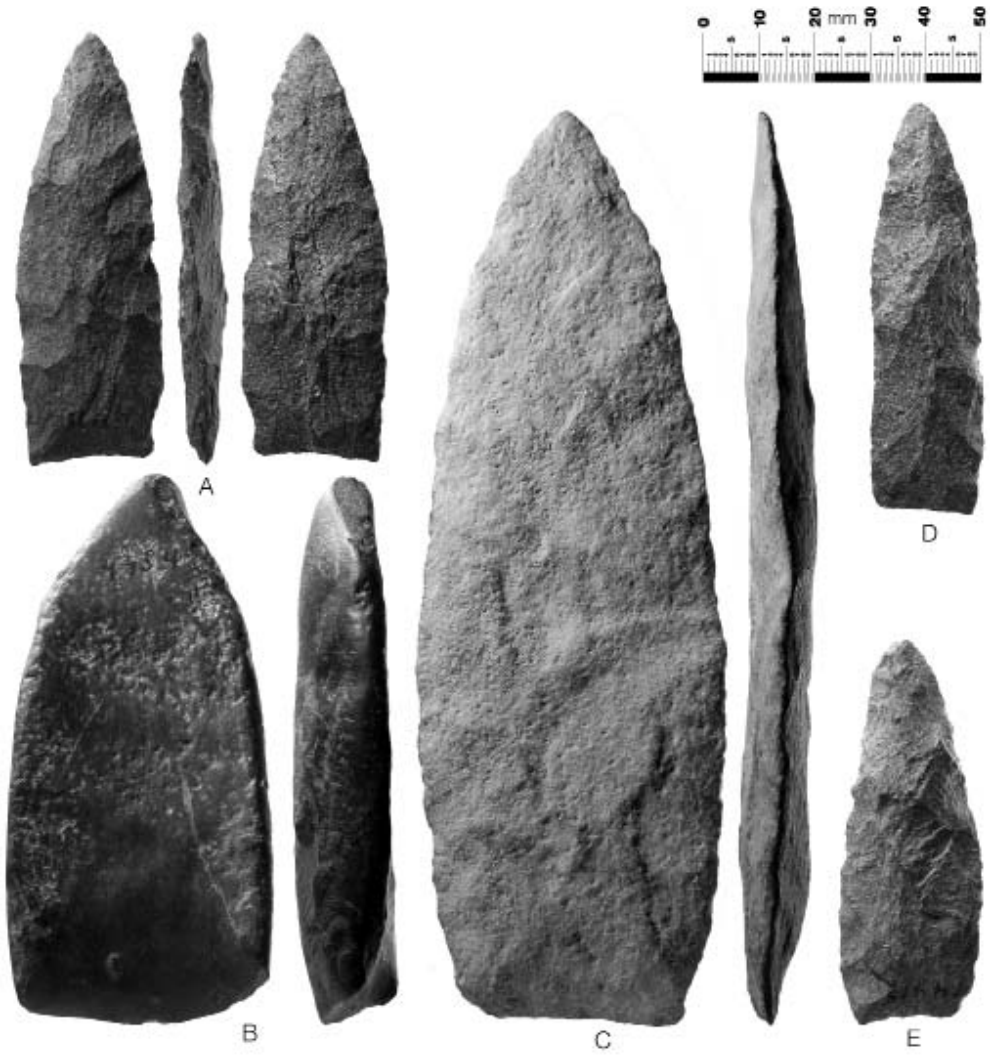


Figure 3.
Berkeley cache, A, D-E, Attleboro felsite Coburn blades, B, Gouge, C, Webb-like Lockatong argillite blade.

Most of this cache was stolen during a robbery. He described three of the blades as "beautiful", three as "slightly stemmed" (Coburn) and one as, "a beautiful spearpoint, deeply side notched. . ." (Wayland Notched?). This is a very interesting cache. It is composed of Coburn blades (Dincauze 1968) made of Attleboro felsite, a large Webb-like blade (Custer 1984) made of Lockatong argillite and a gouge. These traits appeared together at both the Mansion Inn site in Wayland, MA (Mansfield 1961) and Seaver Farm in Bridgewater, MA (Taylor 1972) as incinerated burial offerings. Whiting's cache was not incinerated, suggesting perhaps a cenotaph or a cache assembled for a future anticipated offering.

Reading through the catalogs, one gets a sense of the state of archaeological understanding mentioned above. Certain artifact types were recognized by their forms: axes, gouges, weights, abrading stones, etc. are examples. "Arrowheads" are another matter. Whiting referred to Levanna points as "war points" and narrow Orient-like points as "game points". Whiting may have been aware of Warren K. Moorehead's work. He did cite Charles C. Willoughby's *Antiquities of the New England Indians* (1935) in one of the articles he wrote for the *Bulletin of the MAS*. As a charter member of the Society he was no doubt familiar with Ripley Bullen. Around this time Bullen was developing a point typology based on morphological attributes. This typology is the one on which Fowler based his

typology (1963). Whiting did use the term "corner removed" coined by Bullen, though it would be decades before the temporal significance of these forms would be understood.

An Overview of the Collection: Projectile Points

As of this writing it appears that all cultural periods have a presence in the Whiting collection. Representative examples from each period are shown below. It is not yet possible to quantify the relative frequencies of diagnostic point types. That will not be possible until the trait lists are completed and compiled. Any mention of relative numbers here are impressions only.

As might be expected, Paleo, Late Paleo and Early Archaic artifacts are sparse. There are two fragments of fluted point preforms (Figure 4) and a channel flake fragment made of chert which are indisputable. This channel flake was modified for use as a knife. There is also a point (Figure 4, G), broken in manufacture, made of quartzite, with an extraordinarily well thinned base that may be of Paleo origin. There are a number of parallel-sided basal fragments which may be Late Paleo. How-

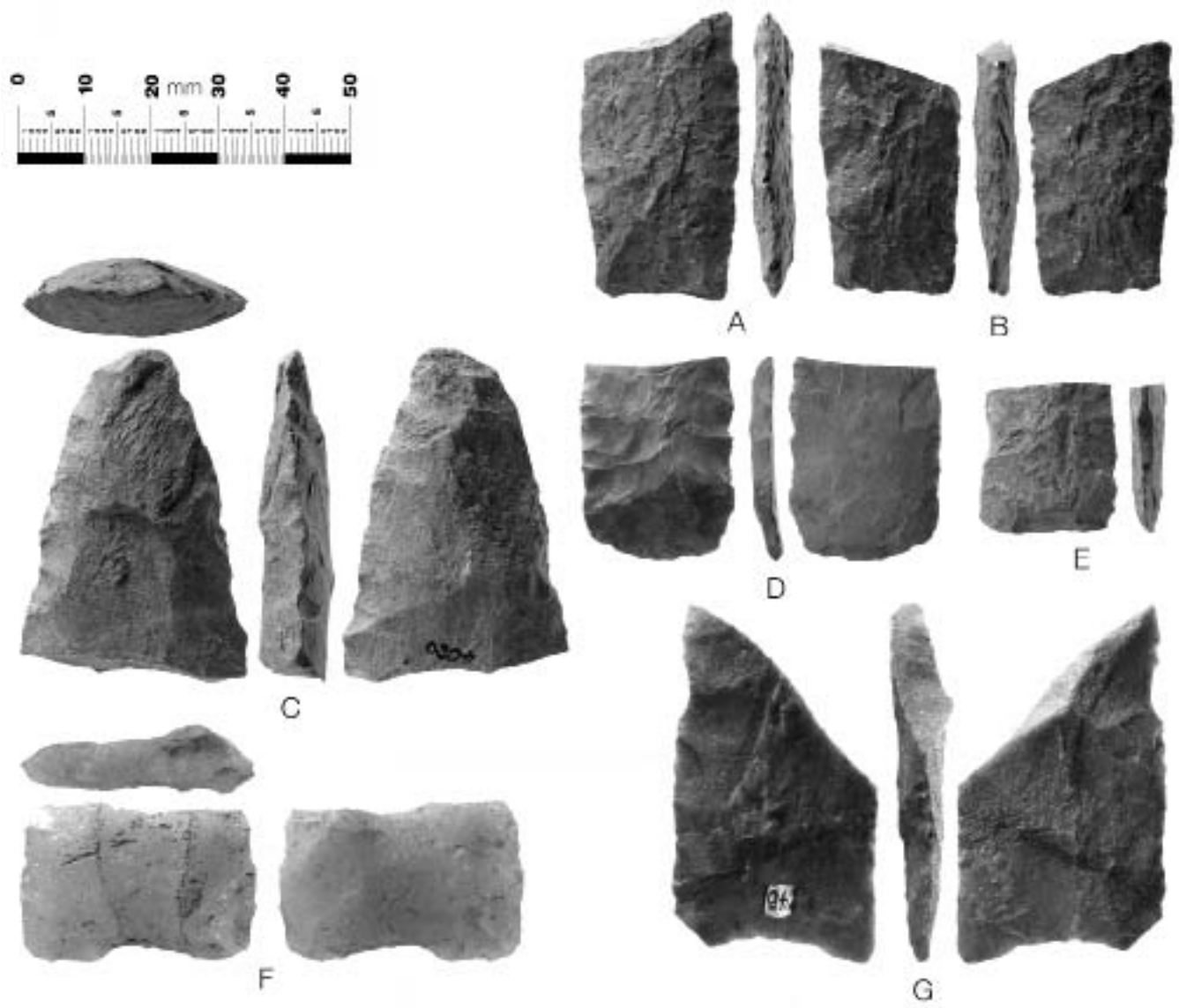


Figure 4. Paleo-Late Paleo, Various sites; A-B, E suspected Late Paleo Ste. Anne-Varney points, C fluted preform tip, D channel flake modified into a knife, F fluted preform base, G suspected Paleo point broken in manufacture.

ever, there are similar fragments which appear in likely Middle Woodland assemblages. Some of the unifacial tools present throughout the collection may be Paleo. It remains to be determined in what context these unifacial tools occur.

Among the Early Archaic artifacts (Figure 5) are a number of bifurcate base points. There is also a large Greenbrier-like knife virtually identical to another from the Ponkapoag site in Canton, MA (Martin 1977). Hardaway side-notched, Hardaway-Dalton and a Kirk drill are also of Early Archaic origin. There may be additional Early Archaic types represented by fragments that have been omitted for the sake of caution. The Early Archaic site settings may prove to be of interest.

The Middle Archaic Neville complex (Dincauze 1976) is well represented in the collection (Figure 6). A small number of serrated Neville points exhibiting extraordinary craftsmanship are present, along with many unserrated specimens. Neville Variant and Stark points are present although not numerous. There are some apparent Stark points that are stout and made of rhyolites that may in fact be Rossville points with unusually distinct shoulders. Merrimack points are identified by general morphology and the presence of stem grinding. In that vein, there are a number of narrow, lobate-based quartz points with heavy stem grinding. That would seem to indicate a closer temporal relationship to Stark and Merrimack than to the more recent Squibnocket complex. A single Stanly point was identified.

The Late Archaic Laurentian tradition (Figure 6) is

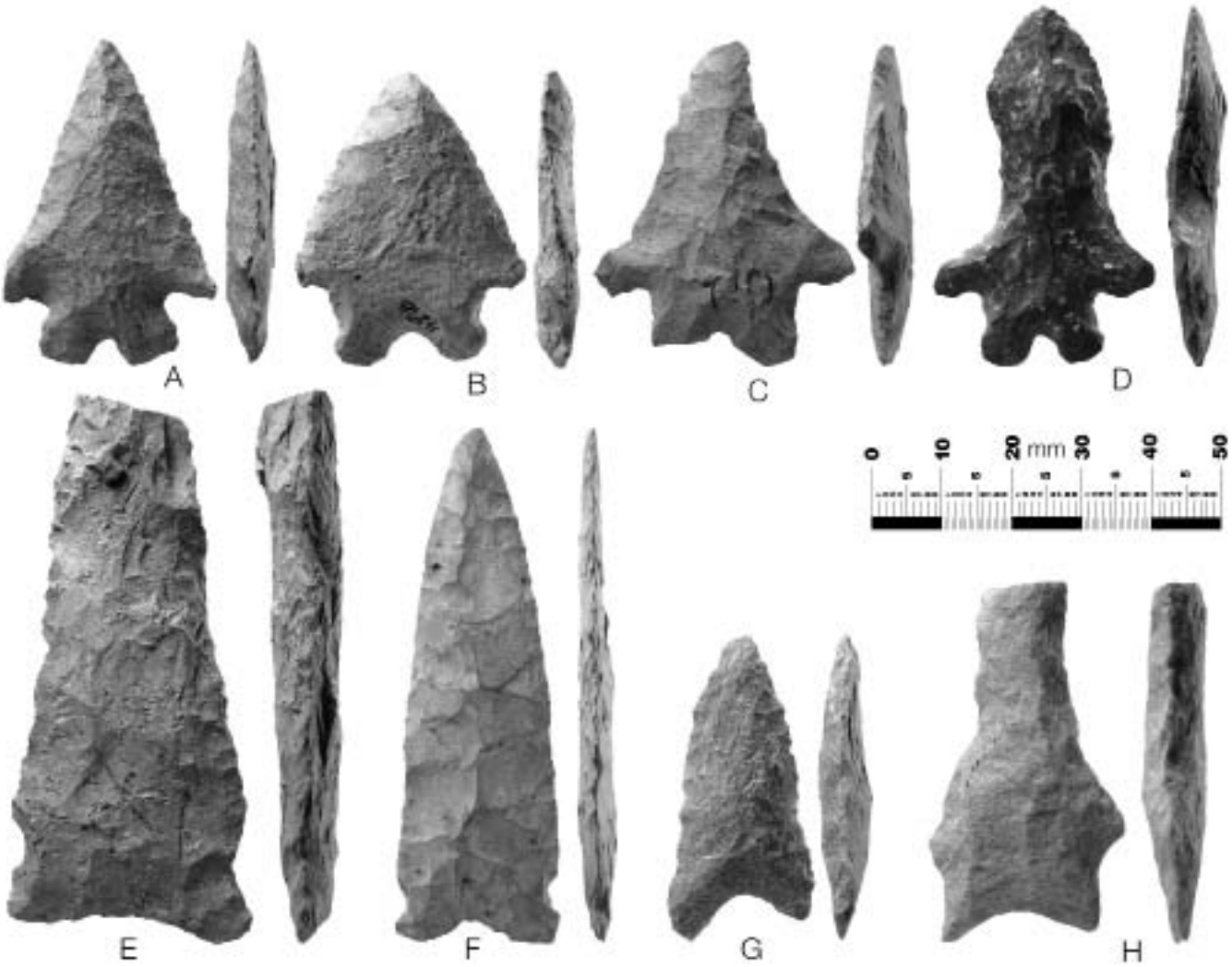


Figure 5. Early Archaic, Various sites; A-D bifurcate base points, D has been modified into a shaft scraper, E exhausted Greenbriar-like knife, F Hardaway Side-notched, G Hardaway-Dalton, H Kirk drill.

very well represented by all the associated types with the exception of the related Normanskill and Genesee types. The Late and Transitional Archaic Broadblade tradition (Figure 7) is also very well represented by most of the associated types. Atlantic and Susquehanna Broad points of many forms are quite numerous. The Watertown phase (Dincauze 1968) is poorly represented, though there is a large Boats Blade made of Blue Hills rhyolite (not shown). Orient Fishtails seem present throughout the collection. There is also a distinct population of Orient-like points whose bases do not flare as much as the more typical form. Several of these Orient-like points have flat facets on their bases,

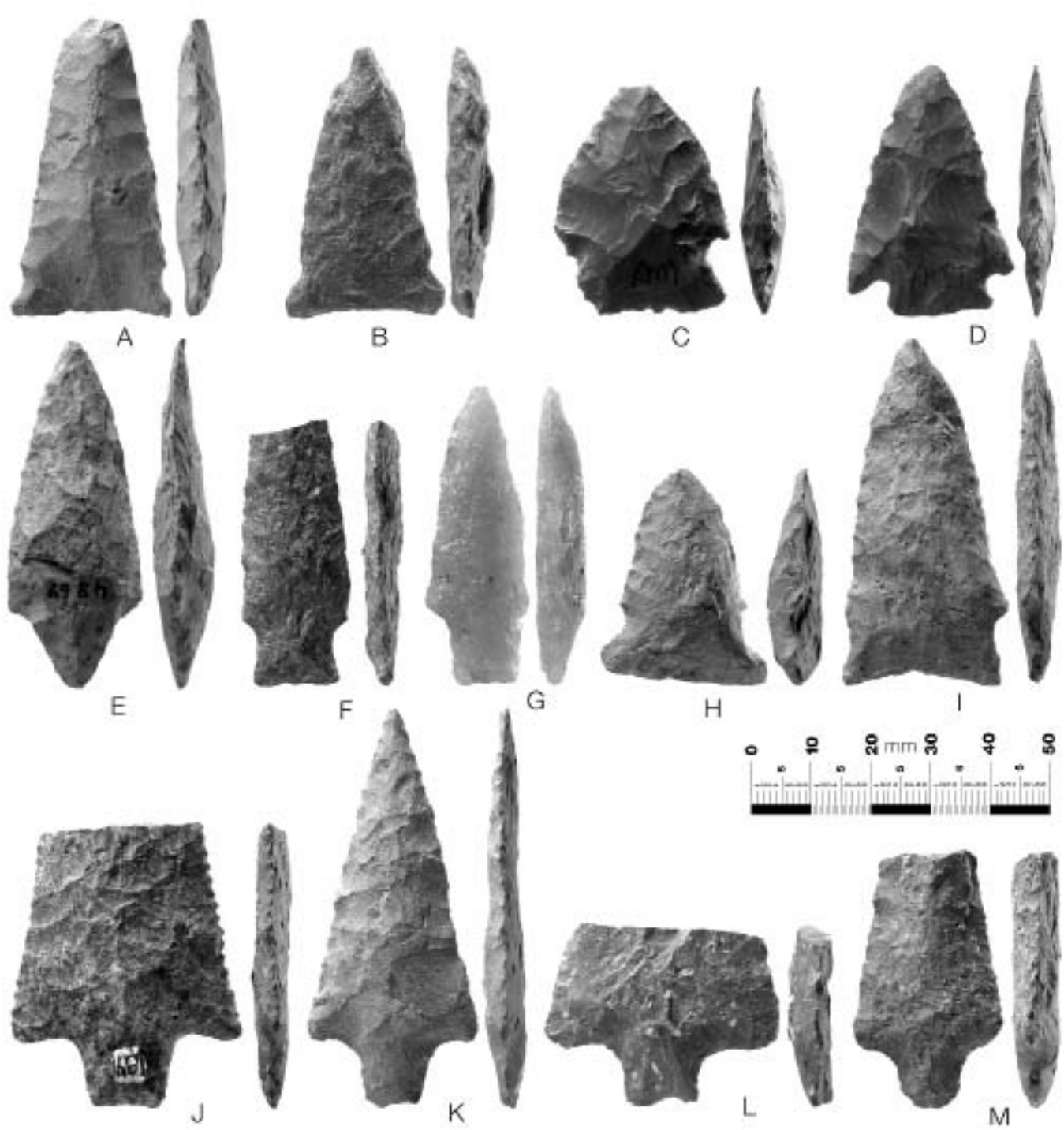


Figure 6. Middle and Late Archaic, various sites; A Brewerton Eared-Notched, B Brewerton Eared Triangle, C-D Brewerton Corner-Notched or Vosburg, E Stark, F-G Merrimack, H Otter Creek, I Vosburg, J-K Neville, L Stanly, M Neville Variant.

which is a trait of Ritchie's (1965) "pebble technology" recognized at the Lamoka Lake site in central New York. That raises some interesting questions about these Orient-like points, which cannot be addressed here. Late Archaic quartz triangles and various forms of small quartz, bifacial tools and stemmed forms (not shown) seem as numerous as one might expect.

The Early Woodland period (Figure 8) is very well represented by numerous Lagoon and Rossville points. Workmanship varies considerably within these two types. Meadowood points are fairly common, with many examples made of Onondaga chert from western New York. The exact number of Adena related points remains untallied at this time.

There is one fine example of an Adena Robbins (Figure 8, E) made of chert which may be of east-

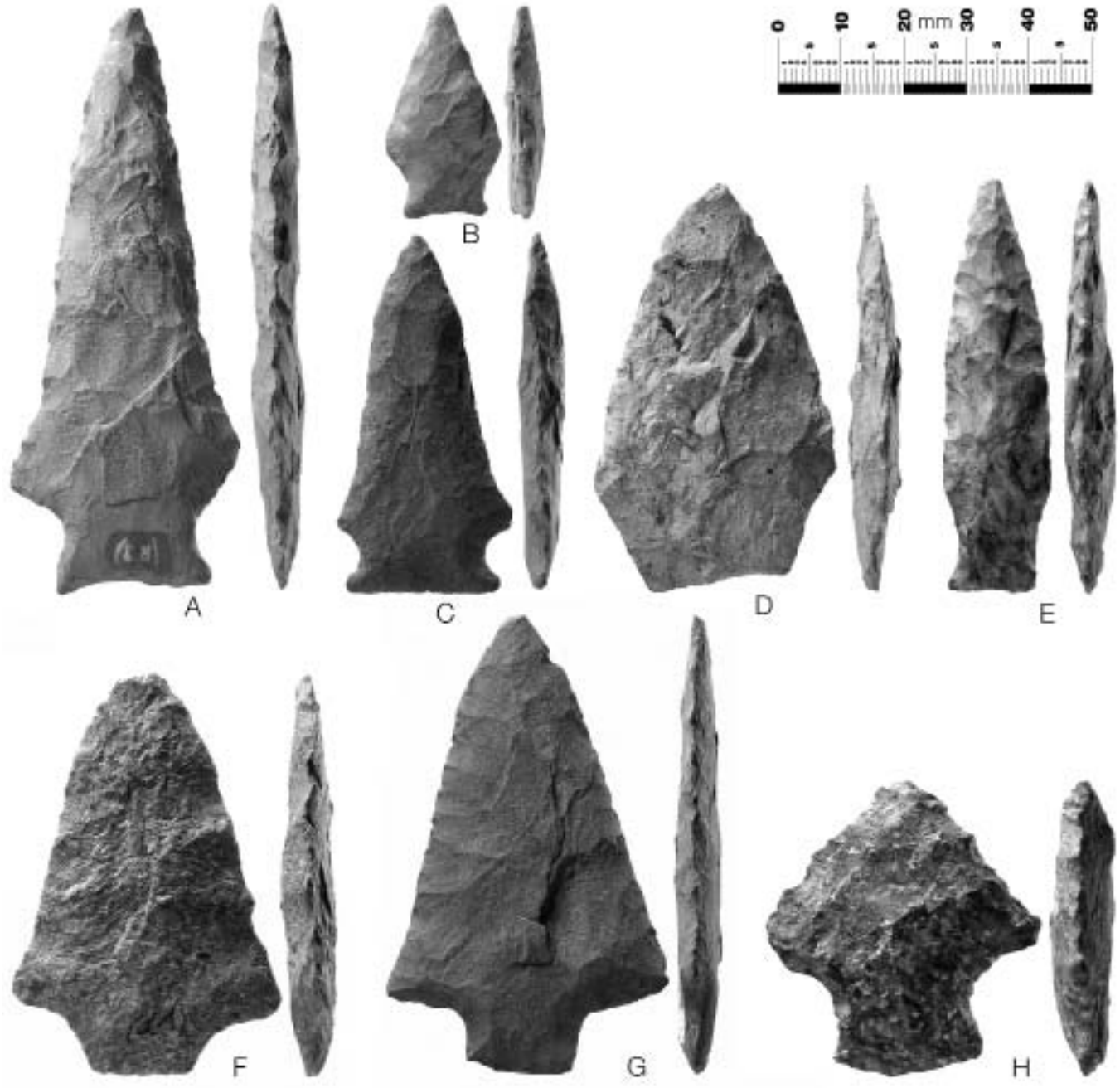


Figure 7. Late-Transitional Archaic, Various sites; A-B Susquehanna Broad, C Wayland Notched, D Mansion Inn Blade (Dudley variety) E Orient Fishtail, F-G Atlantic, H Perkioman.

ern Onondaga chert. Some Orient points, mentioned above, likely belong in the Early Woodland inventory as well. Almost certainly there are various triangles and stemmed points that derive from this period that cannot, at this time, be singled out. It will be interesting to see if there is a single component Early Woodland assemblage present among the many sites. If such a component can be located it may shed some light on these forms. The same may be said for the ensuing Middle and Late Woodland periods.

The Middle and Late-Middle Woodland periods (Figure 9) are represented by Greene points of several forms. The more common form are those with lobate bases. Straight bases are also present, and some have more or less parallel sides, as mentioned above. Jack's Reef Corner-Notched points are not common. Approximately one third of the specimens are shown below. If these are in fact,

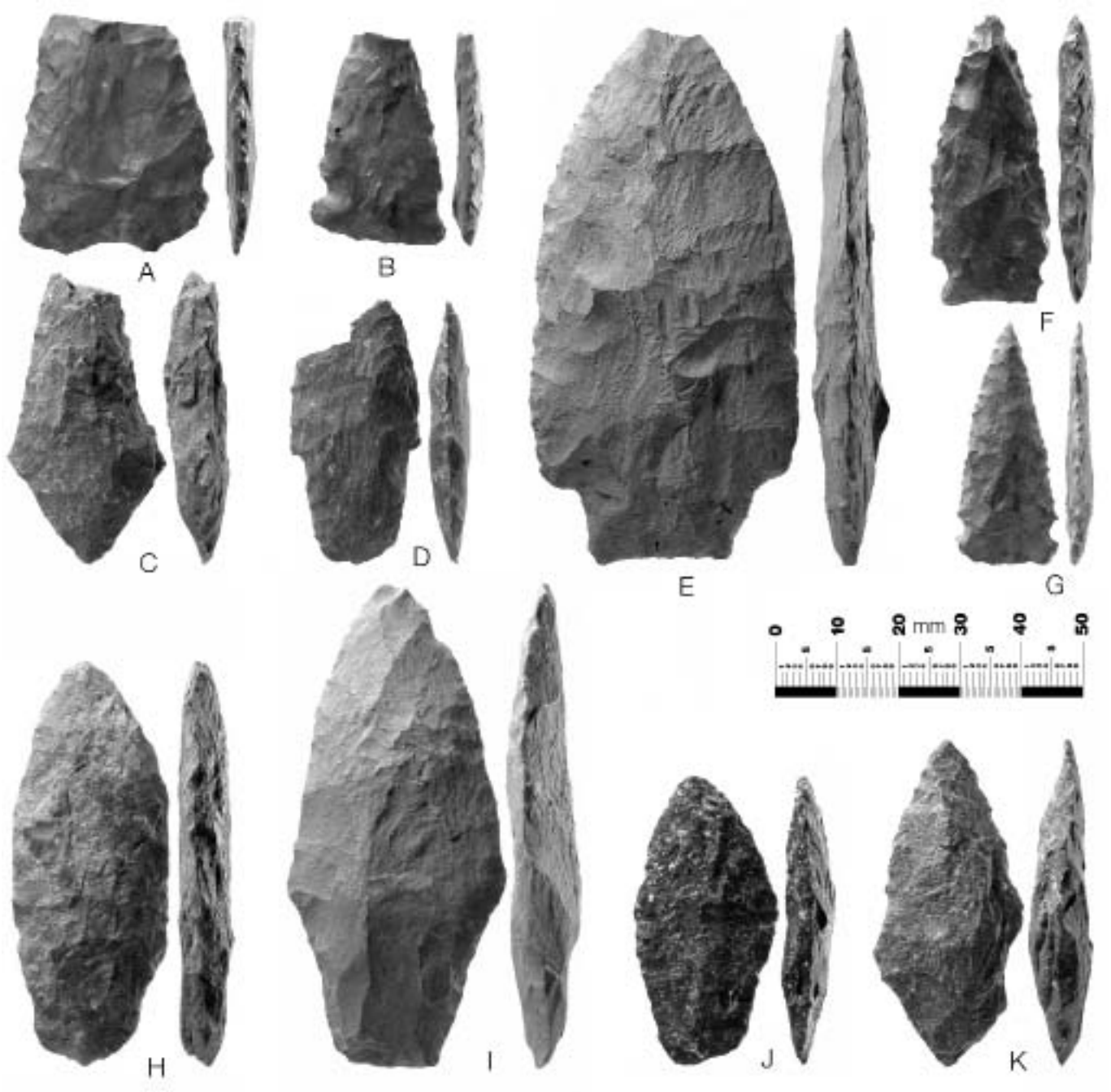


Figure 8. Early Woodland, various sites; A-B, F-G Meadowood, C, K Rossville, D-E Adena, H-J Lagoon.

true arrowheads then it seems likely that the more common type of arrowhead in use at this time was a form of triangle. Some of the Late Woodland Levanna points (Figure 10) probably overlap in age with the Jack's Reef points. The Levanna point is one of the more common artifact types in the collection. The range of size and form seen in this type is indicative of a variety of purposes.

Additional Artifact Types

Various forms of drills or perforators are well represented. Plain and eared drills seem to be the

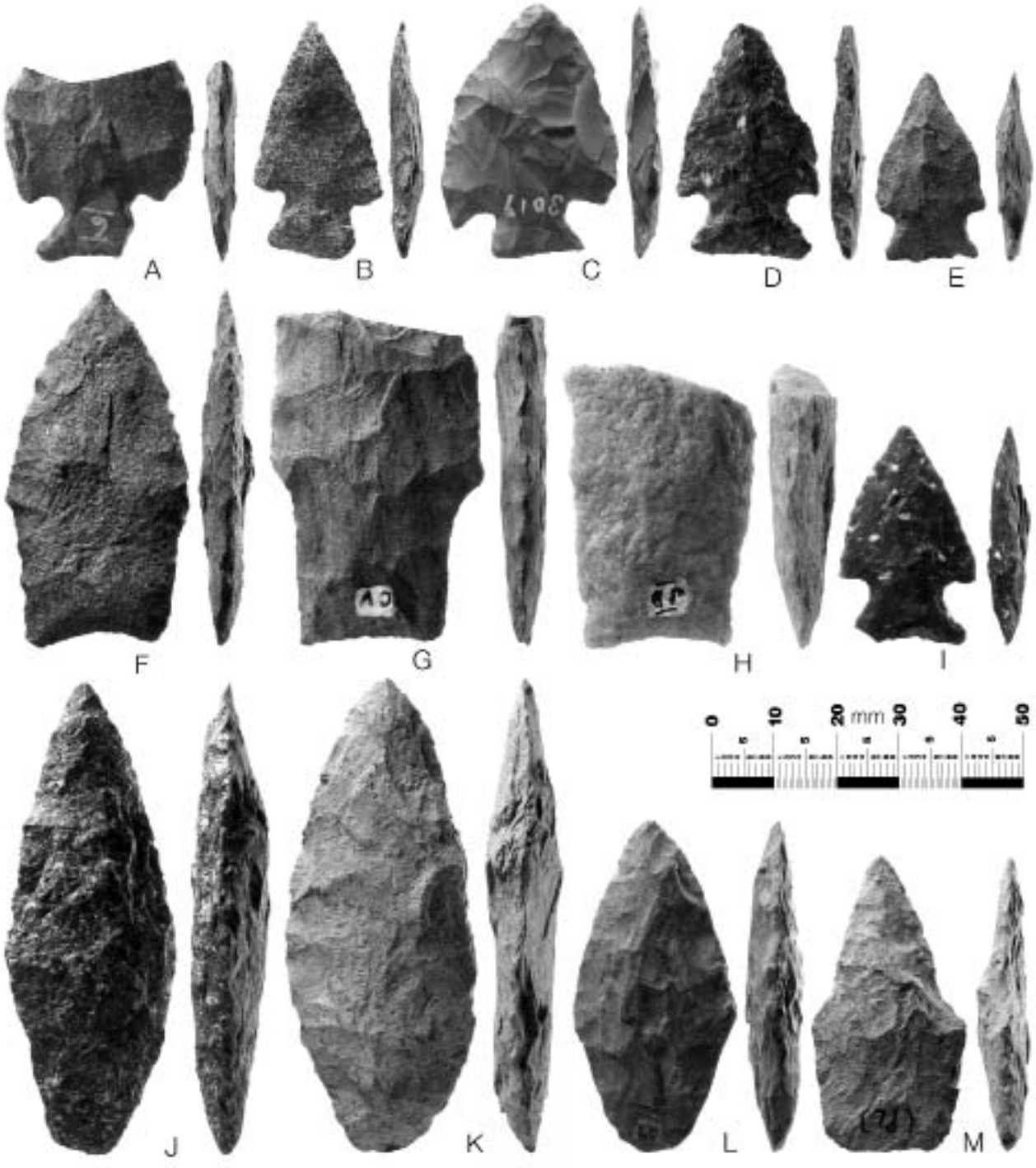


Figure 9. Middle and Late-Middle Woodland, various sites; A-E, I Jack's Reef Corner-Notched, F-G Fox Creek Stemmed, H Fox Creek Lanceolate, J-L Greene, M Green point modified into a reamer.

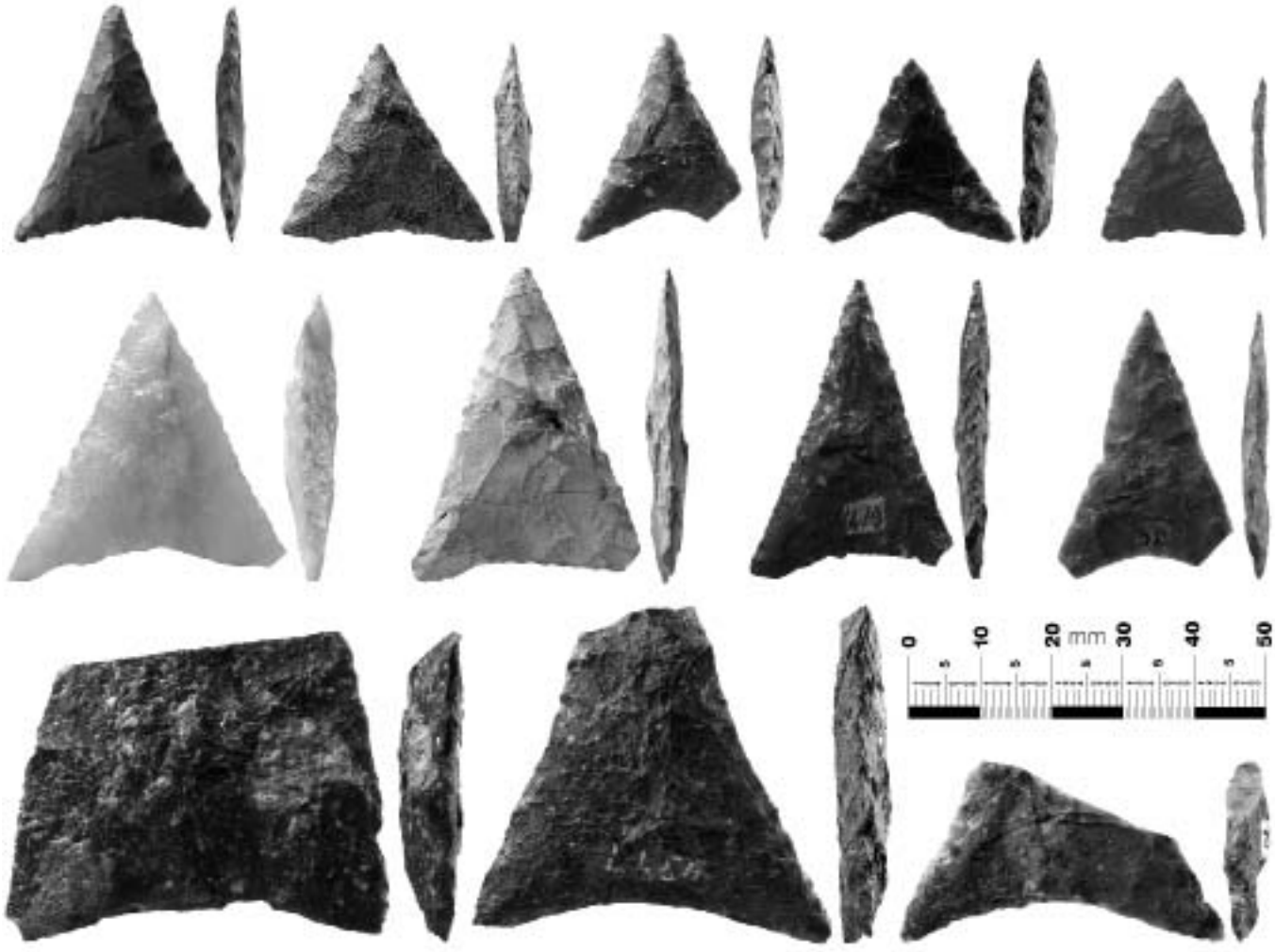


Figure 10. Late Woodland Levanna points from various sites.

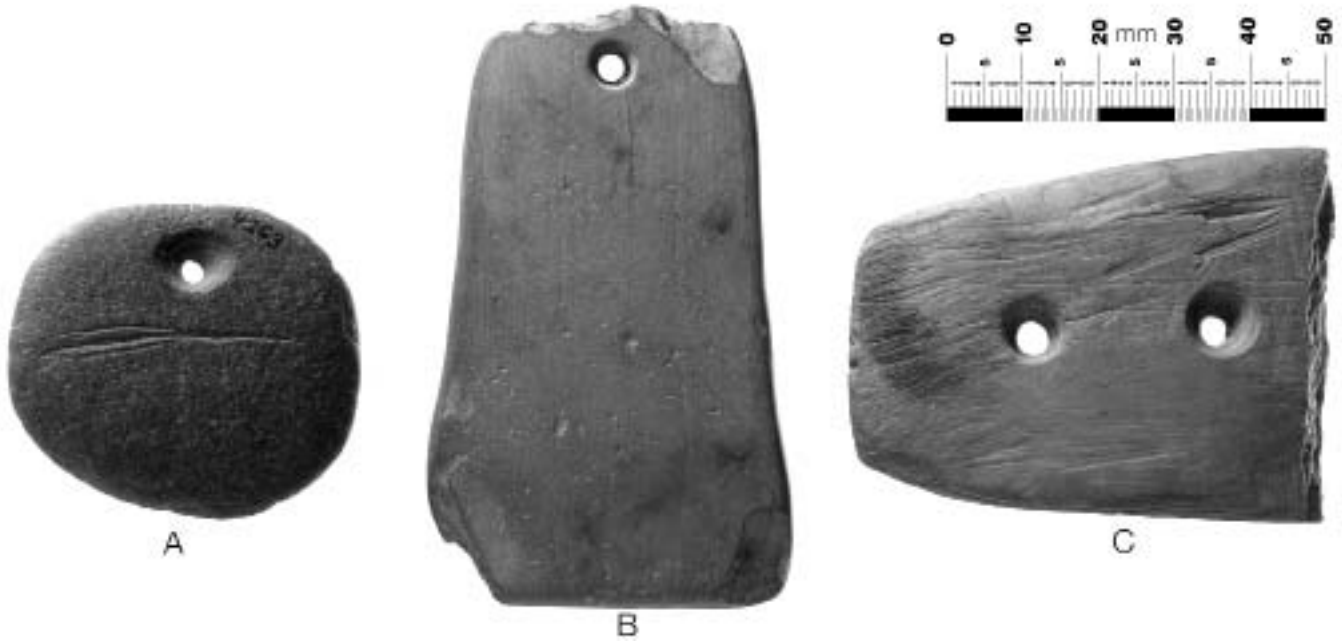


Figure 11. Ornamental objects, various sites; A-B Pendants, C gorget.

more numerous. Scraper forms observed in the collection include unifacial, thumbnail, side, end, steepedge and oval. Some sites have large numbers of scrapers while others have few or none. Hopefully, the significance of this will be revealed as the trait lists are completed. Polished and drilled ornamental objects (Figure 11), as well as what are presumed to be charm stones are present. Among the latter are attractive beach pebbles, of pink and black quartz as well as crystal quartz. Rubbed hematite and graphite fragments are found throughout the collection. Whetstones are present in a number of forms with some being rather curious. Atlatl weight fragments occur in small numbers. Winged and shield types have been identified as well as an unfinished winged type. This artifact was illustrated by Whiting in an article published in the Bulletin of the MAS (1949b). Pecked and polished woodworking tools (Figure 12) are also present in small numbers as are pestles. Several forms of weights are present. The more numerous are plummets (Figure 13) with lesser numbers of hole stones and grooved weights. A number of sites are well endowed with steatite bowl fragments. One steatite rim sherd is decorated with an engraved motif. Decorated steatite bowls have been claimed to derive from the lower Susquehanna River valley (Shaffer 2008). Many ceramic shards of obviously different temper, thickness, color and decorative styles are found throughout the collection. These remain to be identified and assigned to their respective culture periods.

Mr. Whiting worked at a number shell heaps. The exact number is not yet known. Recovered from those explorations are a number of worked bone artifacts. Most are pointed ends of awls or fish spears or fish hook components. There may also be some bone or antler projectile point fragments. There is also a restored needle along with a well preserved antler pressure flaking tool.

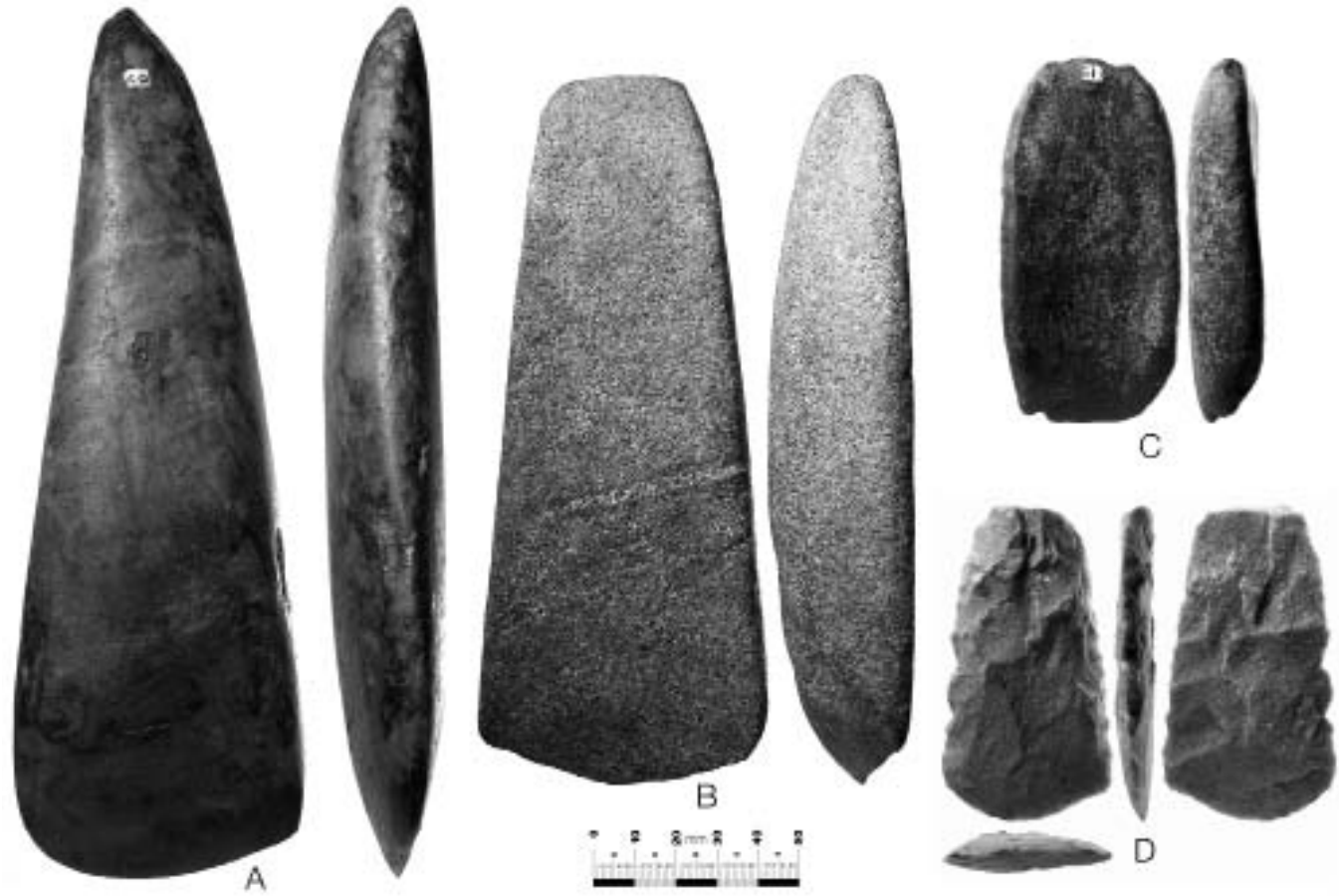


Figure 12. Woodworking tools, various sites; A Celt, B adze, C grooved gouge, D flaked quartzite adze.

Figure 13. Selected plummets from various sites.

Mr. Whiting wrote a number of articles that appeared in the Bulletin of the MAS. These are listed in the references. One of those articles is titled " A Pot from Nook Farm Camp Site, Plymouth, Mass". The article begins, "In 1936 the Nook Farm people had a new tractor, and in plowing the Nook Site they set the plow to go deeper than they had been plowing it in years before. This deeper plowing hit the tops of pits and small shell heaps nearly all over the site which had never showed before". Mr. Whiting later excavated one of those shell pits which contained the remains of a large ceramic vessel. William S. Fowler restored the pot and illustrated it for the article (Figure 14). Fowler's original illustration is among the papers which are part of the collection. The illustration also appears in, "A Handbook of Indian Artifacts from Southern New England" (Hoffman 1991). In that volume it represents an example of a Middle Woodland Trailing 'Stage 2' pot.

Figure 14.
Fowler's original drawing of the pot recovered from Nook Farm.

Conclusion

Recently, Mrs. Beale visited the museum to see what progress had been made with her father's collection. During that visit she mentioned that her father had two wishes for the collection. The first was that it never be broken up. The second was that it should not be given to a museum. He knew that quite often museums put things in boxes and put those boxes in storage and they are never seen again. The gift was made with the agreement that the collection be displayed in Mr. Whiting's cases. We are now in the early stages of defining those aspects of the collection that are the most archaeologically meaningful and best demonstrate

the contribution made by Mr. Whiting. That assessment will guide in the selection of artifacts and how they are to be displayed. The pot from Nook Farm will no doubt be a centerpiece of that display.

It is appropriate to acknowledge those that have helped provide the understanding of the collection we enjoy today. Eugene Winter is the principal advisor and mentor. He will undertake the ceramic analysis. David DeMello created a copy of the typewritten volume with OCR software to minimize wear and tear on the original. In addition to those named above, Bill Taylor, Fred Robinson and Diane Parent helped in the sorting. Special thanks go to Samantha Sgourakes. "Sam", a college student volunteer, who brought great interest and enthusiasm to the project. By late summer, her knowledge of the catalogs and sites was unsurpassed.

References Cited

Broyles, Bettye J.

1971 *Second Preliminary Report: The St. Albans Site, Kanawha County, West Virginia.* Report of Archaeological Investigations 3. West Virginia Geological and Economic Survey, Morgantown, West Virginia.

Coe, Joffre L.

1964 *The Formative Cultures of the Carolina Piedmont. Transactions of the American Philosophical Society, New Series* 54(5). Philadelphia, Pennsylvania.

Custer, J.

1984 *Delaware Prehistoric Archaeology. An Ecological Approach.* University of Delaware Press, Newark Dela ware.

Dincauze, Dena F.

1968 *Cremation Cemeteries in Eastern Massachusetts. Papers of the Peabody Museum of Archaeology and Ethnography* 59(1). Peabody Museum, Harvard University, Cambridge, Massachusetts.

1971 An Archaic Sequence for Southern New England. *American Antiquity,* 36(2):194-198.

1972 The Atlantic Phase: A Late Archaic Culture in Massachusetts. *Man in the Northeast* 4:40-61.

1975 The Late Archaic in Southern New England. *Arctic Anthropology,* 12(2):23-34.

1976 *The Neville Site: 8,000 Years at Amoskeag. Peabody Museum Monographs* 3. Peabody Museum of Archaeology and Ethnography, Harvard University, Cambridge, Massachusetts.

Doucette, Dianna L.

2003 *Unraveling Middle Archaic Expressions: A Multidisciplinary Approach Towards Feature and Material Culture Recognition in Southeastern New England.* A thesis presented to the Department of Anthropology. In partial fulfillment of the requirements for the degree of Doctor of Philosophy in the subject of Archaeology. Harvard University, Cambridge, Massachusetts.

Fowler, William S.

1963 Classification of Stone Implements of the Northeast. *Bulletin of the Massachusetts Archaeological Society* 25(1).

Funk, Robert E.

1976 *Recent Contributions to Hudson Valley Prehistory.* New York Science Museum Memoir 22. Albany, New York.

Hoffman, Curtiss R.

1991 *A Handbook of Indian Artifacts from Southern New England. Massachusetts Archaeological Society Special Publication* 4. Middleboro, Massachusetts.

Mansfield, J. Alfred

1961 The Mansion Inn Site, Wayland. *Bulletin of the Massachusetts Archaeological Society* 23 (1):1-5.

Martin, Robert

1977 The Ponkapoag Site, M35-7. *Bulletin of the Massachusetts Archaeological Society* 38(3) 53-71.

Ritchie, William A.
1965 *The Archaeology of New York State.* Harbor Hill Books, Harrison, New York.
1969 *The Archaeology of Martha's Vineyard: A Framework for the Prehistory of Southern New England. A Study in Coastal Ecology and Adaption.* The Natural History Press, Garden City, New Jersey.
1971 *A Typology and Nomenclature for New York State Projectile Points. (revised edition) New York State Museum and Science Service Bulletin* 384.

Shaffer, Gary.
2008 Decorated Soapstone Vessels Discovered along the Lower Susquehanna River. *Archaeology of Eastern North America* 36:1-24.

Taylor, William B.
1972 Seaver Farn Salvage Excavation. *Bulletin of the Massachusetts Archaeological Society 34 (1-2)L24-28.*
1976 A Bifurcated Point Concentration. *Bulletin of the Massachusetts Archaeological Society* 37(3-4):36-41.

Whiting, William W.
1942 Digging at Indian Workshops Near Plymouth, Mass. *Bulletin of the Massachusetts Archaeological Society* 4(1):13.
1944 A Cache of Rubbing Stones. *Bulletin of the Massachusetts Archaeological Society* 5(2):28.
1949a A Pot From Nook Farm Camp Site, Plymouth, Mass. *Bulletin of the Massachusetts Archaeological Society* 10(2):44.
1949b The Burgess Pasture Site. *Bulletin of the Massachustts Archaeological Society* 11(1):2.

Whiting, William W. and Brewer, J.esse
1946 Pits at the Nook Farm Camp Site. *Bulletin of the Massachustts Archaeological Society* 7(2):43.

Willoughby, Charles C.
1935 *The Antiquities of the New England Indians.* Peabody Museum, Harvard University, Cam bridge MA.

Titicut Ceramics

William B. Taylor

Introduction

Pottery was not abundant in southeastern Massachusetts. Pottery broken during everyday usage was usually disposed of in a nearby refuse pit. During 65 years of surface-hunting the Titicut area, fewer than two dozen potsherds have been found by the author.

Vinette 1 and Vinette 2 vessels are scarce, and examples from the Early and Middle Woodland Periods (ca 2700-1000 B.P.) are infrequently found on local sites. Vinette 1 ceramic pottery (also called Stage 1 by Fow-ler) had a conoidal shape with a pointed base. It had a rounded thick rim, a straight neck and no decoration on the sides. Temper was coarse mineral-crushed quartz. Vinette 2 ceramic pots (also called Stage 2 by Fowler) still had a conoidal shape, with a less pointed base. Necks were slightly constricted and showed some simple decorative motifs. Temper was medium mineral or crushed shell (Fowler 1966).

During the Late Woodland Period (ca 1000-400 B. P.) Stage 3 pottery seems to have become more common. Several fine examples from the Contact Period (ca 400-250 B. P.) have been found locally. Stage 4 pottery reached its peak with the most elaborate styles and designs being manufactured. Stage 3 pottery usually has fine mineral temper, while Stage 4 pottery is usually tempered with fine well-sorted shell fragments. Occasionally, vegetable temper was also used. Stage 3 pottery usually has a flat rim, with simple design motifs on the collar. The ware is usually ½" or more thick. During the Contact Period, Stage

4 vessels still used a flat rim, but the collar had more elaborate geometric designs, occasionally using corn boss or human face effigies. The neck was often constricted and pots have a semi-globular base. The ware is thinner, being 1/8″ to ¼″ in thickness, and many vessels had castellations (Fowler 1966).

Decorative elements appear on our local ceramics similar to Iroquois pottery in New York and to some Shantok ware, originating with the Pequot-Mohegan association from eastern Connecticut. Around 1600 A.D., the latter people moved into Connecticut, bringing with them a distinctive style of pottery, which spread into Long Island, Rhode Island, and southeastern Massachusetts shortly thereafter.

During the mid-1600s, much local land was sold to the European colonists for iron and brass or copper kettles, which became highly coveted by local Indians. The metal kettles were stronger and more easier transported than ceramic vessels. They could also have been repaired when damaged, by using sheetmetal acquired in trade. Broken vessels were often cut up to make arrow points. Several examples have been found in the Titicut area. Other iron tools such as hoes, axes, knives, and scissors soon were standard payment items when land purchases were made.

The Shantok Tradition

The idea of the Shantok tradition was first formulated from ceramic vessels found at Fort Shantok on the Thames River near Norwich and another site in nearby Noank, Connecticut. These villages were inhabited by Mohegan-Pequot people during the Seventeenth Century. It is thought that these Shantok ceramic styles became distributed outside the Pequot-Mohegan homeland as a result of the Pequot War in 1637-1638.

> "Shantok ceramics is [sic!] described as shell-tempered, thin walled vessels with round bases, distinct shoulders and necks and collars with prominent triangular lobes. Castellations were common and collars were decorated with 'bands and plats' of incised lines and punctations. Effigies of human or animal heads are present on some castellation points". (Goodby 2002).

Figure 1. Brass Kettle from Burial No. 4, Taylor Farm. It measures 4′ high by 8″ long and 6″ wide. Pieces of the original rope handle still are attached to the two lug handles.

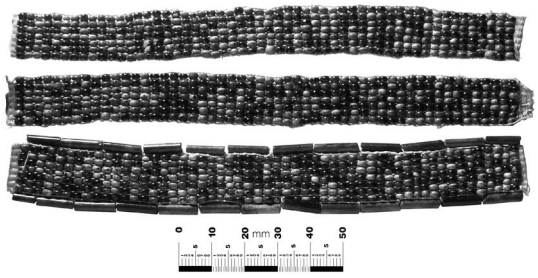


Figure 2. Three strands of glass beads that have been restrung in their original pattern. Tubular glass beads are ½″ along the edges.

Figure 3. Two Iron Hoes from A.D. 1640, Burial No. 4. Broad hoe is 9″ long by 3″ wide. Grubbing hoe is on the right.

Other nodes such as corn effigies are placed on castellations or between pairs of castellations

Taylor Farm Burials (19-PL-165)

Several fine pots were found within burals in the Titicut area. In 1951, a woodchuck brought up a piece of ankle bone (tarsal) at the Taylor Farm Orchard Site. Here the grave of a woman (Burial 4) contained two ceramic vessels, a brass kettle, a broken hand mirror, two colonial iron hoes, a pair of scissors, three cape buttons, two iron tool fragments, a 11¾" (30cm) smoothly ground stone pestle and a beaver skin cap, partially preserved by copper salts from the kettle that lay nearby. Also included were hundreds of glass trade beads, plus a few of bone and shell (Figures 1,2, and 3). Round glass beads were mostly blue with a few faded gray in color; also there were some ½" blue tubular types.

Above the skull, in an inverted position, lay a brass kettle and a Style "C" Shantok pot. Around the neck this vessel had 3 raised bands or rings formed by extrusion, which is a characteristic trait of this style. Portions of the rope handle also remained inside the kettle. Near the shoulder were placed the two iron hoes (a broad type and a grubbing type), while at the right knee lay the small pot. This vessel had similar miniature traits and was found intact. Types of artifacts from this burial point to a time period ca. A.D. 1640. A photo of this burial in situ was shown on page 45 of the *M.A.S Bulletin* vol. 43(2) (Taylor 1982:40-46).

> "It is only in burials of Colonial times in which completed disintegration of organic material has not taken place, that traces of the weaver's art will be found. In this grave (No. 4) the remains of a basket were found on top of a layer of bark that covered the body. Another woven fabric was used as a covering around the two hoes. Finally a woven rush matting of some kind surrounded the grave shaft" (Taylor 1982:43).-

Dr. Maurice Robbins used dental cement to make a mold of a large necklace, as well as a cast of the woven fabrics and basket. The beads were then restrung in a pattern to resemble what the necklace might have looked like originally.

Burial 4 Ceramics

The larger pot had all sherds present (Figure 4a,

> "This pot has distinctive Shantok (Pequot) traits, a Style 'C'design, it had a 4" (10.2 cm) mouth opening and is 6" (15.2cm) tall. It is made of a brownish-gray clay paste 1/8" thick and has no coiling evident, with a smooth finish inside and out . . .This pot has 4 high out flaring castellations, below which were 3 well defined, rounded protruding ribs encircling a somewhat constricted neck, that expand-

Fowler's notes said that the temper was minute mineral. However, Dr.Robert Goodby, with a closer analysis, labeled the temper as "fine medium, well sorted shell fragments". This trait is more in line with Shantok design.

> "Another trait is the squarish mouth. There is also a single incised vertical line on the interior and exterior of each castellation peak, which produces a Shantok-like phallic effect. Three bands of punctates decorate this vessel. One is placed between the collar and upper protruding rib. Another is on the upper portion of the middle rib and the third around the top of the lower rib. Some carbonized residue are [sic!] present on the interior surface of the vessel wall." (Goodby 1994)

> "The miniature pot or vial from Burial 4 was unusually small and found intact. It has a 2" (5 cm) diameter mouth opening and is 2 ½" (6.3 cm) tall. There are 4 castellations, below which was an incised ¼" collar of minute design motifs.
>
> This pot also has Shantok traits and is finished smooth both inside and out; has a full globular shape similar to the other two pots" (Fowler n.d., Figure 4b).
>
> "The mouth is square and the temper is fine shell fragments. No carbonized residue is visible inside. The color, texture and temper is [sic!] similar to vessel 1 and probably made by the same potter. Design of the collar consists of three vertical lines placed obliquely along the upper ¼" lip of the collar. There are faint incised vertical lines at the castellations which create a phallic-like effect" (Goodby 1994).

Burial 5 Ceramics

A small infant burial pot was found in this burial by William S. Fowler in the spring of 1951 (Figure

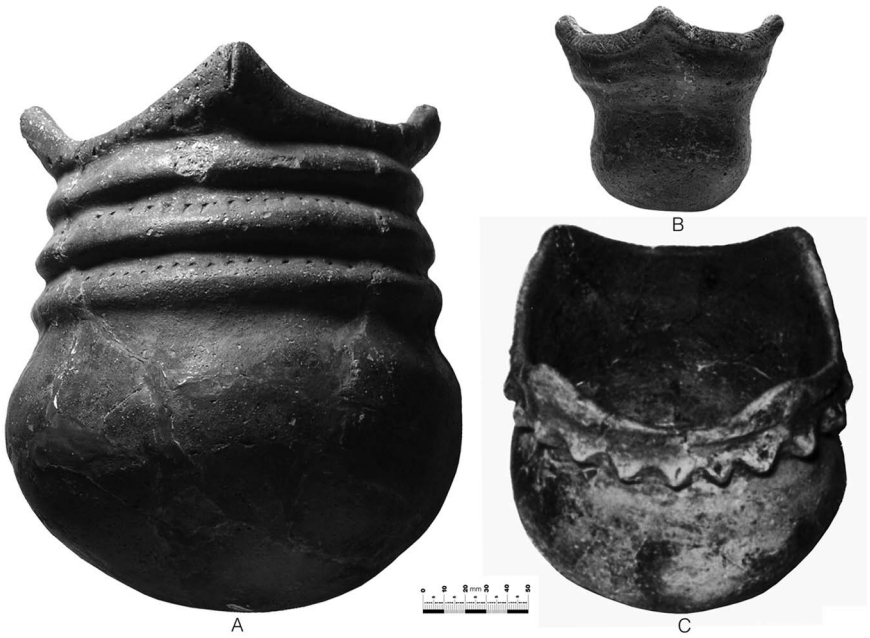


Figure 4: Shantok Pots from Taylor Farm. (a) Large Shantok pot, Style "C"; (b) Small Shantok pot; (c) Shantok Pot, Style "B". (a) and (b) from Burial No. 4; (c) from Burial No. 5.

Figure 5. Pots from Seaver Farm and Titicut. (a) Stage 3 pot from Seaver Farm; (b) Stage 4 pot from Seaver Farm; (c) Stage 4 pot from the Titicut Site, Burial No. 4.
(b) and (c) show Shantok decorative designs.

> "The pot was broken into 41 sherds that constituted the entire pot, except for one small sherd that was missing. This too is a Shantok pot displaying style "B" characteristics of Pequot derivation from southern Connecticut. It had a 3 ½" (8.9 cm) diameter mouth opening and is 4 3/8" (11.1 cm) tall, made of a brownish-gray clay paste. This pot is 1/8" thick with no coiling evident; has a smooth finish inside and out and has great symmetry. This pot has 4 pronounced castellations, below which is a horizontal band of prominent pinched-out lobes, each with a vertical incised mark. These lobes encircle a constricted neck, that expanded into a full globular base" (Fowler n.d., Figure 4C).

This burial was located approximately twenty feet east of Burial No. 4. Other grave goods consisted of numerous glass beads of blue, with some red and yellow, as well as a number of tiny shell beads. This grave also had a woven mat lining about the grave shaft. A complete examination of this pot and a better photo were not possible as Dr. Fowler gave his vessel to an associate in Connecticut, who has since moved to Greece. The current location of this pot is unknown.

In a nearby refuse pit, 12 body sherds of another broken Shantok pot were found. Without the top rim, no attempt was made to restore this vessel.

Seaver Farm Ceramics (19-PL-162)

During the fall of 1956 and throughout the 1957 season, three members of the Cohannet Chapter of the M.A.S. conducted a small dig on the Seaver Farm pasture site. Diggers included the Taylors - father tand son - and Karl Dodge. This location adjoined the Titicut Site (19-PL-161) and was located atop an 18 foot steep bank, which sloped downward to the Taunton River (Dodge-1962:24-29). This hillside showed habitation evidence from the Early Archaic into Contact times. Contact period items included a copper arrow point, a copper pendant, two copper beads over 1" long and a copper button. Two other notable finds were a complete bowl type pipe of chlorite and a dog burial in square D7.

Fifty-seven refuse pits were found, four of which held broken pottery. A refuse pit in square D6 contained many potsherds. Temper is fine mineral. Dr. Fowler restored this as a Stage 3 pot, and it is on display at the Robbins Museum.

> "The pot had an 8" (20.3 cm) diameter mouth opening; is 13 ¼" (33.6 cm) tall with a well formed flat rim ¾" wide, atop of a 1" wide laminated collar. This ceramic vessel is made by appliqué; cord-marked, smoothed over exterior and plain interior. A simple decoration, consisting of deeply incised 3 linear bands around the collar, which are separated at 3" intervals by pairs of ½" long vertical incisions. A slight constriction of the neck expanded into a semi-conoidal base" (Fowler n.d., Figure No. 5A).

Seaver Farm Stage 4 Pot

A large pot was found in two refuse pits; sherds from the body and neck were in a pit in square C8, while sherds forming the collar and rim were found in a pit in square F1, some 42 feet apart. After a year of reconstruction by William Fowler, the two sections were united to form a rare stage 4 pot. This pot is now on display at the Robbins Museum (Figure 5b).

> "This pot has a 10" (25.4 cm) diameter mouth opening and is 13" (33cm) tall. It has 4 low castellations topped by a well formed flat rim ¼" to 3/8" wide. The sides have ¼" thick vegetable tempered ware and is symmetrically well-shaped, cord-marked smoothed over exterior; tool smoothed interior, with exterior cord-marking, the 2 ¾" constricted neck was tool-smoothed, body shape was partially bulbous, with a somewhat rounded semi-globular base. Design embellishment consisted first of a single linear band about the 3" collar, made by jabs from a pointed stylus. Below this appeared an elaborate, incised motif that covered the rest of the collar, with closely spaced meticulous line work; this decoration appeared between every two castellations an effigy of an ear of corn, vertically positioned. This pot is one of the most exceptional examples of Stage 4 - Contact Period (400-150 B.P.) ceramics in existence."
>
> "The interior of this vessel had areas of carbonized residue, suggesting it functioned as a cooking vessel. The interior portion of the lip is decorated with a band of tightly spaced short vertical incised lines. The exterior surface of the lip is decorated with a band of tightly spaced, alternately horizontal and vertical incised lines, interrupted only by a set of three incised lines descending vertically from the high points of each castellation. This set of lines

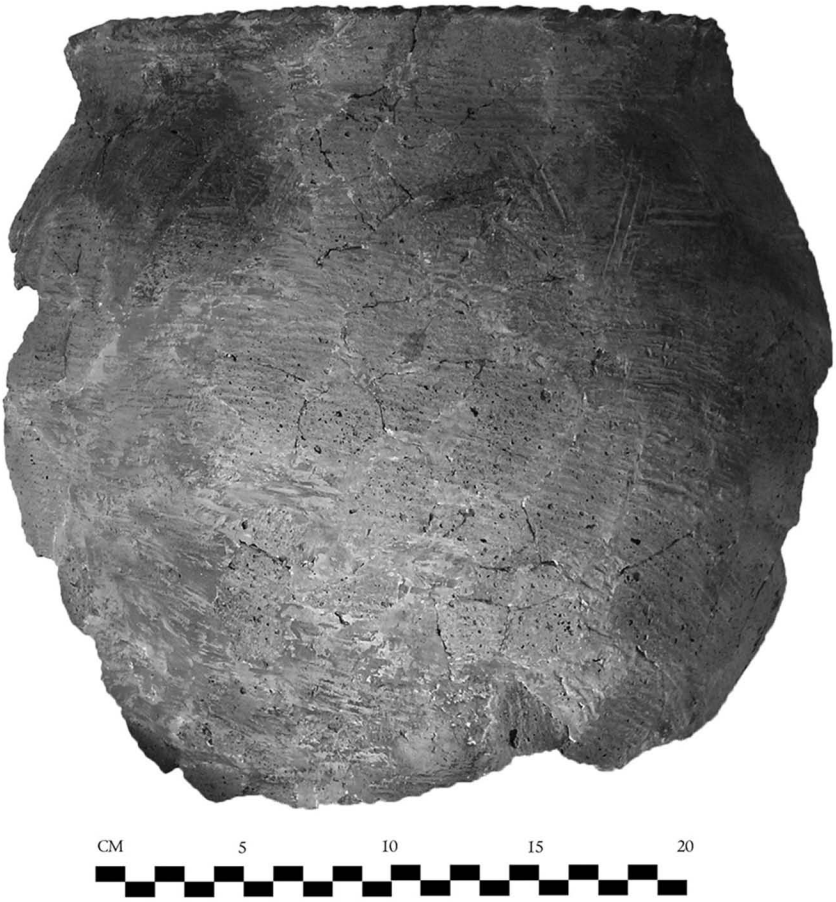


Figure 6. Broken Stage 3 Pot from Seaver Farm. The twisted rope design decorated the rim of this vessel.

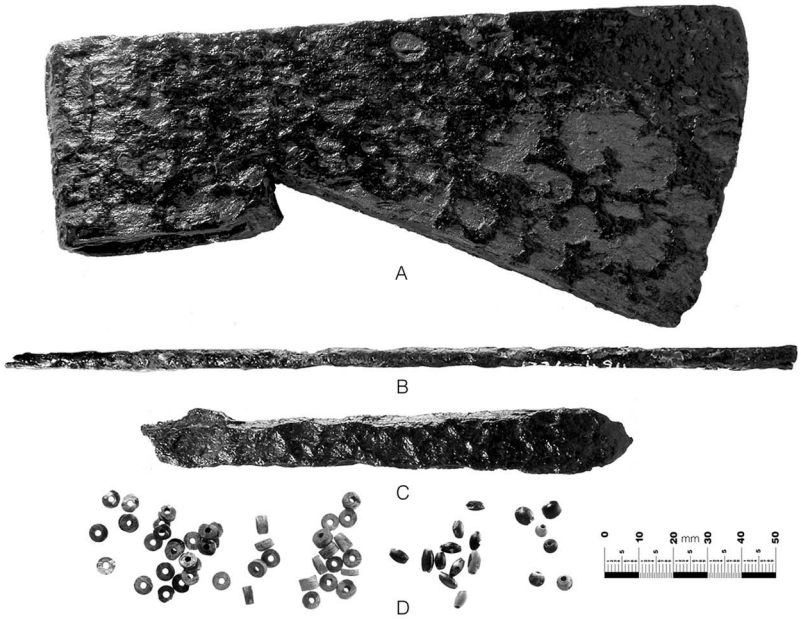


Figure 7. Items from Burial No. 4 at Titicut. (a) Iron axe; (b) Iron Rod; (c) Iron Chisel; (d) Discoidal Shell Beads and Cylindrical Glass Beads

> continues two thirds of the way down the 3" collar, where it intersects with opposing sets of oblique incised lines. This design divides the collar into four large pentagonal zones and four smaller triangular zones. Each of the pentagonal zones is decorated in a nearly identical fashion, as are each of the triangular zones. There is also a band of tightly spaced fine punctuates [sic!] that circle the shoulder" (Goodby 1994).

The broken rim and one side of a large Stage 3 pot were found in square E6. A twisted rope design was used as decoration along the ¼" rim of this vessel. There is a stand-up collar with large incised triangles around the upper body of this pot and alternating inverted triangles between each upright example. This vessel has thin ¼" sides, that taper to a conoidal base (Figure 6). The rest of this pot was perhaps located in another nearby refuse pit at Seaver Farm, which we did not find. Mr. Seaver would not allow us to excavate on the north side of the fence, which was his cornfield.

A complete pot of this type, with the twisted rope design, is shown on page 57 of Fowler's article in the 1966 *M.A.S. Bulletin* (Volume 27 Nos. 3 & 4,

Titicut Site Vessels (19-PL-161)

Burial No. 4 was excavated in the summer of 1947 by four members of the Robert S. Peabody Foundation in Andover, Massachusetts. Fred Johnson was in charge of this dig, which also included two college students. This important burial was located on the west side of the dirt roadway leading into the property, off Beach Street in Bridgewater, Massachusetts; the main cemetery of 23 burials was located on the east side of this roadway.

Burial No. 4 was a child estimated to be an 11 to 12 year old female. Near the skull was a beautiful Stage 4 pot (T-822) (173-22496). "Other artifacts from this burial included quahog and whelk shells (a type used in 17th century to produce wampum)," (Goodby 1994), a 7 ½" long by 4" wide blade iron trade axe, a 9 1/8" long iron rod, an iron chisel, three bone spoons, a socketed antler haft for a felsite projectile point, an antler scoop, two antlers used for flaking tools, a 4 ¾" knife bone handle with no blade remaining. Many shell discoidal and glass beads were recovered; 820 white shell, 170 thin darker shell types and cylindrical glass styles - 370 white opaque and 48 blue-green multi-colored glass (Figure 7). The vessel from Burial 4 was restored by Fred Johnson at Andover and was identified as "Guida incised":

These artifacts from Burial No. 4 were part of the archaeological collections at the R. S. Peabody Museum in Andover, MA, and have been repatriated recently to the Assonet Band of the Wampanoag Nation, a non-federally recognized Indian group.

> "It has a semi-globular body, a 2 ¼" constricted neck and a distinct 2" collar, with two low castellations on opposing sides of the vessel and a square appliquéd lip. This vessel is 15" high (38.2 cm) with a slightly oval mouth opening of 11" by 11 ¾" (29.25 cm average). The clay is tempered with fine well-sorted shell fragments and the exterior and interior surfaces are smoothed. The ½" lip is decorated with a band of ¼" tightly spaced incised lines. . . The base of the 2" collar is decorated with a band of tightly spaced oval punctates and a band of fine punctates circles the shoulder. The one intact castellation has an 'ear of corn' effigy at the peak, and another directly below at the base of the collar, located in an 'empty' triangle demarcated by fine punctates. The opposite castellation is eroded at the peak, but likely had a similar effigy, as there is a nearly identical ear of corn in an 'empty' triangle directly below the peak at the base of the collar" (Goodby 1994, Figure 5c).

Other Titicut Site Pottery

During the 1947 summer season archaeologists from the R.S. Peabody Foundation also uncovered remains of three other ceramic vessels in pit or hearth features. Only limited information about these pots is available, as these ceramic fragments could not be studied. Thus, only a brief comparison to other Shantok traits can be mentioned. Other Titicut area ceramics have Stage 4 pots with similar decorations and construction designs.

Temper is of well sorted shell fragments. At least one high castellation appears on each one. Decoration consists of horizontal, vertical, and oblique bands of incised lines. Interior and exterior surfaces are smoothed. Below the collar a constricted

neck appears. Although badly eroded, the collars show "empty triangular" areas and castellation peaks appear to have an "ear of corn" effigy and incised lines, similar to phallic designs. Two of the three vessels have lobes (Goodby 1994).

Conclusions

Castellations on collars are usually four in number, but a pot with two castellations was found in Burial No. 4 at the Titicut Site. A rare example of a pot with one castellation was found at Wapanuck-et-Locus 1 (Burial No. 2) (Robbins 1980:23-24).

Indians of high rank and children often had pots and elaborate Contact grave artifacts included with the body. Small vessels seem to have been made expressly for the burial, as this size is not found in everyday use.

By the late 1600's many local Indians had converted to Christianity and few artifacts were then included in burials. Sixteen of these "Praying Indian" burials were uncovered in 1957-1958 within the Titicut district. No grave goods were present; only copper shroudpins and nails were used to hold bark liners or coffins together. These were extended burials and after excavation the bones were reinterred nearby.

The Shantok Tradition was not confined to tribal boundaries, as evidence of ceramic styles were shared by historic Mohegan, Narragansett and Wampanoag peoples of southern New England, as well as Long Island (Goodby 2002). Perhaps the European style brass and copper kettles that appeared during the early Contact Period may have inspired Native women to produce more elaborate styles with new decorations applied to traditional ceramic vessels (Goodby 2002).

Acknowledgements

I would like to thank Dr. Robert Goodby for allowing me to use some of his descriptive notes on Titicut Ceramics, especially Burial No. 4 at the Titicut site.

I also used William S. Fowler's unpublished notes on pots found at Taylor Farm and Seaver Farm. This analysis was given to me years ago when Dr. Fowler restored these vessels.

Thanks are due to Ken Alves, the Repatriation Officer for the Wampanoag Confederacy, for allowing me to study and photograph Titicut Burial No. 4 and related artifacts found in this grave.

As usual, Jeff Boudreau deserves much credit for his expertise in photographing these exceptional artifacts.

I would also like to thank Laurie Stundis for help typing this report.

References Cited

Dodge, Karl S.
1962 The Seaver Farm Site. *Bulletin of the Massachusetts Archaeological Society* 23 (3,4):24-29.

Fowler, William S.
1966 Ceremonial and Domestic Products of Aboriginal New England. *Bulletin of the Massachusetts Archaeo logical Society* 27(3,4):51-61.
1974 Two Indian Burials in North Middleboro. *Bulletin of the Massachusetts Archaeological Society* 35 (3,4): 14-18.
n.d. unpublished notes pertaining to restored Titicut area ceramics.

Goodby, Robert G.
1994 Style, Meaning and History: A Contextual Study of 17th Century Native American Ceramics from Southeastern New England. Unpublished Ph.D. Dissertation, Dept. of Anthropology, Brown Univer sity.
2002 Reconsidering the Shantok Tradition. In Jordan Kerber, ed., *A Lasting Impression: Coastal, Lithic and Ceramic Research in New England Archaeology,* pp. 141-154. Praeger: Westport, Connecticut.

Robbins, Maurice
1967 The Titicut Site. *Bulletin of the Massachusetts Archaeological Society* 28(3,4):33-76.

1980 *Wapanucket: An Archaeological Report*. The Massachusetts Archaeological Society, Inc.: Attleboro, Massachusetts.

Taylor, William B.

1982 The Taylor Farm Site. *Bulletin of the Massachusetts Archaeological Society* 43(2):40-46.

Whetstones Found in Southeastern Massachusetts

William B. Taylor

Introduction

Whetstones were used from Early Archaic to Late Woodland times. They were most likely used to grind the blades of woodworking implements (gouges, adzes, axes and celts), during the sharpening process (Hoffman1991:70-71). There were three types of hones most commonly used: plain, perforated, and notched. Most local whetstones are fairly narrow and measure from 6″ to 8″ (15 – 20 cm) in length. Common materials used include argillite, sandstone, schist and slate. Hones or whetstones are not highly coveted by relic collectors. However, they were an important tool type and deserve more attention.

Figure 1. Whetstones from Southeastern Massachusetts

Examples

At the top center of Figure 1, Example e is a whetstone 5 ½″ long by 5/8″ thick and ¾″ wide (140 mm x 16 mm x 19 mm). This black slate hone was found at the Seaver Farm Site (19-PL-162) in Bridgewater, MA. At one end, a slightly expanded handle was formed. All four sides are rubbed smooth.

Below, Example a is a sandstone whetstone from the Arnold Thomas collection (possibly from Middleboro). It is 6 ¾″ long by 1 1/8″ wide and 5/16″ thick (171 mm x 32 mm x 8 mm). A ¼″ (6 mm) hole perforation shows cord marks at the top made from a cord used to hang this example. All sides are ground smooth. 1 3/8″ (16 mm) of the lower end was restored by William S. Fowler.

Example b was found by Adam Gallagher of Bridgewater, MA in 2005, while on a school field trip to Sandwich Beach. Located in a tidal pool, this black slate grooved whetstone measures 7 ¾″ long by 1″ wide and is 3/8″ thick (197 mm x25 mm x 10 mm). This piece was whole when found, but was dropped and lost a ¼″ (6 mm) long by 15/16″ wide and 5/8″ thick (184 mm x 24 mm x 16 mm). It is made of slate and is labeled No. 173..

The last whetstone in Figure 1, Example d, is another perforated example (M.A.S. No. 6941) and was found by A. Santacaterina in Franklin, MA. This find was made near Beaver Pond at the Beaver Brook Site. It measures 6 5/8" long by 1 3/16" wide and 5/16" thick (168 mm x 30 mm x 8 mm). It is made of slate..

Figure 2 shows a slate whetstone recovered from the Middleborough Little League site (19-PL-520) in 2006 (Hoffman 2007:21). It is 4 15/16" long by 1" wide by 3/8" thick (124 mm x 25 mm x 10 mm). It was found within a pit feature which contained 11 edge tools, 2 projectile tips, 169 paintstones, 12 polished pebbles, 2 anvils, 1 chopper, cined bone, and 583 pieces of fire-burnt rock. Charcoal from the pit provided a radiocarbon date of 3240±140 B.P. (GX-32750, corrected for dC13, cal 3685 3271 bp). This provides a Transitional Archaic date for the use of this tool type.

Discussion

In northern New England, especially Maine, stone rods are often much longer (14.1", or 360 mm) and are believed to have been used primarily to sharpen long full channel gouges. Other names are giv en to these hones, such as ground stone rods, slate pendants, needle pendants, abraders and abrasive stones. It is not unusual to find stone rods in burials with red ocher and gouges (Robinson 1992:89-92). Locally, most gouges are found in the 3" to 5" (75 – 125 mm) length range, with a few in the 6 ½" to 8" (165 – 205 mm) size. Rare examples reach 11 ½" (290 mm) or can be as small as 2 ½" (65 mm). Full channel gouges are scarce, and hones over 8" (165 mm) are not usually needed to sharpen our local gouges.

Acknowledgements

I would like to thank Jeff Boudreau for his help with photography.

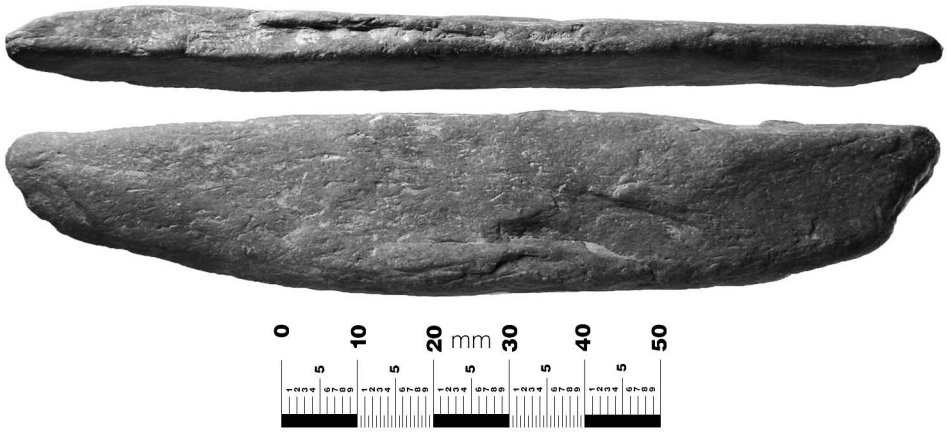


Figure 2. Whetstone from the Middleborough Little League Site

References Cited

Hoffman, Curtiss R.
1991 *A Handbook of Indian Artifacts from Southern New England, M.A.S. Special Publication* #4. Massachusetts Archaeological Society, Middleborough, MA.
2007 Middleborough Little League Site, Middleborough, Massachusetts. 2006 Annual Report and Permit Renewal Request. On file at the Massachusetts Historical Commission, Boston MA.

Robinson, Brian
1992 Early and Middle Archaic Period Occupation in the Gulf of Maine Region: Mortuary and Technological Patterning. *Occasional Publications in Maine Archaeology* 9: 63-117.

The 2009 Season at the Middleborough Little League Site
A Preliminary Report

Curtiss Hoffman

Introduction

Since 1996, Bridgewater State College students and MAS volunteers working under the author's direction have been excavating at the Middleborough Little League site (19-PL-520). The site is located on a series of three terraces to the northwest of the Nemasket River. These were formed during successive draw-downs of proglacial Lake Narragansett following the last glacial retreat (Hartshorn 1960). The second terrace has largely been destroyed during the construction of ballfields in the 1980s and 1990s, and almost all of the archaeological work done at the site has concentrated on the third, highest terrace. This has produced a wealth of information about cultural activities, ranging in age from ca 8000 – 1000 B.P. This work was undertaken under permit from MHC at the site examination and data recovery levels of investigation, in response to proposals on the part of the Middleborough Little League to construct yet more ballfields on this terrace (Hoffman 1996, 1997, 2000, 2001, 2004b, 2007).

At the close of the 2008 season, the author obtained a verbal agreement from the Little League to avoid future construction in the area noted as "2006-2008 excavation area" in Figure 1, and to restrict future construction to the areas noted as "1996 excavation area" and "1999 – 2002 excavation area" in Figure 1. However, it is probable that future upgrades to the existing power line on the edge of the first terrace would result in disturbances to ground surface in that area, which has never before been explored archaeologically. Accordingly, the 2009 field school undertook an intensive survey level of investigation in the area shown as "2009 project area" in Figure 1. The western edge of this area is marked by the clear-cut power line right-of-way. It slopes down gradually to the eastwards to the edge of the river floodplain. To the north, there is a low-lying area heavily vegetated by bull-briars which may mark an ancient stream course. Most of the area investigated has fairly young secondary growth forest, but there are a number of wetter environment plant species peculiar to this area which are absent from the third terrace, including American holly, Concord grape, red cedar, and high-bush blueberry.

Research Design, Sampling Strategy, and Field Methodology

In order to explore this area's archaeological potential, the author proposed a series of research questions:

- Are there cultural materials located on the first terrace?
- What is the degree of post-depositional alteration of the first terrace, both within and beyond the right-of-way?
- What are the contents and structure of features, to determine site functions in this area?
- Are there zones of greater and lesser in tensity of occupation, as on the third ter race?
- Is there greater evidence for fishing and hunting activities on the first terrace?
- Is the activity of collection of ceremonial objects which has been well-documented for the third terrace replicated on the first terrace?
- What is the degree of utilization of local vs. regional and exotic materials, especially in comparison with recoveries from the third terrace?
- How else do recoveries from the first ter race compare with those documented from the third terrace?

This research design was accepted by MHC and the Middleborough Conservation Commission, and the author was issued a permit to conduct the operation. The field crew consisted of 8 Bridgewater State College Anthropology students and 3 MAS volunteers, working between July 6th – Au

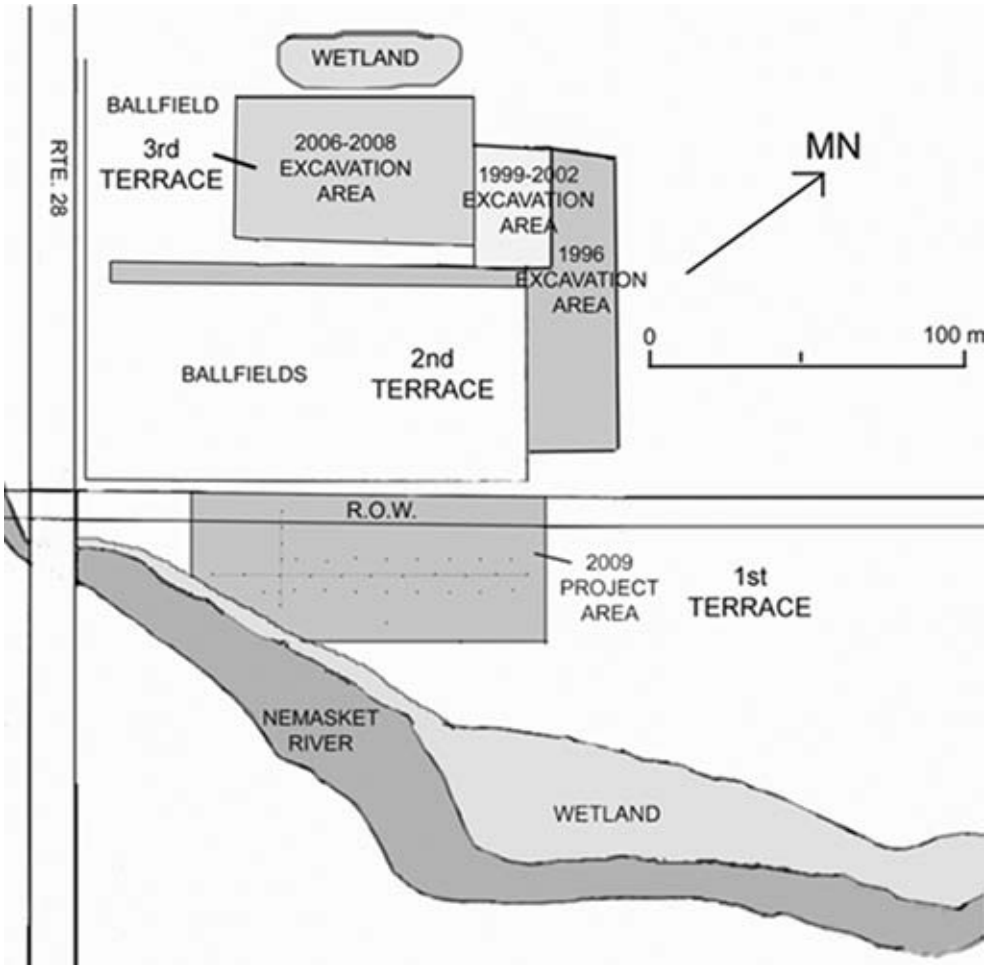


Figure 1. Schematic Map of the Little League Site

gust 9th, 2009. We first set up a baseline transect running off the 2006 grid eastwards. This transect had 50 cm x 50 cm excavation units set apart at 5 m intervals. Three transects were run perpendicular to the baseline, with 50 cm x 50 cm units set apart at 10 m intervals. We used a staggered systematic sampling design for these transects, offsetting the eastern and western ones by 5 m from the central transect. One additional unit was placed along an-orth-south transect to explore the eastern edge of the area. In all, 33 units were excavated, for a total area of 8.25 sq m (Figure 2). Units were dug with hand tools in 5 cm depth increments within natural soil horizons. Topsoils were screened through ¼" mesh, while subsoils were screened through 1/8" mesh. All recoveries were recorded on forms provided for the purpose and were bagged by level for primary laboratory processing. The processing took place at the Bridgewater campus on rainy days and at other intervals during the field season.

Discussion of Results

The answer to the question of whether the area was occupied is, emphatically, yes. We recovered 22 features, 716 lithic artifacts, 318 pieces of debitage, 482 historic period artifacts, 2,404 pieces of fire-cracked rock, 734 pieces of charcoal, and 2 pieces of turtle bone, for an average recovery rate of 564.4 items per sq m. None of the units excavated was absolutely devoid of cultural material.

The second question to be addressed concerns the degree of post-depositional alteration of soils on the first terrace. Since this terrace is much closer to the river, it was considered possible that the river might have flooded, depositing silt layers. However, no evidence of this was found. Soils in most units were identical in stratigraphy to those found on the third terrace, with a thin dark brown A1 layer of recent forest floor decomposition overlying a well-developed medium brown

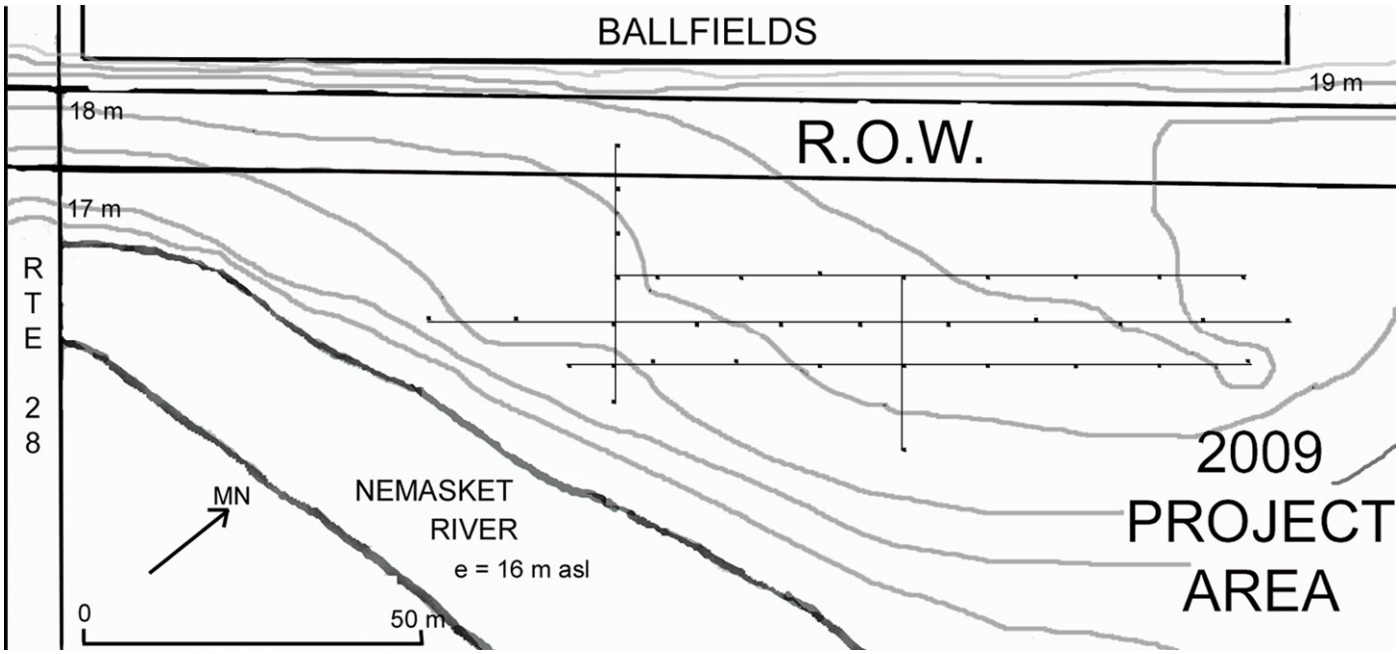


Figure 2. Contour Map of First Terrace, Showing Layout of Units

A3 plow zone overlying yellowish brown B1 zone aeolian sediments. In some units, darker strong brown aeolian sediments, defined as features, were found; these were referred to as B2 soils. These sediments in turn overlay more gravelly brownish-yellow C zone soils from the time during the early Holocene when the area was crossed by braided stream courses (Clark 2000, Fletcher 2001) (Figure 3). The soil on all three terraces is defined by the Plymouth County Natural Resources Conservation Service Soil Survey as a Gloucester Very Stony Sandy Loam, down to the actual edge of the floodplain, where it changes to a Raynham Silt Loam (USDA 1969). We never reached that point, but some of the units on the eastern end of the first transect and the southern end of the second had rather wet soils, and the water table was reached in the easternmost unit of the first transect before the base of the aeolian horizon was reached. Local residents informed us that as recently as 40 years ago the area was a cleared field. In units close to or within the right-of-way, the A1 level was lacking; and in general this zone increased in depth as the river was approached,

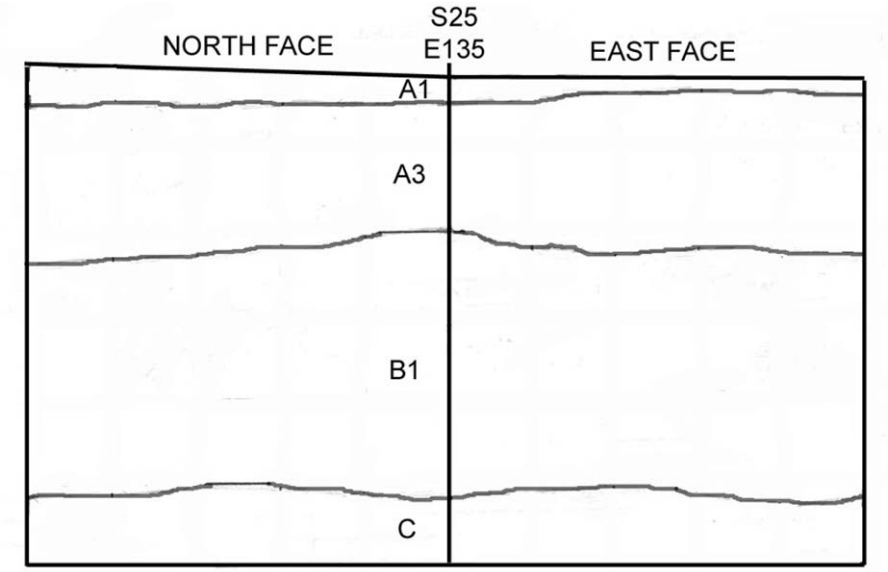


Figure 3. Typical Soil Profile

indicating ablation rather than siltation. Since the plow zones did not show similar trends, it is reasonable to assume that this alteration took place after field abandonment in the early 20th century.

Very similar to the third terrace, the plow zone on the first terrace contained 433 artifacts dating to the 18th to 20th century use of the area as a plowed field. 36 historic artifacts were found in the A1 zone, and only 10 had percolated down into the B zone. These artifacts tended to be more frequent in units closer to the right-of-way. They were dominated by coal and clinker, with smaller quantities of pottery, glass, metal, brick, plastic, and rubber. Even though this part of the site is very distant from the 18-19th century farmhouse and the early 20th century Japan works (Maddigan 1996), it still received its share of "field trash". In all, 44.6% of recoveries of all periods were found in the plow zone, comparable to what was found on the third terrace.

The third question concerned the identification of features and feature contents. Features were identified on the basis of subsoil anomalies, usually oxidation to a strong brown (Munsell colors 7.5YR5/6 or 5/8) color. In all, 22 of the 33 units contained such anomalies, though some of them may have been the result of natural processes such as tree throws and animal burrows. Most features were simply shallow bowls. One red earth feature (Figure 4) contained a clearly delineated post mold, only the second found at the site. This may have been part of a structural support for a building, or an isolated pole – at this level of survey it is impossible to tell. Some features had rather complex mixes of different colored soils, each one of which was noted and mapped during excavation (Figure 5). In some features there were clearly marked scatters of fire-cracked rock and artifacts, probably indicating waste disposal. In other features there were large rough stone tools embedded at the base of the feature, in one case showing use as a hopper-type mortar, in others large slabs of local arkose adapted for use as anvils (Figure 6). These, along with nutting stones, pestles, and choppers, are indicative of vegetable food process-

Figure 4. Profile of Feature #156, Showing Post Mold

Figure 5. Profile of Feature #142, Showing Lenses

Figure 6. Mortar (a) and Anvils (b and c). Materials: a, c – Arkose; b – Granodiorite

ing activities. Fire-cracked rock, most heavily concentrated in units closer to the right-of-way, will later be analyzed to determine if it is of anthropogenic origin. About 25% of it derived from feature soils. Charcoal distribution was more uniform, with a few heavy concentrations, but about 45% of it was in feature soils. No hearths or firepits were found, so there were no radiocarbon dates to process. The high concentration of fire-cracked rock in some units suggests that some heating activities were taking place in this portion of the site.

The fourth question concerns the distribution of cultural materials around the area investigated. There was a clear pattern in the distribution of features. With one exception, the northern and southeastern portions of the project area lacked features. The remaining features were concentrated in a contiguous area about 70 m x 20 m in extent, bounded on the north, south and east, and apparently extending well into the right-of-way to the west (Figure 7). Exploration of additional transects to the west of those excavated in 2009 will be needed to confirm this. Debitage distribution was somewhat similar to that of the features, with the strongest concentrations in the southwestern part of the excavated area. Some units had moderately high concentrations, above 50 flakes per sq m, but this is still far lower than what was found on the third terrace, where some units had in excess of 500 flakes per sq m. At least so far, the lithic workshops and lithic waste disposal pits found on the third terrace were absent from the first terrace; only 13.5% of the debitage was found in features. Chipped stone tools – far fewer in number than on the third terrace – showed a rather different distribution pattern, with the strongest concentrations in the central part of the excavated area. Only five out of 52 chipped stone artifacts were actually found in features. While use-wear analysis has not yet been undertaken on these tools, they provisionally include scrapers, knives, utilized flakes, and a spokeshave (Figure 8). There were also 3 cores and a preform, all of quartz. Once these tools have been analyzed, it will be possible to determine what kinds of activities were being performed using these edge tools, and to compare this with the results from the third terrace.

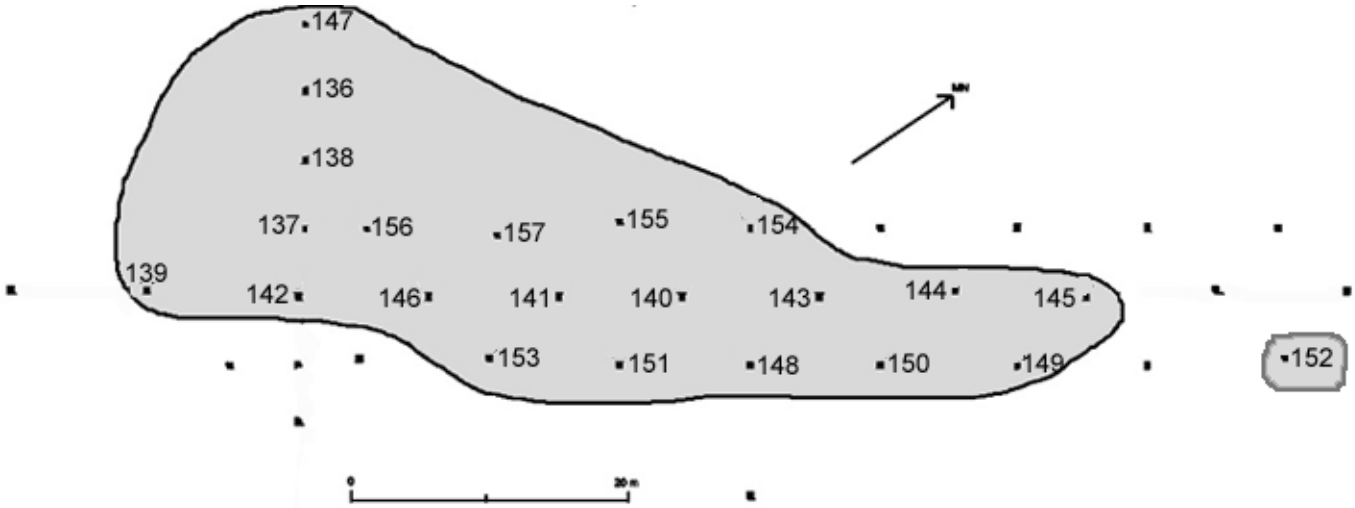


Figure 7. Distribution of Features, 2009 Season

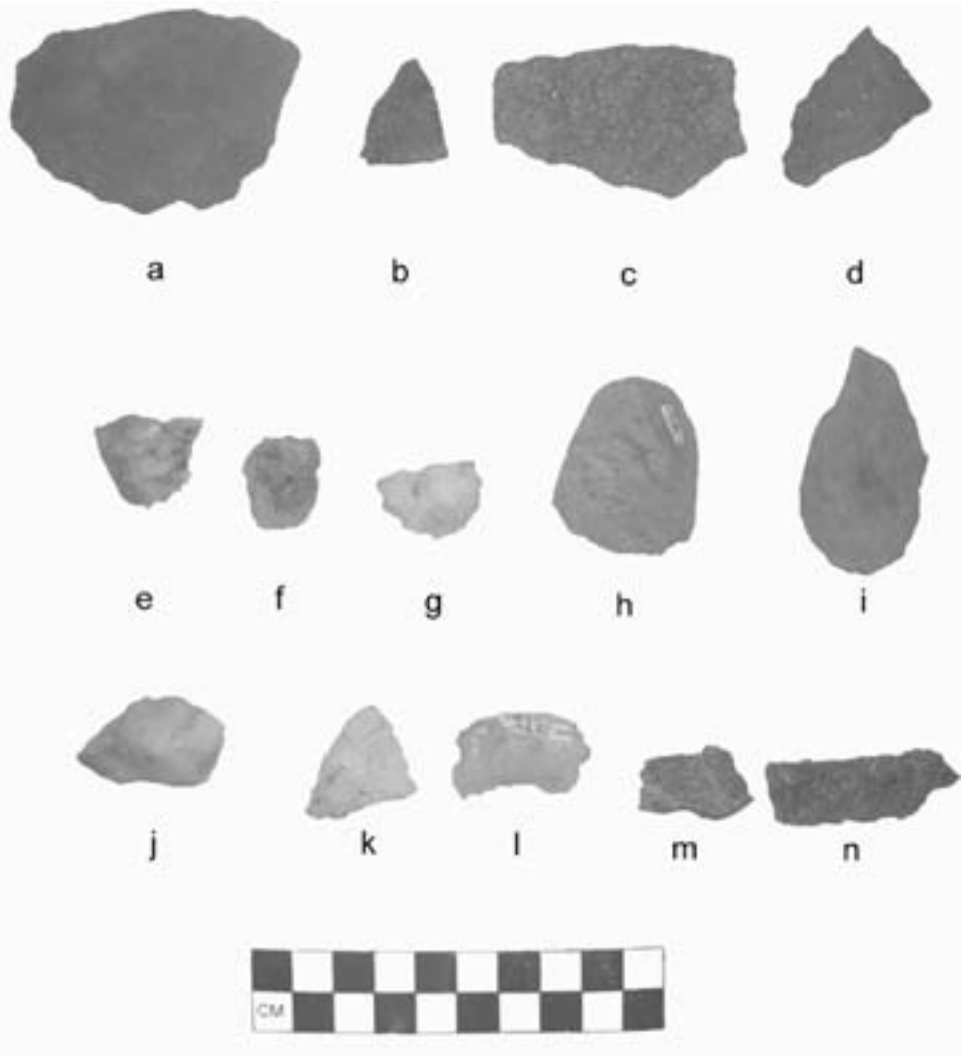


Figure 8. Chipped Stone Tools. a-d – Knives; e-i – Scrapers; j-n – Utilized Flakes. Materials: a, i – Argillite; c – Arkose; b, d, h, m, n – Felsite; e, f, g, j, k, l -- Quartz

Another research question concerns the activities of hunting and fishing. While the third terrace produced ample evidence of meat and bone processing, there were relatively few projectile points recovered compared with the assemblage of other edge tools. However, surface investigation of the second terrace during construction activities in 1986, both by MAS members and representatives from MHC, recovered a wide variety of projectiles (Kerber 1986). This led to speculation that the second terrace might have been an area for more concentrated men's hunting activities, while the third terrace was mostly used by women for food, bone, and hide processing. Due to the near total destruction of the original soil horizons on the second terrace, the exploration of the first terrace was of interest, to see if this hypothesis would be confirmed. However, only four projectile points were recovered from the 2009 excavations, similar in proportion to other chipped stone tools as that found on the third terrace. These include a probable Snappet point of quartz (Doucette and Cross 1998); two Small Stemmed points, one of quartz and one of felsite; and a broken felsite projectile tip (Figure 9). This suggests that hunting was not an important activity in this area. It also suggests occupation during the Middle Archaic to Early Woodland periods. Given its closer proximity to the Nemasket River, which hosts an annual run of alewives in the Spring, it was hypothesized that fishing might be one activity more intensively practiced on the first terrace than on the third. A few notched pebbles and plummets were found on the third terrace, but soil samples taken from 28 features during the 2007 season failed to show elevated levels of heavy metals (mercury, lead, cadmium, and arsenic) such as one might have expected to be present if anadromous fish processing were taking place there (Cramsey 2008). Excavation on the first terrace found no artifacts that could be interpreted as fish-processing tools. Soil samples taken from 20 of the features remain to be tested for heavy metals.

The assemblage on the third terrace was dominated by objects associated with ceremonialism (Hoffman 2004a). Paintstones – of black graphite, red and purple hematite, and brown limonite – were found in great abundance, constituting as much as 70% of the assemblage. Pebbles with a high degree of polish, interpreted as having been used as rattle stones or as stones for divination, were also present in large numbers. Quartz crystals, including 13 Herkimer diamonds, were actually more common than projectile points. Slate pendants, including pendant blanks, were also

Figure 9. Projectile Points. a – Snappet Point; b, c – Small Stemmed Points; d – Point Tip. Materials: a, b – quartz; c, d – felsite

found, in one case in a cache dated to the Transitional Archaic period (Hoffman 2004b:84-85). There were also a few other ceremonial items, including stone rods and a tally stone. This allowed for the interpretation of one important function of the site as a location for gathering these materials together from a variety of local and non-local sources for redistribution to ceremonial sites elsewhere in the southern New England region.

Thus, another of the research questions for the 2009 season was whether this pattern of collection of ceremonial items would be duplicated on the first terrace. It clearly was. Paintstones were far and away the most common artifact type found at the site, constituting over 50% of all artifacts. However, the distribution by material was rather different, as will be discussed further below. As on the third terrace, the distributions of graphite and hematite tended to be somewhat mutually exclusive, but the highest concentrations of both materials were found in the same general area of the site. Graphite was much more common and more widely distributed. 33.6% of graphite paintstones, 41.6% of hematite paintstones, and 31.0% of limonite paintstones were found in features.

Polished pebbles were also abundant on the first terrace – after paintstones, they were the next most common artifact type. Over 90% of them were made of quartz, while other materials – agate and chert, felsite, quartzite, basalt, and granodiorite – were present in smaller numbers (Figure 10). Quartz crystals, including two Herkimer diamonds, were again present in higher numbers than projectile points. Some of these crystals are quite large, and show evidence of bag wear on the margins between facets – just as they did on the third terrace (Figure 11). Other ceremonial items included a rod fragment and two argillite pendants. One broken specimen is similar to the one-hole pendants found on the third terrace, the other is delicately pecked around the center for attachment, like a miniature grooved hammerstone (Figure 11). The distribution of polished pebbles and other ceremonial items somewhat resembles that of the paintstones, with the strongest concentrations in the southwestern and central portions of the site. 22.4% of polished pebbles and 40.0% of quartz crystals were found in features.

The next question concerns the use of different lithic materials for debitage and chipped stone tools, and the comparison of these between the two terraces. Quartz was the dominant material on the first terrace, accounting for 62.3% of all flakes recovered. It was followed by arkose at 15.6% and argillite at 14.8%, both of these derived from the local bedrock. Other materials – hornfels, granite, chert, basalt, quartzite, felsite, and granodiorite – were present in trace amounts. Since all of these materials except for chert and Attleboro felsite are present in the glacial drift at the site, this indicates that less than 2% of the

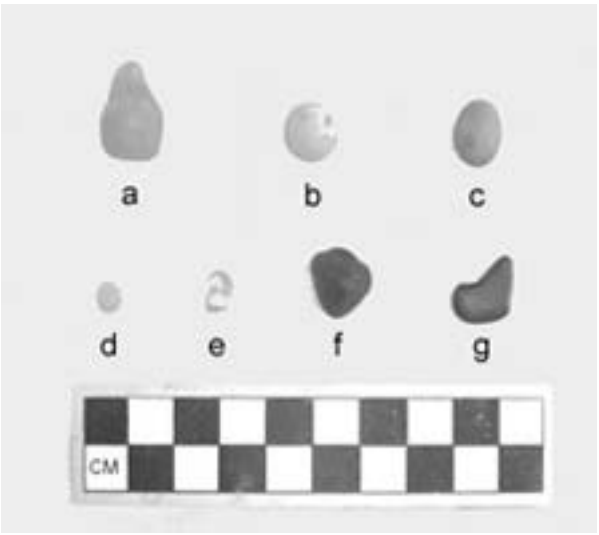


Figure 10. Polished Pebbles.
Materials: a-e – Quartz; f, g – Felsite

Figure 11. Quartz Crystals.
a-d – Uniterminated; e, f – Herkimer Diamonds

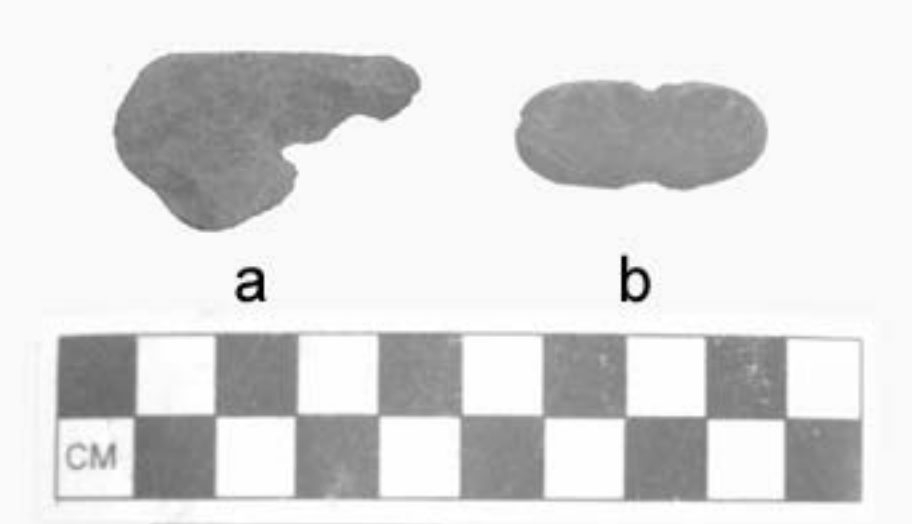


Figure 12. Pendants. a – Broken One-Hole Pendant; b – Grooved Pendant. Material: Arkose

debitage derived from non-local sources. On the third terrace, with a much larger sample, the results were somewhat comparable: quartz constituted 67.8% of all debitage, followed by arkose at 18.5% and argillite at 5.2%. However, felsite was a bit more common than argillite, at 6.0%. All other materials – quartzite, granite, hornfels, gabbro, granodiorite, coalstone, chert, gneiss, and breccia – were present only in trace amounts. Exotic lithic materials were even less common than on the first terrace. The major difference between the two areas is in the percentage of felsite, which was nearly 6 times as common on the third terrace than on the first. Lithic use-wear studies by Susan Jacobucci (2005, 2007, 2008, 2009) have shown that felsite tools on the third terrace were primarily used for cutting and butchering, as well as for projectile points. It may be suggested, in advance of use-wear studies, that these activities were not as important on the first terrace as on the third. Only 13.8% of flakes from the first terrace were found in features.

The chipped stone artifacts show a similar pattern of distribution by material. Quartz dominates on the first terrace, at 63.6%. Felsite is second, at 16.4%, followed by argillite at 10.9% and arkose at 5.5%. Non-local lithics account for less than 2% of the total. On the third terrace, quartz is even more dominant at 74.8%, followed by felsite at 8.4.%, arkose at 7.6%, and argillite at 4.0%. Tools made of non-local lithics are quite rare. This suggests that lithic procurement strategies were relatively similar on both terraces. The last research question, which has already in part been addressed, is how the recoveries from the first terrace compare with those from the third terrace.

If we compare general artifact types, we find some clear similarities – ceremonial items dominate both assemblages, but much more so on the first terrace, where they constitute 87.1% of the artifact assemblage, while on the third terrace they are at 68.3%. However, chipped stone tools are much less frequent on the first terrace, at 8.4%, while on the third terrace they are at 25.6%. Rough and pecked and ground stone tools are at comparable levels, at 4.4% on the first terrace as compared to 5.9% on the third terrace. However, proportionally to chipped stone tools, they are much more common on the first terrace, at a ratio of about 1:2, while on the third terrace the ratio is closer to 1:4. This suggests that the processing of vegetable foods may have been more important on the first terrace than the processing of meat and hides. As well, tool-making appears to have been much less important an activity on the first terrace, with only 3 cores, 1 preform, 5 hammerstones, and 318 flakes, for an average of 39.8 per sq m, as compared to 198.0 per sq m on the third terrace.

Comparing the different types of paintstones from the two terraces, there are some potentially significant differences in distribution (Figure 13 On the first terrace, graphite was much more common, accounting for 64% of paintstones, while hematite was less common, accounting for only about 25%.

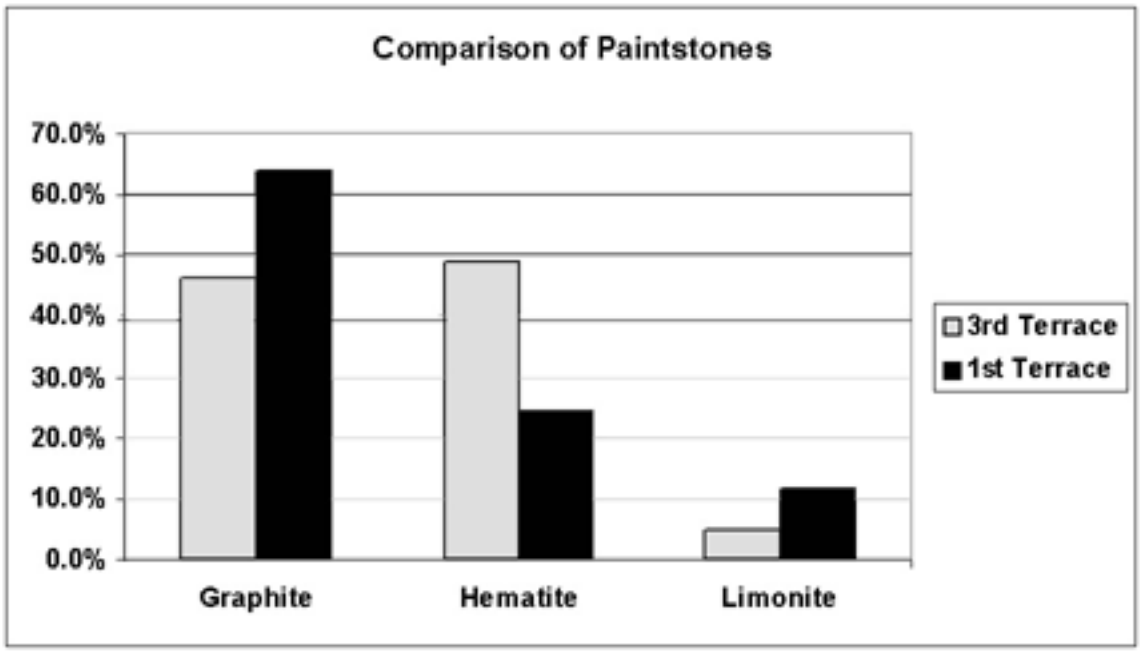


Figure 13. Graph Showing Distribution of Paintstones by Material on the 1st and 3rd Terraces

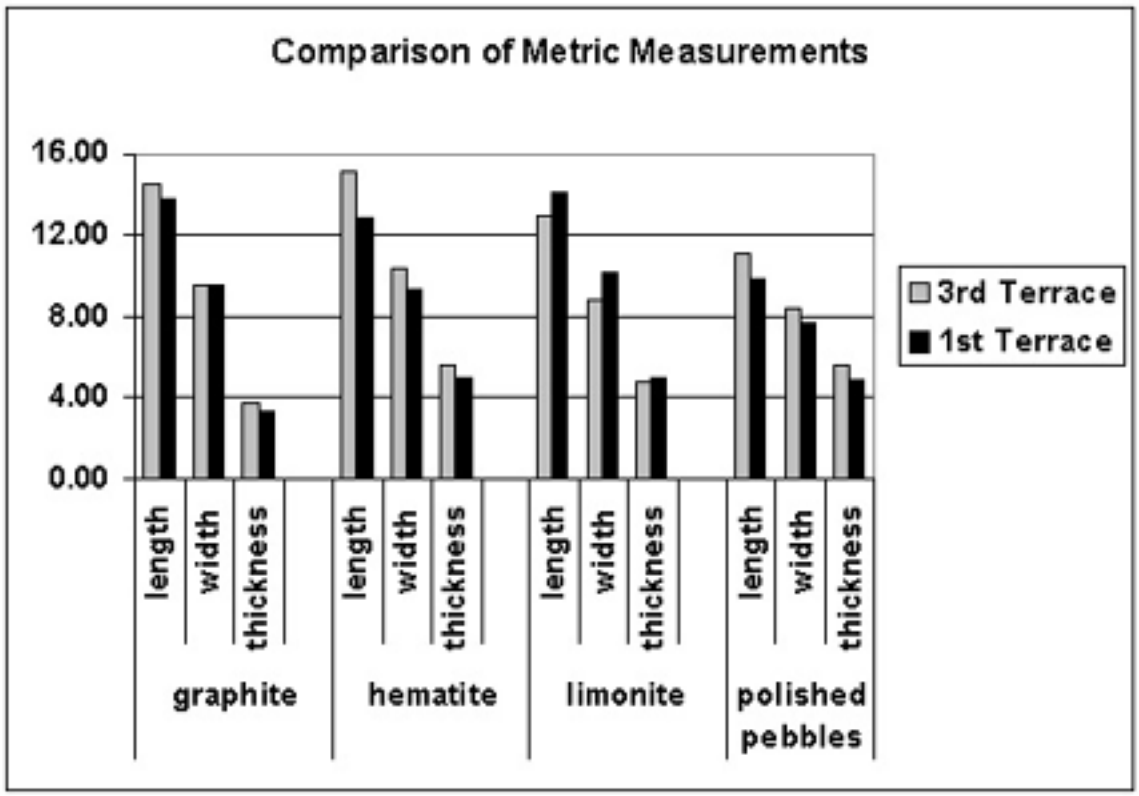


Figure 14. Graph Showing Distribution of Paintstones by Size on the 1st and 3rd Terraces

Limonite was somewhat more frequent, at 12%. On the third terrace, hematite was associated with all periods of occupation, while graphite was found only in the Late Archaic, Transitional Ar chaic, and Early Woodland dated features. This may provide one of the few clues so far discovered as to the age of occupation of the first terrace. The presence of Middle Archaic to Early Woodland point styles tends to confirm this conclusion.

There are also some similarities and differences in the choices of materials for polished pebbles between the two terraces. Quartz dominated at 90.1% on the first terrace, as it did on the third terrace where the percentage was 74.7%. However, the variety of other materials was much narrower on the first terrace, restricted to only quartzite, agate/chert, basalt, felsite, and granodiorite, while on the third terrace some polished pebbles were also made of andalusite/chiastolite, argillite, granite, and hornfels. Since none of these materials was present in large quantities on the third terrace, this difference may be merely due to sampling size. However, the raw frequency of polished pebbles on the first terrace was much higher, at 18.4 per sq m, while on the first terrace it was only 4.9 per sq m. This difference may be due to the fact that polished pebbles were not recognized in the first three seasons of excavation on the third terrace.If we factor in only the polished pebbles found during the 2006-2008 seasons, the ratio is more comparable to that on the first terrace, 14.0 per sq m. There were also some differences in average size for paintstones and polished pebbles between the two terraces (Figure 14). While graphite paintstones on both terraces tended to be of similar size, hematite paintstones and polished pebbles were significantly smaller on average on the first terrace than on the third, while limonite paintstones tended to be significantly larger. Some paintstones from the third terrace were quite large, with maximum lengths of 79 mm for graphite, 147 mm for hematite, and 54 mm for limonite. The largest paintstones recovered from the first terrace were 45 mm, 43 mm, and 28 mm respectively.

Conclusions

In conclusion, the initial test excavations on the first terrace have demonstrated patterns which are in many ways comparable to those found in other areas of the site. These patterns indicate a general continuity of occupation between the two areas, which may in turn reflect contemporaneity, or at least similar activities. It should be kept in mind that the sampling fraction from the first terrace so far is very small, so that these conclusions should be considered to be preliminary only. We plan to return to the site in the summer of 2010 to investigate several additional north-south transects, and, if time allows, explore some of the features in greater detail.

References Cited

Clark, Sandra
2000 Personal Communication concerning the origins of the soil at the Little League site.

Cramsey, Kyle
2008 Determination of Cadmium, Lead, Arsenic and Mercury in Soil Collected from an Archaeological Site in Middleborough, MA. Paper presented to the Annual Meeting of the Eastern States Archaeological Federation, Lockport NY.

Doucette, Dianna, and John Cross
1998 Archaeological Investigations within the Anasnappet Pond Archaeological District, Data Recovery Program for Loci 1, 2, 8, and 9, Carver, Massachusetts. Public Archaeology Laboratory Report #580. Submitted to the Massachusetts Highway Department, Boston, MA.

Fletcher, Peter
2001 Personal Communication concerning the origins of the soil at the Little League site.

Hartshorn, Joseph H.
1960 Geology of the Bridgewater Quadrangle. Geologic Quadrangle Maps of the United States, Map

Hoffman, Curtiss
1996 Middleborough Little League Path: Archaeological Intensive Survey. On file at Massachusetts Historical Commission, Boston MA.

1997 Middleborough Little League Fields: Archaeological Intensive Survey. Supplementary Research Report. On file at the Massachusetts Historical Commission, Boston MA.

2000 Middleborough Little League Fields: Archaeological Intensive Survey and Site Examination. On file at the Massachusetts Historical Commission, Boston MA.

2001 Middleborough Little League Site, Middleborough, Massachusetts: 1999 Annual Report and Permit Renewal Request. On file at the Massachusetts Historical Commission, Boston MA.

2004a Symbols in Stone, Part Two: Quartz Ceremonial Items from the Middleborough Little League Site. *Bulletin of the Massachusetts Archaeological Society* 65 (2):63-71.

2004b Middleboro Little League Site, Data Recovery Operation: Final Report. Three volumes. On file at the Massachusetts Historical Commission, Boston MA.

2006 Late – Transitional Archaic Exchange in Southern New England. *Archaeology of Eastern North America* 34:91-104.

2007 Middleborough Little League Site, Middleborough, Massachusetts. 2006 Annual Report and Permit Renewal Request. On file at the Massachusetts Historical Commission, Boston MA.

Jacobucci, Susan A.

2005 A Preliminary Analysis of the Steepedge Scrapers Recovered from the Middleborough Little League Site. In Hoffman, Curtiss, Middleborough Little League Final Site Report, Appendix VII, pp. 873-890. On file at the Massachusetts Historical Commission, Boston MA.

2007 A Preliminary Analysis of Use-wear: Low-power Use-wear Analysis on Stone Artifacts Recovered During the 2006 Field Season from the Middleborough Little League site. In Hoffman, Curtiss, Middleborough Little League site, Middleborough, Massachusetts, 2006 Annual Report and Permit Renewal Request, Appendix B, pp. 112-132. On file at the Massachusetts Historical Commission, Boston MA.

2008 A Preliminary Low-Power Use-wear Analysis on an Assemblage of Stone Artifacts Recovered from the Middleborough Little League Site. Report submitted to Bridgewater State College, Bridgewater, MA.

2009 A Preliminary Low-Power Use-Wear Analysis on an Assemblage of Stone Artifacts Recovered over Several Years and from Many Contexts Associated with the Middleborough Little League Site. Report submitted to Bridgewater State College, Bridgewater, MA.

Kerber, Jordan

1986 Archaeological Investigations at the Soccer Field Site (19-PL-520), Middleborough, Massachusetts. On file at the Massachusetts Historical Commission, Boston MA.

Maddigan, Michael J.

1996 Japan Works: A History of the George H. Shaw Company Site, East Grove Street, Middleborough. Manuscript prepared for the Middleborough Historical Commission, Middleborough MA.

U.S. Department of Agriculture

1969 Soil Survey, Plymouth County, Massachusetts. U. S. Government Printing Office, Washington DC.

CONTRIBUTORS

JEFF BOUDREAU is a former chairman of the Cohannet Chapter of the MAS. As a flint knapper, he has conducted replicative studies of quartz Squibnocket points, felsite Neville points, and, more recently, various forms of fluted points. He is a frequent contributor to the MAS Bulletin and is the author of A New England Typology of Natie American Projectile Points. He is also the official MAS photographer.

CURTISS HOFFMAN is a Professor in the Anthropology Department at Bridgewater State College. He has conducted archaeological excavations at numerous sites in eastern Massachusetts, including the Middleborough Little League Site from 1996-2002 and 2006-2009. He is the Editor of the MAS Bulletin.

WILLIAM B. TAYLOR is a long-time member of the MAS. He has been an ardent collector of Indian artifacts in the Titicut area for more than sixty years. He is a frequent contributor to the MAS Bulletin, and serves on the MAS Board of Trustees.

ISSN 0148 1886