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Polynesian specimens can be seen for comparison with New England Indian material in the collections of the Peabody Museum of Salem and the Peabody Museum of Archaeology and Ethnology, Harvard University.

Peabody Museum of Salem
Salem, Massachusetts

"THE BULL BROOK" SITE, IPSWICH, MASS.

William Eldridge and Joseph Vacaro

During the spring of 1951 members of the Northeastern Chapter collected chips, stone artifacts, pottery and such from the Bull Brook Camp site, the location of which had been known for some time. Previously the late Mr. Roy L. Esty had collected a number of artifacts there. In early June 1951 Eldridge and Vacaro showed the site to Messers. Byers and Johnson of the Peabody Foundation at Andover. Because of the interest of the artifacts which had been collected, it was decided to publish the following account. Some of the data included here has been supplied by Byers and Johnson.

The Bull Brook site, M13/36 in the Society's site catalogue, is located on a spit of land less than one half mile wide forming a divide between Bull Brook and Muddy Run, the two upper tributaries of the Rowley river. The spit is composed of a deep layer of waterlaid sand in which occasional boulders are to be found. The surface of the area upon which the artifacts are to be found is flat, having a relief of less than an estimated five feet. It is about 40 feet above sea level. This flat surface is covered with sparse vegetation, grasses and scattered trees growing in a deposit of sandy humus some eight inches thick.

A number of years ago when the site was first discovered the northeasterly end was numbered M13/36 and surface indications were that the area was restricted. Since that time a large sand pit and rock crusher have been located on the spit and stripping operations have revealed evidence of occupation distributed in a general southwesterly direction for more than 500 yards. The artifacts are concentrated in small areas, some of them on the sloping sides of the spit.

The bulldozers operating about the sand pit have stripped off the layer of humus and the excavations for sand have removed all of the original M13/36. From all that has been observed to date, however, it seems likely that further work, though it will probably produce interesting and significant artifacts, will not add to our knowledge of the stratigraphy of the site. As far as is known all the artifacts are found in the humus or in the transitional zone between the humus and underlying sand. Because of the manner in which the sand was laid down, it is impossible to conceive of a way in which anything but its present surface could have been occupied. The inferred process of deposition is that during successive occupations the materials which were left behind came to rest on a surface of the humus which had been laid nearly bare of vegetation and partially eroded by the ordinary activities of the people. Upon being abandoned, the artifacts were covered up by the vegetation and by deposits of the very light humus which drifted about the site. Successive occupations deposited tools and chips in this humus in the same manner so that their location can give little or no clue to the stratigraphy. It is possible that very careful mapping of concentrations of artifacts might provide significant data, but the size of this task and the uncertainty of success almost precludes this as a possibility. This kind of work is rendered further uncertain by the probability that the area has been cultivated at some time since it was occupied.

In spite of these discouraging remarks the site is worthy of record. The fluted arrowpoint excavated by Vacaro from a surface laid bare by a bulldozer is the best record of such a specimen from Massachusetts to date. Adding to this a similar arrowpoint found by Mr. Esty heightens the interest. Unfortunately, this arrowpoint cannot now be specifically identified in Mr. Esty's collection. One fragment of a fluted arrowpoint and one small arrowpoint not so easily classified as a fluted point were kindly loaned for study by Mrs. Esty. They are labeled "Folsom Points" and on a slip in the box "Ipswich" is written. They may have come from this site. The presence at this site of "sheared" tools, though apparently not unique in New England, is also of significance. In view of this we offer the following description of the tools which have come to light during the past few years.

ARROWPOINTS

One arrowpoint, Fig. 23, no. 37, Fig. 24, no. 7, is of particular interest. The size (2 1/2" x 1" x 1/4"), shape and the channel which is to be found on both faces places it within the general group called Eastern Folsom. It is of the smaller variety. The arrowpoint is somewhat crudely made of a hard, fine-grained "cherty" stone. Apparently the edges were retouched by the removal of narrow, horizontal flakes before the channel flake was removed. In a few instances, however, especially near the butt, the flake scars do not reach as far as the channel scar. On one face the concave base has been retouched following the removal of the channel flake. On the other face the channel flake came off in two pieces, apparently due to a single blow or application of pressure at one spot. This channel scar is more irregular than that on the other face. The edges near the butt have not been polished. One of the corner points at the butt has been broken off, but it is impossible to say whether or not this occurred while it was being made.

The other arrowpoints in the collection require only brief comment. All the forms shown, Fig. 23, nos. 28-36; 38-43, are commonly found in Massachusetts. No. 42

had a notched or bifurcated base, but one corner of this has been broken and it does not show clearly in the illustration. With the exception of the arrowpoints made of quartz, nos. 30-33, these arrowpoints are most frequent in non-pottery horizons, but they occur, actually in probably significant percentages in association with various kinds of pottery some of the latest of which may be the New England counterpart of New York Owasco. The four quartz specimens are of interest because Ipswich is close to the northern boundary of their occurrence, especially in the forms seen. This kind of arrowpoint, along with others, is found in large relative numbers south of Boston, Massachusetts, in Rhode Island and eastern Connecticut. Nos. 30 and 32 have been called Lanceolate and are slightly more frequent in earlier pottery bearing horizons. The triangular form, no. 31 is a rather crude example of a type found in the same general horizon. No. 33, trianguloid, stemmed, has a similar distribution.

In all twenty-three arrowpoints from the site may be described. In addition to the sixteen illustrated, two are duplicates of nos. 32 and 35, although not made of the same material. One broken piece has a slightly concave base and crude side notches. Another is a broken arrowpoint, the base of which has been retouched for use as a scraper. The three other pieces are probably sections of long, narrow forms. These specimens belong in the same general horizons as those which are illustrated.

As a whole, excepting the eastern folsom specimen, the arrowpoints belong in a group which is as yet only vaguely defined. The group is not the most ancient known in New England for it appears to have been most commonly employed by the people who were just learning to make pottery. Cultural affiliations and the time horizon of eastern folsom arrowpoints are as yet unknown. Here we only record the discovery of this specimen in a location which defies stratigraphic interpretation. We do not know whether it antedates the other specimens, or whether it was made by people who also used the more commonly distributed types.

SCRAPERS

Figure 23, nos. 18-26, illustrates a series of scrapers such as are commonly distributed in Massachusetts. Excepting no. 19 this particular group is made up of relatively thick pieces of chert or other fine-grained rock. All of them have one flat or slightly curved face. The edges at the top of the specimens as illustrated have been dressed by the "vertical" chipping characteristic of scrapers of this sort. On some of the specimens a "side" has also been retouched in similar fashion. No. 19 is made of a thin flake the edge of which has the characteristic vertical chipping. It is singled out here because of an impression that thin scrapers of this sort may be characteristic of cultural horizons, especially to the north and east. No. 26 has been made of a particularly refractory piece of stone. Part of the upper surface is flaked off, probably due to frost. The vertical chipping, although probably done by pressure is irregular perhaps because of a flaw in the stone. The sides of the specimen are dressed. Apparently the specimen was first "roughed out" and then the edges sharpened by removing smaller flakes.

Nos. 17 and 27 are forms of scrapers which are either rare in Massachusetts or not frequently described. One face is flat. The convex faces seen in the illustration have parts of the original surfaces of the pebbles from which the tools were made. Various edges have been retouched so as to produce a form of vertical chipping. There is a question whether the blunt point of no. 27 (possibly a similar point was broken off no. 17) was purposeful. We are inclined to think it was not, for the smooth end of the point may be the outer surface of the original pebble.

SHEARED SPECIMENS

To our knowledge the occurrence in New England of tools sharpened by a technique called "shearing" by Barbieri has not been previously recorded. The technique is described as follows. "Some material, notably obsidian, flakes into very thin, fragile edges. Such edges develop in other materials during the process of pressing off thin flakes. They have not sufficient solidity to produce a sizable flake, but break off short at the slightest pressure. So the workman shears them off by running the side of his flaking tool across the thin edge at an angle nearly parallel with the face of the specimen, pressing firmly as the tool sweeps along the edge. This shears off the useless thin zone and produces a slightly blunted edge against which the flaking tool can find a proper 'bite'. The working edges of these scrapers, which are incurved ones, have been trimmed by this trick of shearing, giving them the appearance of having been very finely and evenly flaked. Except for the percussion strokes which blocked them out and shaped them, these implements show no other workmanship. They could be made easily and quickly, and probably were soon discarded."[1]

The stone industry of New England is notorious for the crudeness of its product. Much of this is due perhaps to the type of stone selected by the aboriginal artisans. The commonest materials are coarse-grained rocks such as the porphorytic rocks, poor grades of quartzite, jaspers and the like. Chalcedony, flint and rocks of similar properties are present although not abundant in the region. However, tools made of such stone are relatively rare except at sites which apparently were near some source of supply.

The distribution of the shearing technique in New England may well be somewhat modified by the kind of stone used by the Indians. Although distributions suggest it, they do not prove the idea that Indians of the region had developed habits in using certain rocks, especially varieties which appear to us to be more refractory than other kinds immediately available. Only

1. Barbieri, Joseph A. "Technique of the Implements from Lake Mohave" in "The Archaeology of Lake Mohave, a Symposium." Southwest Museum Papers, no. 11, Los Angeles, 1937.


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CENTIMETERS
INCHES

FIGURE 23

infrequently did the people use the cherts and other "better" stones. This employment of coarse-grained rocks is reason for some uncertainty in identification of the shearing technique. It may have been employed and its distribution may be rather general, but we cannot be sure at this writing. For example, no. 12 in the illustration is a flake about 1/8 of an inch thick. The upper edge has been finely retouched in a manner suggesting shearing. However the irregularities due possibly to differential fracturing of the crystals are reason to doubt the identification. Specimens which are sheared are numbered 9, 10, 11, Fig. 24, 5, 3, 1. In the drawings an attempt has been made to indicate the characteristic regularity of the tiny flake scars and the lack of serrations along the edge. It is also evident that the flaking is usually at a steep angle analogous to the vertical chipping on thicker scrapers.

Tools numbered 1, 13-16 are probably sheared. Nos. 1, 13 and 14 are 1/8 inch or less thick, but the retouched edges are somewhat more irregular than those of nos. 9, 10, 11. The rounded end of no. 14 appears to have been dressed by pressure retouch before having been sheared. There is some doubt concerning nos. 15 and 16 both because the chips from which they were made are thicker and because the retouching on the edges has removed larger irregular flakes than is usual. It is to be admitted that segregating small differences of this sort may be unwise, but until we are more familiar with the results of the technique as applied to local rocks, it is perhaps of value to point out such minute variations.

This description and record of a number of sheared tools from a single site leaves an impression that the specimens have unusual characteristics. Actually nothing is further from the fact. It is probable that the principle reason for the present lack of record of shearing in the Northeast is the fact that the very fine retouch is not easy to identify and, furthermore, it is usually found on chips which are ordinarily discarded. Inspections of collections of chips from various places in the Northeast are bringing to light an increasing number of examples of this type of retouch. For example, Dr. E. E. Tyzzer found on the Smith Farm in Lynnfield, Massachusetts, jasper flakes which had been retouched in this manner. At this site there were also a number of triangular arrowpoints suggesting that the site was of relatively recent date. Other examples have come from sites scattered about New England, and to the east. For example, T. L. Stoddard, Jr., of the Peabody Foundation's Northeastern Survey, excavated a number of specimens from sites in New Brunswick. A few examples have been found in the collections from the Nevin Shellheap, Blue Hill, Maine. It is not possible to judge the significance of the observation that the technique has not yet been identified in the collection of more than 3000 artifacts from the Titicut site, Bridgewater, Mass. In view of our slight knowledge of the vertical and geographical distribution of the technique in the region, it is not possible even to suggest the time when it was employed or the cultural affiliations of the people who used it.

PERFORATORS (?)

Nos. 6 and 7, Figure 24, 4 and 6, are unusual in this region. Mainly by shearing, a sharp point has been formed on one edge of these very thin flakes. Although quite small, the retouching on the "sides" of the projecting point can be easily seen. No. 8 may have been a similar tool. The base of a small projection is present on the straight edge. The curved edge at the bottom in the photograph has also been sheared.

SMALL BLADES

The blade illustrated, Figure 23, no. 2, Figure 24, 2, is a type which is uncommonly reported from Massachusetts. It is roughly prismatic in cross section. The end has been trimmed to a sharp point by the removal of small flakes. Technically this tool is not a burin or a graver, but it could be used as such, particularly the latter. The other three specimens, nos. 3-5, are flakes of similar nature, although they are not as thick as the first one. They are not retouched in any way and it may only be suggested that they are either tools or evidence of the presence of a blade industry. It is entirely possible, of course, that these are accidental, having been flaked off during the process of dressing down a block to make an arrowpoint or other tool.

GORGET

A broken gorget is illustrated, Figure 23, no. 51. This is a crude example of this kind of ornament in which two holes may be identified.

POTTERY

The potsherds illustrated, Figure 23, nos. 44-46, 49-50, 52-57, have been selected to represent varieties seen in the whole collection of more than twenty pieces. Some of this pottery, nos. 49-50, 52-54, is mineral tempered, with cord wrapped paddled inner and outer surfaces. Nos. 45,46 are rim sherds. No. 46 has a flat rim in which punch marks have been made. The other rim is rounded. The outer surface of both these sherds appear to have trailed lines on them. The pieces are too small to identify these as decorations. The inner surface of these sherds has been smoothed, the technique cannot be identified. No. 54 is a sherd of a thick, mineral tempered pot, the inner and outer surfaces of which had been smoothed so that no tool marks are to be seen. One imprint of a cord wrapped stick may be seen on the outer surface. Nos. 56 and 57 are sherds showing dentate, rocker stamping.

EUROPEAN SPECIMENS

A fragment of a clay pipe, no. 47 and a large glass bead, no. 48 were found on the site. The pipe fragment is too small to attempt identification. The bead is certainly an old one and of a type traded to the Indians during colonial times.

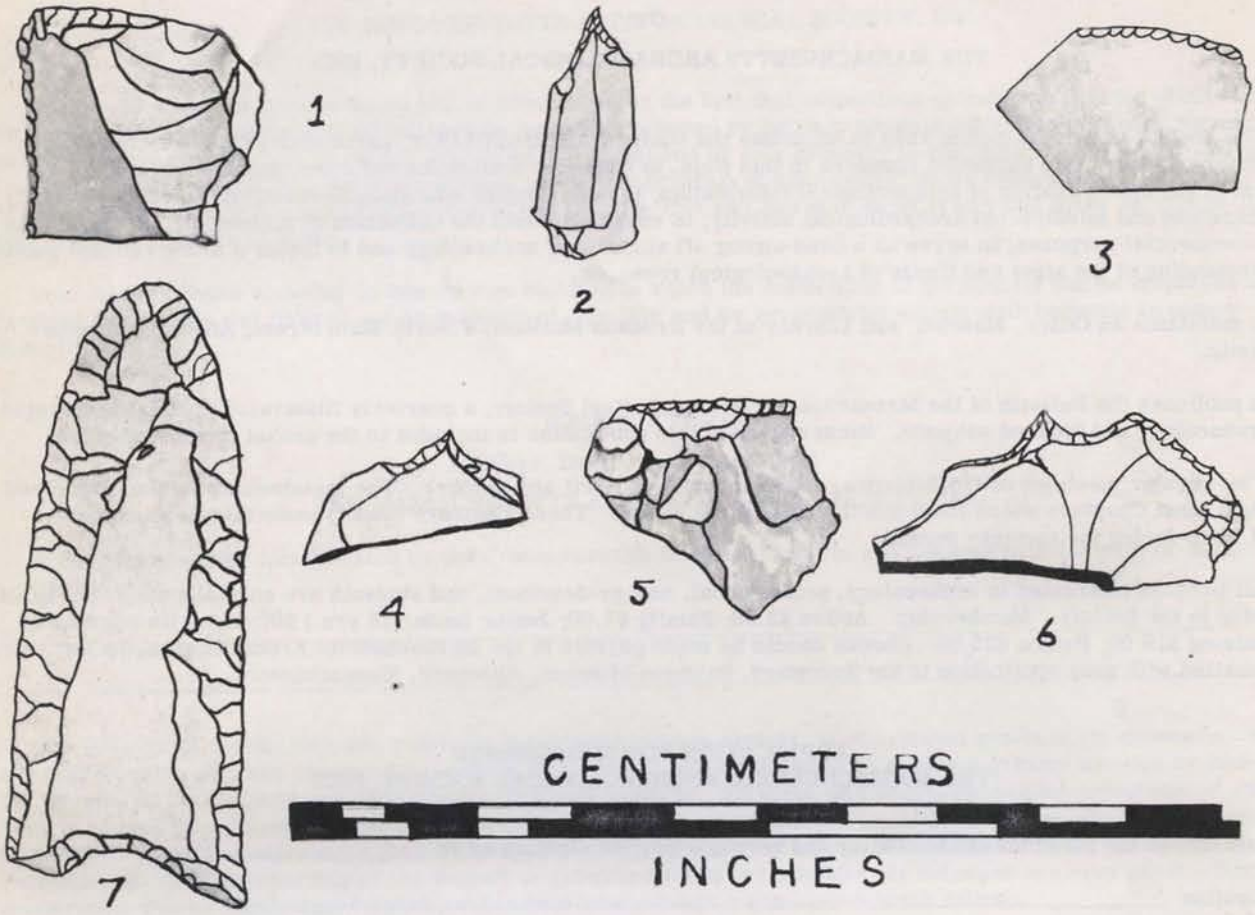

FIGURE 24.