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CONTENTS

THE MANSION INN SITE — WAYLAND
J. Alfred Mansfield ........................................................................ 1

PROJECTILE POINTS AND THEIR CULTURAL SIGNIFICANCE
William S. Fowler ........................................................................... 5

AN INTRODUCTION TO SOILS
Arthur C. Lord, Jr. ........................................................................ 14

A CAPE COD CANAL POT
Jesse Brewer .................................................................................. 18

WAS THE GUIDA SITE THE CENTER OF CERAMIC INFLUENCE?
EDITORIAL .................................................................................... 20

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BRONSON MUSEUM

This is the Society's museum, 5th Floor of the 8 North Main Street Building, Attleboro, Mass. — Museum hours are from 9:30 to 4:30, Mondays, Tuesdays, and Thursdays. For special arrangements to visit on other days, contact the Director, Maurice Robbins, or the Curator, William S. Fowler by mail at the Society Office, Bronson Museum, Attleboro, Mass.

The Museum includes exhibits of artifacts and seven dioramas portraying man's prehistoric occupation of New England. The displays are arranged so as to show man's development through four culture stages, from early post glacial times.

The most recent diorama extends 15 feet across the front of the museum. It depicts an Archaic village of seven large and unique wigwams as indicated by their foundations, excavated at Assowampsett Lake by the Cohannet Chapter. Human figures to scale make the scene come alive and help create what unquestionably is an outstanding addition to our ever growing museum displays.
THE MANSION INN SITE — WAYLAND*

J. Alfred Mansfield

This site is situated on a high flat knoll, approximately 20 feet higher than the narrow ridge, which separates Dudley Pond from Lake Cochituate in Wayland, Massachusetts. It lies about 200 yards equidistant from both bodies of water, and only a short way from the Sudbury River. This afforded contact by water travel with other parts of the country. In historic times, the main Indian trail, known to the English as the Old Connecticut Path, connecting the Boston area with Connecticut regions, ran close by the site. One day in 1959, while driving to see friends in Saxonville, I noticed that the place, where the old Mansion Inn had formerly stood — recently destroyed by fire — was bulldozed, and a steam shovel had commenced to excavate. Intrigued by the possibility of new discoveries, I decided to return after the first good rain, especially since this site was one of the best I knew of, from which many artifacts had been recovered by surface hunting in past years.

The following week, on a Sunday afternoon, I returned with Leslie Longworth, also a member of the Massachusetts Archaeological Society. The soil was very dry — no rain had fallen since my first visit — and no occupational evidence appeared on the surface. However, we were attracted to one spot, where almost pure charcoal had been exposed by bulldozer operations. It covered an area about 6 x 8 feet in size. Here, we noticed several broken stone knife blades sticking out of the charcoal at various angles. Realizing that excavation was necessary, we procured trowels from our cars, laid out the disturbed space in 3 foot squares, and began to excavate the charcoal-filled area. We felt impelled to hasten as much as possible, for fear of impending destruction by bulldozer operations, in evidence on all sides.

After digging through a bone dry top stratum, the underlying charcoal became very damp. Soon a number of artifacts appeared, most of which were badly cracked or broken, as though they had been exposed to fierce fires. At the end of the day, only two or three perfect artifacts had been recovered, although there were many broken blades. One grooved ax was found in four pieces, which were subsequently glued together. They occurred at various depths over an extended area of several feet. Because of this scattered distribution, we soon realized that the culture to which they belonged must have been responsible for all depths of deposit in the charcoal area. Therefore, it became obvious that the depth of deposition of an artifact had no significance, since the age of the deposit was the same from top to bottom. Rather than record depths, it seemed more important to preserve recovered artifacts in the condition in which they were found, covered with ash or other extraneous material. Several times, broken artifacts found in one square were contiguous with others found in a square, as much as 4 or 5 feet away. Small fragments of calcined bone appeared, scattered throughout the charcoal. Later, recovery of two human teeth from adjoining deposits seemed supporting evidence to show that bone fragments were human.

Many of the smaller knives or projectile points, when first exposed to the air, were almost the texture of wet clay. In one instance, after carefully exposing a small blade, upon attempting to pick it up, only that part grasped by the fingers came away from the ground. However, after exposure to the air, these artifacts rapidly grew hard, although they became extremely brittle and broke at the slightest knock. The charcoal was very greasy and clung to the hands, so that it could not be entirely removed by scrubbing. Over the next week or so, during our digging, a deposit of fine yellow sand slightly mixed with charcoal was noticed in the midst of the blackest charcoal area. This intrusive sand indicates continued use of this charcoal concentrated area, because of the presence of much charcoal on top of it from later fires.

From a large tree contained area about 20 feet away, which the bulldozer had not disturbed, it was evident that grading operations had removed about 19 inches of overburden above the charcoal deposit. When this pit's bottom was reached, the exposed excavated hollow measured 8 x 12 feet by 27 inches deep, below which, white to yellowish sand occurred. Therefore, the total depth before grading operations would have measured 46 inches. But the pit's level of origin in the overburden could not be determined, because of its removal by the bulldozer. By now, accumulated evidence including many fire-damaged artifacts (Fig. 1) had convinced us that this charcoal filled area had once been a

Fig. 1. CREMATORY GOODS — Mansion Inn Site. 1-3, Celts; 4, 5, Full Grooved Axes; 6, 7, Short Plain Gouges; 8, 9, Hatches; 10, Pestle; 11, 12, Side-notched Points; 13, 14, Eared Points; 16, 17, Tapered Stem Points; 15, Stemless Knife; 18, Eared Drill. (1-10, 15, Scattered throughout; 11-14, 16-18, in cache at bottom of crematory).
crematory, where human bodies were burned before burial. If this were so, then, we reasoned, there should be secondary burial deposits nearby. Impressed by the importance of the find, we were careful to fill in the excavated area at the end of each day, especially since several homes were in full view, and the roadway was only about 40 feet away, although fortunately above and out of sight.

Excavating just beyond the crematory, the first of many secondary burials was exposed. It contained but one artifact, a small copper ax (Fig. 2, #10). This lay in a rather large shallow accumulation of yellow sand, and was surrounded by a thin circle of red ochre. Adhering to the ax were fragments of bone (presumably human), covered with charcoal dust. These, evidently, had become fused together by fire, which indicated original deposition in the crematory.

On another evening, a heavy concentration of charcoal was located outside the crematory pit. In it appeared a fractured grooved ax, and a water-washed stone 3 x 5 x 1" size, with one edge worn away by rubbing. Both specimens were covered with red ochre stains. As the work of excavation progressed, two more secondary burials were discovered at the edge of the crematory, badly damaged, their pits resting on fine yellow sand. In one appeared 22 cache blades of from 2" to 3½" in length. Most were fractured and in a state of disintegration, apparently caused by intense heat from the crematory fires. However, indication that they had been redeposited in this secondary burial was evident from the fact that they were surrounded by a small circle of red powdered ochre. In the other burial occurred 12 cache blades of the same size and condition as those of the first, also surrounded with red ochre.

In another direction at one side of the crematory, a fifth secondary burial was uncovered, but this one contained no red ochre. The buried artifacts consisted of 34 well made blades (probably points or knives), 1 x 3½" in size, and in excellent condition. With them appeared a small amount of burnt bone (presumably human), and charcoal. They had been carefully placed in the grave in groups of 4 or 5 each, one group on top of another, with the points of some in one direction, and those of others in the reverse. In no case did the blades lie crosswise, and the charcoal and bone fragments covered only about half of them. It should be noted that 9 blades were of red felsite, 6 had a gray-blue tinge, and the balance a sandy gray color, probably felsite.

By this time, news of the discovery had leaked out, in spite of our utmost caution. Before long, many intruders commenced to excavate. They opened more secondary burials and recovered some outstanding large knife blades (Fig. 2, #3,4). (In the case of these two specimens, exhibit #3 appears to be of Kineo felsite and #4 of Coxsackie flint. The former is smeared with red ochre stains, and the latter has incrustations of iron, possibly from decomposition of a pyrites strike-a-light—Ed.). One of the most significant recoveries made at this time was a soapstone bowl, about 14 inches long with the customary lugs at either end. It appeared in a secondary burial along with stone blades of various kinds. No potsherds, shell refuse, or bone artifacts were found in the crematory or in any of the secondary burials. Many of the blades were made of indigenous felsite; only two were of white quartz, one of which, a knife, is illustrated (Fig. 1, #15).

CONCLUSION

It seems likely that the large charcoal deposit was a crematory, where bodies of the deceased were burned. Afterwards, bone residue and ash were scooped up and redeposited in secondary burials. These lay within an area about the crematory extending outward from it about 40 feet. Evidently, the practice of placing implements — perhaps belonging to the deceased — first in the crematory during the burning, and then removing some of them for re-burial was followed. Also, additional implements were sometimes placed in the secondary burials, some of which may have been deliberately broken or "killed," although many were undamaged.

Here is an inventory of our recovered artifacts, some of which were in fragments, but identifiable:

<table>
<thead>
<tr>
<th>Artifacts</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grooved Ax</td>
<td>13</td>
</tr>
<tr>
<td>Honing Stone</td>
<td>2</td>
</tr>
<tr>
<td>Pestle (small)</td>
<td>8</td>
</tr>
<tr>
<td>Hatchets</td>
<td>2</td>
</tr>
<tr>
<td>Drill</td>
<td>2</td>
</tr>
<tr>
<td>Gouge</td>
<td>2</td>
</tr>
<tr>
<td>Rubbing Stone</td>
<td>18</td>
</tr>
<tr>
<td>Projectile Points and Knives</td>
<td>650</td>
</tr>
</tbody>
</table>

Watertown, Mass.
June 22, 1961

APPENDIX

(Editorial Comment)

Here again at the Mansion Inn site is evidence of a cremation complex similar to that reported at the Boats, Wapanucket 6, and the Coburn sites. At all three stations and as reported for the Coburn site by Frank Kremp, Bulletin of the Massachusetts...
Fig. 2. SECONDARY BURIAL GOODS — Mansion Inn Site. 1, Grooved Ax; 2, Plain Gouge; 3, 4, Stem Knives; 5, 6, Stemless Knives; 7, T Drill; 8, 9, Stem Scrapers; 10, Copper Ax; 11-13, 20, 21 Tapered Stem Points; 14-16, Eared Points; 17, Red Ochre; 18, Side-notched Point; 19, Diamond Point; 22, Honing Stone
Archeological Society, Vol. 22, Nos. 3 and 4, p.p. 33-42, certain stone implement traits were present, which have been proven to be diagnostic of the Stone Bowl Age (Late Archaic). Grooved ax, large diamond point, eared and tapered stem points are perhaps the most diagnostic, and these traits, also, are present at the Mansion Inn site.

When news of this Wayland discovery reached us, we were anxious to get a report of the excavation for publication. We felt that the one who had made the find would provide the most authentic information, especially as he was a member of this Society. Therefore, we are grateful to Mr. Mansfield for the information he has furnished, and for the use of some of his recovered artifacts for illustration. To these have been added a few more (Fig. 2, #1,3,5-8,10,13,17,22), recovered by other excavators. The two implement groups, one from the crematory, the other from secondary burials, are representative of recovered artifact types.

Mansfield's conclusion concerning probable cremation activities is borne out by similar evidence at Wapanucket 6. At this site, the complex was found to be about 4,200 years old from a carbon-14 measure of associated charcoal. Therefore, it now seems well established that by 2200 B.C. occupants of this area had become artisans of the Stone Bowl Age, and had established certain well formulated beliefs of a life after death. Where these people came from is not known. However, it may be argued that they were early pioneers of a movement of peoples through middle western regions, of whom later migrants remained behind to become Hopewell and Adena Moundbuilders of the Mississippi and Ohio valleys. Certain it is that the grooved ax is common to both culture complexes and now the copper ax (Fig. 2, #10) has been added to other culture traits of the Stone Bowl Makers. Support for a belief in a western source for the copper stock seems to lie in the fact that a similar copper ax from Plymouth, Bulletin of the Massachusetts Archaeological Society, Vol. 21, No. 2, has recently been determined by spectrographic analysis to be made of Lake Superior copper.

Of interest are the two large knife blades (Fig. 2, #3,4) of Kineo felsite and Coxsackie flint, respectively, materials foreign to this area. Are these knives, then, the work of local Stone Bowl artisans from imported stone stock, or are they the work of foreign workmen? The felsite and flint stone sources, respectively, each are widely separated — Mt. Kineo in Maine and Coxsackie on the Hudson below Albany — and yet the blades are almost identical, as though made by the same artisan. Therefore, they may be presumed to be of local manufacture, and consequently a part of the Stone Bowl culture complex.

Finally, since no potsherds or shell refuse occurred at the site, we may be reasonably sure that this cremation complex is a part of the Archaic before Ceramic times had arrived. It is a proven fact, as found on numerous excavated sites in this area that people did not commence to eat shell fish until the advent of pottery making, which replaced the stone bowl industry.

PROJECTILE POINTS AND THEIR CULTURAL SIGNIFICANCE

WILLIAM S. FOWLER

A typological classification of projectile points published by the Massachusetts Archaeological Society forms the basis for this paper. It has been used successfully for several years not only in classifying existing collections in the Bronson Museum and elsewhere, but in identifying recovered points during excavations. In this research certain pieces of evidence have repeatedly occurred from time to time, with much regularity, to throw new light on the probable source and subsequent development of different shapes of points. For this reason, the time seems opportune for a review of projectile point types and their relation to culture sources, as deduced from such evidence.

From a typological standpoint this approach may appear unorthodox. However, the science of archaeology, it would seem, should take into consideration something more than a classified study of artifact styles. For these did not happen of their own accord, but were determined by the actions of man. As with all products of human ingenuity,
each projectile point style was produced, no doubt, to meet a definite need. For upon the effectiveness of spear or arrow depended man's very survival. First, there was the problem of how best to attach points to the shaft, which perhaps from the beginning was the foremost factor in determining basal shapes. Then there was the consideration of what method of hunting was to be used, whether for harpooning, javelin or dart throwing, spear jabbing, or arrow projecting. These too, were important problems to be resolved before suitable projectile point shapes could come into being. Today, thousands of years removed from primitive man's activities, we can only make constructive guesses as to what went on in earlier times. Nevertheless, we would be negligent indeed if we did not use our human faculty of reason to make logical deductions based upon recovered evidence. We should not be indifferent, in our aesthetic appraisal of intriguing and beautiful point shapes, to the human motives that inspired them. In fact, we should try to associate variously styled stone points with the men who made them, and learn as much as possible about what bearing their cultures had upon the shaping of these points. Investigative thought in this direction has lead in recent years to relatively firm beliefs concerning some phases of projectile point development in this part of New England. While this paper expresses the personal convictions of the writer, it has been written after numerous discussions with other interested individuals. However, it can be no more than an approximation of the truth, as in archaeology we can only tend to prove something. For here we are dealing with unwritten evidence, of which we can never be absolutely sure. The writer has chosen to name the four culture periods referred to in this paper with probable chronological dates as follows: Paleo, 7000 B.C.; Early Archaic, 4500 B.C.; Stone Bowl, 3000 B.C.; Ceramic, A.D. 300. (Other names for several are often used).

**FLUTED**, (Paleo or Ancient). This early point has wide distribution on low excavated levels in nearly every state in the Union, as well as in Ecuador and Chile. It has hollowed out faces opposing each other. In New England it occurs with tapering or nearly parallel based sides, usually slightly ground or finely reworked. The base is concave with basal corners generally well defined. In South America a modified type appears, as well as the standard, having a short relatively wide stem, which is fluted on both faces.

Characterized by facial fluting this group of points has been associated closely with charcoal or other organic samples having Carbon-14 measures of approximately 10,000 years ago at Folsom, New Mexico and Lubbock, Texas; 9,000 years at Ipswich, Massachusetts (Bull Brook site); and 7,000 years in Chile. The Sandia points of Sandia, New Mexico are presumed to ante-date fluted points by perhaps as many as 3,000 years. They lay below and separated from fluted points by a thick deposit of carbonate of lime droppings in a Sandia cave. However, this earlier arrival has been identified in only a few places in the far West other than Sandia, which suggests only sparse occupation. On the other hand, the extensive distribution of fluted points indicates a prolific race of hunters, perhaps the first dominant culture to leave its mark upon the country. It seems significant that fluted points have been found in Alaska, one on the north side of the Brooks Mountains, and broken specimens near Point Barrow lying below Eskimo culture remains, separated by a layer of clayey silt. However, which way this fluted culture diffusion moved, north or south, still remains unresolved.

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Fig. 3. FLUTED POINTS. Sources: 1-3, Bull Brook, Mass.; 4, Twin Rivers, R. I.; 5, Assowampsett, Mass.

As illustrated, the flute in some specimens may extend nearly the whole length of the point. However, in others it extends only a short way, even though the stone may be flint. Probably the quality of the stone used, flint or other material, had something to do with it. The narrow specimen from Twin Rivers, Rhode Island, seems to indicate this. It is made from quartzite, which has a much
inferior concoidal fracture to that of flint. This point may represent certain modifications, which undoubtedly took place toward the close of fluted point manufacture. Its parallel basal sides are carefully reworked for 3", and one at least is either worn or intentionally ground, as is the case with many flint specimens. Its narrow proportions seem to indicate a change is taking place from the broader blades of most fluted points.

**CORNER-REMOVED #2, (Transitional) — Paleo to Early Archaic.** This type of point has a wide stem nearly the width of the blade with almost parallel reworked sides, which produces only slight indentations or none at all where shoulders normally appear on other stem points. It is suggestive of similar traits found on early Yuma points of the West, thought to be associated there with fluted points. It has occurred infrequently in New England. At a Wayland site in Massachusetts it appeared at a low level underlying Early Archaic remains (illustration, second specimen). At Titicut site in Bridgewater it appeared in the low white sand zone, thought to represent end of the Paleo period, because fluted points were absent, whereas the Early Archaic point type, Corner-removed #9 was present.

**CORNER-REMOVED #5,8,9, (Early Archaic).** These three different types have one thing in common: they occur at levels underlying Stone Bowl remains at several sites. Basically, they resemble each other in that they are relatively long and have their basal corners sharply removed to form narrow tapering short stems, terminating in a slight bifurcation, a point, or a rounded end respectively, as illustrated. Tapering of the stem always starts from well indented shoulders.

At Titicut type #9 first appears on the lowest white sand level associated with small stone hearth remains and one Corner-removed #2 point, believed to represent end of the Paleo period. This suggests that racial continuity probably exists between Paleo and Early Archaic times, since in the latter overlying zone at Titicut and elsewhere occur an increasing number of type #9 with type #8 added. Also, in this zone appears type #5, which is present on similar Early Archaic levels at Twin Rivers and Green Point sites in Rhode Island.

Although these types at most sites seem to have an Early Archaic provenience, it is possible that they overlap into the following industrial culture period of stone bowl making. For at Wapanucket 6, Assowampsett Lake, they occur with evidence of early Stone Bowl times (Late Archaic).

Another feature these three types seem to have in common is their adaptability to the same method of hafting. Excavated evidence at Twin Rivers suggests that first, the pith of the spear shaft was removed at the point end with a drill to a depth of about half an inch. Then a groove may have been sawed across the end. With these two operations, any of these points could have been inserted in the shaft and then secured by lashing.

**CORNER-REMOVED #3, (Early Archaic through Ceramic).** Relatively narrow with a length of 1½" or more, this point seems to have been made by various peoples in widely separated areas throughout the last three culture periods of New England. Its base has a short or long stem, as the case may be, formed by removal of basal corners, and is often quite thick with a minimum of thinning. While only a few appear in the Early Archaic zone, their number increases rapidly throughout the remaining overlying zones. Therefore, this type is not believed to be culturally diagnostic. Apparently, its convenient shape seemed to suggest itself to
barbs, which are often serrated. Its stem is rounded and deeply bifurcated. At Titicut this type first appears on the transitional white sand level with a C-14 measure of about 6,000 years ago, indicating the beginning of the Early Archaic, and continues into the overlying subsoil of this horizon. At the Nunkatuset site it occurs deep in the subsoil underlying the Stone Bowl zone, identified as the Early Archaic horizon.

Various kinds of people, wherever they may have lived.

**CORNER-REMOVED #1,7, (Stone Bowl).** Type #1 of this group has basal corners only slightly removed to form a broad stem with sides that taper. The blade is broad, long, and relatively thin. This point has appeared in cremation remains of the Stone Bowl Makers of Late Archaic times. Type #7 is a broad blade, sometimes long, but usually shorter than type #1. Occasionally, it occurs in small sizes not less than 1\(\frac{1}{2}\)" in length. Contrary to type #1, removal of its basal corners is well defined to form a relatively broad truncated stem. This point is frequently found in the Stone Bowl horizon, and together with its associate type #1 seems highly diagnostic of this stone bowl-making industrial age.

**BIFURCATED, (Early Archaic).** This point has well pronounced corner-notching to form sharp barbs, present on specimens at low levels, with relatively broad and short well worked blades suggest use as harpoon points. They would have served this purpose well in a bone harpoon holder similar to one recovered deep in the subsoil at Assowampsett Lake. Another clue as to their culture relationship is had from the fact that the Assowampsett recovery was fitted with a Corner-removed #9 point — presumably with detachable bone barbs — an Early Archaic type.

While Bifurcated points with sharp barbs doubtless had their inception at the beginning of the Early Archaic, it may be that they were used in modified form with rounded barbs for regular spear points by the end of the age and even later, as excavated recoveries seem to indicate (illustration, third specimen).

**TAPERED STEM, (Stone Bowl).** In this group are points whose basal sides taper to a truncated base. This taper may be slight or extreme and may be formed by convex or by straight sides. In the latter case, the type is sometimes referred to as pentagonal.

This point is diagnostic of Stone Bowl times, since it occurs associated closely with remains of those days at camp site digs. Also, it appears in that period's crematories and secondary burials at Wapanucket 6 and the Coburn site. However, excavated evidence shows it to overlap into the following Ceramic Age (Woodland), although to a diminishing extent.
It seems likely that the pointed base was created to facilitate hafting.

It should be noted that beautifully made 3'' to 6'' long, broad blades in the diamond shape, in one instance with irregular side notches above its tapering sides (illustration, Boats site), have recently appeared in Stone Bowl crematories or secondary burials at Dighton, East Orleans, and Wayland. Therefore, large blades like these should be diagnostic of the Stone Bowl Age. Further, it seems possible that these large blades set the pattern for the smaller diamond points of later days.

TRUNCATED, (Stone Bowl). This point type is long and broad, having nearly parallel basal sides and a truncated base. Infrequently, it occurs in small sizes. It appears in Stone Bowl culture remains at Wapanucket 6 and in the Coburn site's cremation burials. Therefore, it should be diagnostic of Stone Bowl times. Its broad blade adds one more style to broad blades of that industrial age.

LEAF, (Ceramic). In this type the base is rounded from convex sides, which converge without shoulders. Not much is known about this point except it seems to be absent in Archaic and present in Ceramic horizons; therefore, may be diagnostic of the latter. Its source at this time is not at all clear, but it may have been inspired by any of several artifacts having a similar shape.

LONG EARED, (Early Archaic). This type of eared point, usually relatively long and broad, is side-notched with long straight ear-like basal points, which are emphasized by a more or less concave base. It seems diagnostic of the Early Archaic, since it first appears on the transitional white sand level and continues into the overlying yellow subsoil Early Archaic zone at Titicut; is on
EARED #2, (Transitional — Stone Bowl to Ceramic). This eared type, usually in large, broad blades, has a more or less equilateral triangular shape, except on rare occasions (illustration), when it has an extended isosceles shape. Its basal ear-like points are usually well defined, although at times they are almost imperceptible. The broad blade type first appears at Sweet-Meadow Brook, Rhode Island, in the late Stone Bowl horizon, and continues through Ceramic Stage 1 zone, but not beyond. Therefore, it should be considered diagnostic as a transitional trait between the two culture periods.

Fig. 14. EARED #2, (several variations).

EARED #1,3,4,5, (Stone Bowl). These four types are relatively broad in small or large sizes, with basal ears, sometimes pointed, and often only slightly protruding. The four types have, to a great extent, appeared at excavations in the Stone Bowl horizon, although they seem to overlap into the first part of the Ceramic horizon, to some extent.

Fig. 13. EARED #1, 3, 4, 5, (variations of #4).

They should, however, be considered more diagnostic of the Stone Bowl culture, probably, than of the Ceramic. Type #4 has a small sized variation, which doubtless was used as an arrow point, as also was small sized type #3 as illustrated. However, most eared points have wider bases, which seem to fit them better for spears.

Fig. 12. LONG EARED.

the same early level at Green Point, Rhode Island; and is deep in the subsoil at Wapanucket 6. If it is the original eared invention, as it seems, then later ones of the Stone Bowl era, presumably are modifications with less pronounced ears. Evidently, the long ears of Early Archaic days were found to be unnecessary, therefore undesirable as years passed by.

EARED #1,3,4,5, (Stone Bowl). These four types are relatively broad in small or large sizes, with basal ears, sometimes pointed, and often only slightly protruding. The four types have, to a great extent, appeared at excavations in the Stone Bowl horizon, although they seem to overlap into the first part of the Ceramic horizon, to some extent.

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Fig. 12. LONG EARED.

LARGE TRIANGULAR, (Ceramic). A large point measuring more than 1¼" across its base, this type is triangular in shape. Generally, it has straight or slightly concave sides, with usually a concave base, excessively pronounced at times. At several sites, especially at Sweet-Meadow Brook, it is well established as belonging to the Ceramic period, appearing first with Stage 2 pottery remains, not before. Therefore, it seems diagnostic of middle to

Fig. 15. LARGE TRIANGULAR, (several variations).
late Ceramic times. At this Rhode Island site with Eared #2 points lying just below among Stage 1 potsherds, it seems evident that Large Triangular points may be modified broad bladed Eared #2 points with basal ears eliminated, as being no longer necessary to facilitate hafting. If this deduction is valid, then it points to a culture change in which the former Stone Bowl tradition shows signs of breaking down with modified traits emerging.

**SMALL TRIANGULAR, (Stone Bowl and Ceramic).** In this category are small triangular points. They measure up to, but no more than 1¼" at their base, except in rare instances, when blades are short with basal points outflaring. They may be isosceles or equilateral, with convex or straight sides. Types #1,3,4, and 6 first appear in Stone Bowl horizons at excavated camp sites, and at stone bowl quarries; therefore are believed diagnostic of the entire Stone Bowl Age. Type #5 with straight sides, sometimes somewhat concave, usually appears in the overlying Ceramic zone; therefore, is held to be more diagnostic of Ceramic times.

![Fig. 16. SMALL TRIANGULAR #1, 3, 4, 5, 6.](image)

Small Triangular points seem to have had their inception in early Stone Bowl days, presumably as arrow points. It is possible that they may have been inspired by the small Eared #4 point, which in effect is a Small Triangular with ears, that may have been dropped as unnecessary.

**SIDE-NOTCHED #1,4, (Stone Bowl).** Type #1 has a broad and relatively long blade. This point usually occurs in large sizes, although small ones appear occasionally. The base is side-notched with extensive removal of basal corners, transforming it abruptly into a relatively narrow sidenotched stem. This point is always found associated with Stone Bowl remains, and therefore, seems most diagnostic of those times. Type #4 is narrow resembling Corner-removed #3, except the stem is widely side-notched with a rounded base. This point is 1¼" or more in length, and appears at Ragged Mountain quarry, Connecticut, in association with stone bowl remains. This establishes its industrial relationship as belonging to those days.

![Fig. 17. SIDE-NOTCHED #1, 4, (variations of each).](image)

**SIDE-NOTCHED #3,6, (Transitional — Stone Bowl to Ceramic).** This important group of points seems to denote the turning point from one culture to another, as the trait occurs in late Stone Bowl and early Ceramic zones. In this sense, it joins Eared #2 as having passed through the industrial revolution, which took place when ceramic pots replaced stone bowls in the domestic life of the people. Type #6 appears to follow after type #3, as denoting, perhaps, a later phase. Both types are long and relatively narrow with wide side-notching at the base, which at times is scarcely discernible. Type #6 has convex sides, which add an aesthetic touch to the whole, while in type #3 sides tend to be more or less straight.

![Fig. 18. SIDE-NOTCHED #3, 6, (variations of #3).](image)
These points first appear at Potter Pond site, Rhode Island, in the late Stone Bowl horizon and continue into the Ceramic Stage 1 zone, but not beyond. This supports the belief that they are transitional between these two culture periods.

**SIDE-NOTCHED #5,7.** (Ceramic). All other side-notched shapes may be placed with either of these two types. In general, they are determined by distinct side-notching, which is narrower in type #7. However, the main difference between the two types is that in #5, bases tend to be truncated, while in #7 they are convex or somewhat rounded.

Well shaped blades of both types in numerous variations usually occur in the Ceramic zone. Therefore, they are considered diagnostic of the Ceramic Age, although a few specimens appear in the lower zone, indicating that side-notched types had their inception in Stone Bowl times.

**SMALL STEM.** (Stone Bowl and Ceramic). Points belonging to this group have many varied shapes, which are not considered important determinants. Rather, if a point has a recognizable stem, even though it may be side-notched, and is less than 1\(\frac{1}{4}\)" in length, it should be considered to belong in this group, except small Eared #4 points.

Small Stem points appear first in the Stone Bowl zone, and continue throughout the Ceramic zone. Because of their small size they are believed to be arrow points.

**CORNER-NOTCHED,** (Ceramic). This type applies to both large as well as small, relatively broad blades, which have well defined notches, some broader than others, extending obliquely from basal corners. This notching tends to form pronounced shoulders, sometimes as barbs.

What is significant about this type is that, contrary to outside areas, it appears first on excavated sites in New England in the middle Ceramic zone with Stage 2 pottery remains. Since it occurs earlier in New York and Pennsylvania, it seems likely that the type is a late comer in this area, inspired by a diffusion of the trait from western regions.

**DISCUSSION**

Class names used to describe the various types of points in this paper are the result of ten years of study. At least two earlier classification systems preceded the present one, which is a rearrangement and modification of the former. While a few type names have been eliminated and others added, many of the original ones have been retained as desirable. The present nomenclature is, therefore, a composite result of many minds, and does not represent the work of any one individual.

The use of type numbers in certain class groups is for the purpose of separating important trait diagnostics, some of which have cultural significance. This seems to provide an easily understood and remembered method of treating interclass differences of type styling without disrupting class groups.
The illustrations are faithful copies of actual specimens from sites in Massachusetts and Rhode Island, except one Comer-removed #2 from New Hampshire, and one Side-notched #4 from Connecticut. However, they do not represent by any means all possible variations. Within any type group, other minor variations from those shown may occur and should be expected. Also, type sizes may vary within certain limits, as has been indicated, and projectile points as illustrated do not represent exact size standards, only approximate them.

In developing this classification, culture relationship has been recognized as an important factor in man's production of the different point styles. But even now, with what research has been accomplished, we are able only to see dimly which cultures apply to which types. However, with continued research, in time we may come to know a great deal more about this problem.

One question frequently suggests itself: What constitutes an arrow point as distinguished from a spear point? Considerable difference of opinion makes solution of this problem difficult. It has been maintained by some that because a point has a wide base and is comparatively heavy is no reason to claim that it is not an arrow point. They argue that arrow shafts in the beginning, at least, may not have used feathers to guide the flight. If this is so, then a heavier weighted tip made by point and an enlarged bulkier shaft at this end would have been required to keep the arrow straight in flight, although restricted to shorter distances than arrows with feathers. Recently, a 19" arrow of Indian source of about 1790 from Norwell natives has been donated by a Society member, in whose family the arrow and a 3' bow (now missing) have been handed down through six generations. It has a 1/2" diameter, and toward the point end expands to 3/4". This shaft was used without feathers, and would accommodate a narrow as well as a wide based point. Here is proof that featherless arrows were used in historic times, as well as feathered ones reported by early commentators. The featherless shaft may have been traditionally influenced from the remote past, and may have been the first invention.

If the enlarged tip end of a shaft was serviceable in the case of arrows, then certainly it would have been equally so for spears, which presumably were made without feathers. The enlarged shaft end would then have been useful in providing a proper seat for such wide based points as Long Eared; Eared #1,2,5; Corner-removed #1,2; and other wide based types. Their extreme width would seem to suggest their use on spears rather than arrows.

However, an arrow with feathers is a universal invention of man, and must, therefore, be considered as a probability in the hunting equipment of early times. For this reason, the writer inclines to the belief that Small Triangular and Small Stem points proclaim without much doubt the arrival of bow-and-arrow, doubtless with feathers, on levels where they first appear. Whether arrows with or without feathers were used before these small points appear is a moot question, and probably will always remain so.

Spear points, it seems, should be those larger and heavier points with bases measuring more than a half inch in width for shaft attachment. Half inch or narrower bases usually found on Corner-removed #3 points would be adaptable for use on arrow shafts. Light weight and short points with a half inch or less base width like some Corner-notched points, also were doubtless used on arrow shafts. On the other hand, some short but stubby Eared #4 points with a base spread of 3/4" or more between side-notching could better have been hafted on a spear rather than an arrow shaft. One such point is illustrated measuring only 1 5/8" in length. By this reasoning, a point to qualify for a spear need not have great length. The determinant seems rather to be a wide base spread of more than 3/4" between side-notching, corner-notching, or corner-removing.

It is also possible that points having extreme basal shaft widths of one inch or more were sometimes used on large ceremonial spear shafts, or on jabbing spears, whose shafts must have been bulky to make them sturdy. Because of this, diameter of their shafts must have been somewhat greater than that for thrown spears or javelins. Furthermore, it seems fair to speculate that small thrown spears or darts were also in use, and were here before the arrival of bow-and-arrow. This might then account for the presence of smaller Early Archaic points occasionally found on that early culture level.

Bronson Museum
June 22, 1961
AN INTRODUCTION TO SOILS

Arthur C. Lord, Jr.

The purpose of this article is to present a simplified description of soils with particular emphasis on those factors with which archaeologists are most concerned: the soil profile, rate of soil formation, and factors contributing to erosion.

Webster's dictionary defines soil as, "the loose material of the earth in which plants grow". The soil scientist desires a more extensive definition because soil is a mixture of minerals, organic matter, air and water which may vary in depth from a few inches to hundreds of feet.

FORMATION

Soil is formed as a result of the combined activity of four different agents: 1) parent material, 2) organic matter (vegetable and animal), 3) climate, and 4) time. The possible combinations of these factors are infinite, and, although no single agent is responsible for the production of a soil type, climate is the most important factor. Therefore, soils may be characterized in terms of three general climatic processes: laterization, calcification, and podzolization. Laterization is a process of the hot-humid tropics which removes all of the elements, except iron and aluminum, from the soil by excessive rainfall and ground waters. The process of removal of the elements by ground water is called "leaching". The iron and aluminum compounds, hardened by leaching and tropical heat, produce a hard, brick-like laterite soil which is very infertile. Calcification is a process of the arid grasslands where rainfall is insufficient to produce leaching. Since the decayed grass produces a great deal of humus and the calcium and magnesium have not been leached out, these natural grasslands produce the most fertile soils in the world, of which the Chernozem is the best example. Podzolization is a process of the cool and humid forest regions of the world, which includes New England. Organic matter decays slowly in this climate producing a thin humus zone with highly leached soil. Soil produced by this process is usually very shallow, and may be only two or three feet deep unless based on deeper glacial deposition. This soil is not fertile and requires much attention to produce crops other than trees.

The type of soil produced is the result of more than just the climatic processes. It also depends on the other three agents: parent material, organic debris, and time. Slope is of great importance when considering the depth of the soil. If there is adequate slope and a lack of vegetation, erosion can and does remove the topmost layer of the soil if not checked by conservation methods. Of course, it is realized that climate is the single most important factor and that climate is the main determinant of the degree of leaching, the profile, and the fertility of the soil. The parent material is of importance as this is the raw material from which the various elements originate. It determines what the texture of the soil will be and also what nutrients will be available for plant life. The amount and type of organic matter is a result of the climatic type. If animals, insects and worms are not present, the soil will become so hard packed that air and water will be unable to penetrate. In the formation of soils, time is also of importance as the controls work very slowly and most soils are not mature but in some stage of development. Realizing that erosion works in reverse to time, the stage of a soil may be expressed as time minus erosion. A good rainstorm may remove from a plowed field which lies on a slope the amount of soil that all the other controls took hundreds of years to develop.

Figure 22 represents a typical soil profile with the letter classification and sub-numbers for each horizon or zone. Each horizon is characterized and the true soil horizons are pointed out. Please note that the profile is purely theoretical and the thicknesses of the layers have little relation to the actual thickness of any particular soil type. The A00 and A0 horizons are not actually soil but a layer of organic debris on the surface. To be a true soil, they would have to contain minerals, water and oxygen. Dead leaves, sticks and grass as well as roots make up the major source of this organic material. The A00 horizon has not yet started to decay but is the dead leaves and such on the surface, while A0 horizon contains the decayed organic matter and has started to be mixed into the A1 zone. Ants, mice, etc. are the usual agents which accomplish this mixing.

The A1 horizon is the first of the true soil horizons and is usually very dark colored, almost black, and is a mixture of organic humus and minerals. In an area which has been plowed, the A00, A0, and A1 horizons have been mixed by the plow and there is no distinction between the layers. This mixture which contains a great deal of humus is what is commonly termed a "topsoil". The A2 horizon is lighter in color and is the zone of active
leaching as both the humus and the minerals are being continually removed. The transition from A to B is not a clear line but a gradual change; therefore, we include two zones of transition, the A3 and B1 which are difficult to distinguish.

The B2 horizon is a deeper colored zone and is the zone of accumulation. It is usually a deeper rusty red or a dark grey because the minerals and elements removed from the A horizon by ground water have been concentrated here. These colors may result from iron, manganese or calcium compounds. This layer is quite often very hard and is sometimes called a "hardpan" or a hardpan layer. Horizon C is not actually soil but broken rock rubble and contains no humus. Many parts of Massachusetts are covered by a thick layer of rock and rock fragments, glacial till, which would provide a very thick C horizon. Horizon D is the solid bedrock which is buried deep in many parts of Massachusetts while exposed at the surface in other spots.

In Massachusetts, to be specific, the A00 and the A0 horizon are comprised of a thin layer of leaves and decayed material over a brown or grey-brown humus and mineral layer (A1). They, in turn, lie over a lighter, reddish brown A2 zone which blends into a deeper reddish-yellow B zone. This usually is of much finer material containing more clay than do the surface layers. The C layer is either a result of glacial deposition or bedrock which then would be near the surface. If the area has been plowed, the A00, A0 and A1 horizons have been mixed and are found as a layer of brown colored topsoil that contains both minerals and humus. There is a distinct break between the humus-bearing topsoil, the transition, and the B horizon exposed underneath. This break which could be taken from the A1 and A2 line then is actually the lower plow marks and is called by many "the junction".

CLASSIFICATION

There are three main types of soils: the zonal, azonal, and the intrazonal. These three soil types are based on the profile or lack of profile. The major soil type is called zonal soil because it has distinct zones or horizons. The other two, the azonal and the intrazonal, lack the well-developed profiles. Zonal soil profile (Fig. 22) has a well-
developed profile which results from a definite climatic influence on well drained land.

The intrazonal soils are those in which the development of a profile has been impeded by the lack of drainage. Soils in a marsh, swamp or bog would be examples of the intrazonal soils. The azonal soils are those which lack a profile because there has not been sufficient time elapsed since they were deposited to develop a mature soil profile. Examples of the azonal soils would be river deltas, alluvium deposits or active sand dunes.

The zonal soils are the larger group, the most universal, and also the one with which we will be most concerned. The other two types must always be analyzed as individual cases while, on the other hand, the zonal soil types are universal and a podzol is a podzol whether it is found in Canada, U.S.S.R., or the United States.

There are two distinct categories of the zonal soils (Fig. 23), the Pedocal and the Pedalfer, the criteria for division being basically the amount of rainfall. The Pedocal soil, a result of the calcification process of soil formation, is a soil of the arid regions of the earth and is not found in Eastern United States. A Pedocal soil is characterized by calcium accumulation near the surface as there is no leaching. The Grey Desert Soil is an example of a soil of the very arid regions, deserts, and can be fertile if given water, as many irrigated areas of the West prove. The Chernozem Soil, the so-called "Black Earth", is the most fertile soil found on the earth. It is formed in the semi-arid grasslands which while arid enough to hinder leaching, still have enough rain to produce a good grass cover. The grass, in turn, supplies a great deal of organic matter which when decayed produces a very thick humus layer in the profile.

The Pedalfer soils, on the other hand, are soils of the more humid regions, of which Eastern United States is an example, and therefore are highly leached soils. The humus layer is much thinner because of a forest cover, and the B horizon is reddish-yellow in color as there is accumulation here of iron compounds. The subtypes of the Pedalfers include the Prairie Soils which are less leached than the other Pedalfers. They are of the transitional forest-grasslands and receive less rainfall than do the other Pedalfers. The Podzolic soils are infertile soils of the cool-humid forest regions, which includes New England, and have a thin A horizon. While not on the diagram (Fig. 23), the subtypes of the Podzols that are found in Southern New England are the Podzols of Cape Cod, the Grey-Brown Podzols of the Narragansett Bay Region of Rhode Island, and the Brown Podzols of the rest of the area with the exception of the Berkshires. The last of the Pedalfers are the lateritic

<table>
<thead>
<tr>
<th>Soil Type</th>
<th>Zonal</th>
<th>Azonal</th>
<th>Intrazonal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pedocal (Arid)</td>
<td>Chernozem Soils (Semiarid Grasslands)</td>
<td>Pedalfer (Humid)</td>
<td>Podzolic Soils (Cool-Humid Forest)</td>
</tr>
<tr>
<td>Gray Desert Soils (Arid Deserts)</td>
<td>Prairie Soils (Humid Forest-Grasslands)</td>
<td>Laterite Soils (Tropical Forests &amp; Grasslands)</td>
<td></td>
</tr>
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![Fig. 23.](image-url)
soils of the humid tropics and subtropics, including South Eastern United States. The soils are deep red in color from the iron concentration due to the leaching of the soils by excessive rainfall and heat of the region. It must be realized that these are only a few of the types and subtypes, but these are representative types and indicate the influence of climate and vegetation on soil.

**EFFECTS OF EROSION ON SOIL**

One area of soil formation that is of great interest to the archaeologist is the building up and the breaking down of the soil. The build-up is the slow process of soil formation, but the break-down is a process of erosion and may be slow or very rapid, depending on the degree of slope and the character of its vegetation cover. Unless there is a distinct identifiable layer or old buried soil profile which can be dated or related to a known occurrence, one may not use soil profiles and soil depth to indicate the age of an artifact. Relative statements can be made as to which is nearer to the surface in a single, very limited area, but the distance from the surface or distance above or below the junction has little to do with the age of an artifact. An artifact found on the surface in one place can be much older than one buried 200 cm. in another place.

In New England, soil formation started as soon as the glacier retreated into Canada, and the soils are still in the process of being developed. Soil does have a tendency to "bury" artifacts for the following reasons. Organic debris is continually being added to the surface of the soil, where mineral matter brought to the surface by animals and insects are mixed with it. For example, when an ant or a fox digs a hole or den, it brings to the surface minerals to be mixed with the organic material, thereby covering anything that was dropped on the surface. This then would tend to "bury" any artifact which was dropped on the surface. The second factor would be erosion of the surface, thus exposing articles that have been under the surface. Erosion has the tendency to make all land level by removing material from high points and depositing it in areas of lower elevations. Where there is a slope, surface water is the major agent of erosion. Vegetation is the one thing that can limit erosion. Therefore, if the vegetation is removed, as by plowing, the rate of erosion increases tremendously. When both these factors are considered, different conditions are possible.

The problem set up in Figure 24 is an example of the effects of soil build-up and erosion on the surface of a typical archaeological site. This will then illustrate why the depth at which an artifact is found may differ greatly depending on the varying rates of erosion. In Figure 24, artifacts ("A", "B", and "C") are dropped on the aborigine surface at say 500 B.C. "A" is on a small hill, "B" in a valley, and "C" on a second hill. In the 2,100 years between when they were dropped and the start of plow type agriculture at about 1600 A.D., they would have been buried the distance between the Pre-Agriculture Surface and the Aborigine Surface. In the valley, "B" would lie at a greater depth than "A" and "C" on the hills because even though there were trees and grass, there would have been some erosion. For the sake of the problem, say that since 1600 the hill where "A" lies has been plowed regul--
larly, while the hill where "C" lies has been kept in woods or in pasture with a good grass cover. Whether the valley where "B" lies has been plowed or not matters little, as it is an area of deposition not erosion. The hill where "A" rests is the result of the erosion of 360 years, 1600 to 1960. On Hill "A", erosion has removed the soil down to the position of the artifact dropped at 500 B.C., so that "A" now rests on the surface. The hill at "C" has not been eroded at the same rate as "A" Hill because of the vegetation covering, and "C" remains buried. "B" is even more deeply buried than "C" because the soil removed from Hill "A" has been deposited in the valley and added further cover to "B".

This example illustrates how the soil depth and the position of an artifact in a soil profile cannot be trusted as an indication of age for artifacts. All three artifacts, "A", "B", and "C" were deposited on the surface at the same time, but today one is exposed on the surface and the other two are buried at different depths in the soil profile.

It is hoped that this short introduction to soils will be of help in any future field work in archaeology. There are many fine texts on soils available in most libraries. I have always found that the three books listed in the bibliography are very helpful on all matters dealing with soils. The Department of Agriculture Yearbook for 1957, *Soils*, is one of the better books and is available free-of-charge from your congressman.

Central Michigan University
Mount Pleasant, Michigan
November 1960

**BIBLIOGRAPHY**


**A CAPE COD CANAL POT**

Jesse Brewer

Editor's Note: This remarkable recovery of sherds of a Stage 4 pot required courage, skill, an iron hand grip, and resourcefulness. It demonstrates to what extent archaeologists will sometimes go in order to retrieve important artifacts.

Great Herring Pond lies 15 miles south of the town of Plymouth. Its north half is in the township of Plymouth, while its southerly end falls within the township of Bourne. From this end the Manomet river flows into the Cape Cod Canal a short distance south of the lake. This small connecting river originally ran south for about a half mile to the base of a plateau, on which stood the historic Indian village of Manomet. From this Indian town, in 1622, Governor Bradford obtained a supply of corn for the Pilgrim settlers. And here, today, still live four or five families, who claim to be descendants of the original Indians of this district.

Formerly, when the Manomet River reached what is now the Cape Cod Canal, it took a sharp right turn and ran west into Buzzards Bay. There, at the mouth of the river, was located the Dutch Trading Post, now completely restored.

In 1911 August Belmont & Co. dug the original Cape Cod Canal. It started in Buzzards Bay and came directly up the Manomet River past the bend, already referred to. Here, it cut through the plateau where once stood the Indian village, and passed on to Scroton Creek and Sandwich. A herring ladder, today, runs from the canal into a small part of the original river from Great Herring Pond, and is a tourist attraction during the herring run in the spring.

Before the Federal Government took over the canal, it was just a big ditch with natural earth banks. When large boats passed through, great water disturbance would result, with much erosion of the canal banks. This erosion, in time, formed nearly vertical banks on both sides. Throughout this area for several years, William W. Whiting and I had surface hunted with good success. Projectile points, grooved hammerstones, a beautiful polished ax, and quantities of potsherds were recovered.

In August, 1942, Whiting and I again went to this canal site for the purpose of surface hunting.
All along the top edge of the canal cut we found nothing. When I reached the herring ladder — Whiting had by now disappeared in another direction — the tide was out, so I walked back along a narrow strip of sand at the base of the high canal bank, on the lookout for anything that might have fallen from above. At a spot where the bank is about 50 feet high, I saw what looked to be the outline of a pit near the top. I marked the place by a utility pole, which was directly above the pit, and retraced my steps till I reached the pole on top of the bank. Then, I lay down and looked over the edge of the bank. There below me, too far to reach, was the outline of a pit clearly defined. At this distance, it seemed about 3 feet deep by 2½ feet wide. But what attracted my attention most was the presence of numerous exposed potsherds near the bottom of the pit.

The problem of how to reach the sherds without falling down the 50 foot almost perpendicular bank now confronted me. As I was alone, I realized it was a problem for me, only, to solve. Accordingly, I got a good grip on some long grass at the bank’s edge, and cautiously lowered myself down the steep bank. Dangling at full length, my feet reached below the bottom of the pit, where I cut a deep groove with the toes of my shoes in the side of the bank. Then, I proceeded to use this groove as a shelf to stand on, and after warily testing it, found it would carry my weight. Now, holding onto the grass with my left hand, I commenced to dig out the earth at the bottom of the pit, which lay just under the pottery, with my right. Continuing this process, one by one the sherds began to drop down from above. Holding myself against the bank with my left hand gripping the grass above, I now commenced the long and exhausting job of sherd recovery. As each potsherd dropped into my hand, I reached up over my head and placed it on the bank above. As the work progressed, I realized there were sherds of all sizes, some as large as 4 x 6 inches. An hour and a half passed without changing my position, as I emptied the pit of a great quantity of potsherds. My foot support held firm, and at last the work of recovery was completed. Upon climbing back on top of the cliff, I found a great heap of sherds, which I had extracted from the pit. These I put into a box, which was available, for safe transfer to my home.

Eventually, they were sent to the R. S. Peabody Foundation at Andover for restoration. After

Douglas Byers and Fred Johnson had looked them over, they reported all of one pot was present except one castellated section of the rim. Further search at the site at the foot of the bank failed to uncover the missing sherds. Finally, the pot was restored at Andover (Fig. 25), where it was on exhibition for three years. It is now in my collection at my home in Plymouth.

Plymouth, Massachusetts
June 6, 1961

APPENDIX

(Editorial Comment)

This well styled pot is important evidence, because it is one more link in establishing certain well defined traits appearing in Stage 4 pottery of proto-historic times. It stands 15¼" high with about a 10¾" opening at its mouth. It has a semi-globular base, and is surmounted by a pronounced castellated collar, covered with an intricate incised pattern, in which the chevron motif is imperfectly portrayed, but carefully worked. A row of jabs surrounds the body of the pot, marking the base of a 3" constricted neck. Special attention should be called to corn and face effigies, appearing at top and bottom, respectively, of each castellation. While such effigy markings are rare, occasionally, they do appear on pottery from the central New England area.
It is widely accepted in archaeological circles that this Stage 4 pottery was influenced by Iroquoian contacts of one kind or another. The castellated collar styling appears as an emergent trait in late pre-Iroquoian times in New York State, referred to as Owasco. It seems to have been developed from this earlier elemental source and reached its zenith in Iroquoian ware. Similar evidence of preliminary rudimentary conceived castellated collared pots in New England is lacking, which seems to support the theory of an Iroquoian source for this coastal area.

However, to pick out some spot in New England — like the Guida site (Byers and Rouse) — and say that all pottery ideas flowed from there to other sections of New England is misleading reasoning. It tends to discredit potters in other sections as having no ability to create and develop patterns and pottery contours for themselves. It seems much better logic — perhaps nearer the truth — to credit potters in other New England locals as being as human in their urge to invent, and as skillful in making beautiful pots, as those Guida artisans of Westfield. In support of this statement, there will appear in future issues of this Bulletin additional evidence in the form of restored pots recovered from New England sites. These will serve to remind us that skillful performance goes hand in hand with inventive genius, not with supine imitation.

**EDITORIAL**

**WAS THE GUIDA SITE THE CENTER OF CERAMIC INFLUENCE?**

The last Bulletin of the Archaeological Society of Connecticut, Number 30, is entirely devoted to an interpretation of evidence from the Guida Farm site in Westfield, Massachusetts. In this lengthy report, "A Re-examination of the Guida Farm," the authors, Douglas S. Byers and Irving Rouse, have attempted to establish this site as the source from which ceramic traits and influence diffused into all regions of central New England during the final Ceramic (Woodland) period. To do this, they have created what they call the "Guida Tradition" of ceramics, which consists of Guida site pottery with "collars bearing the so-called Iroquois designs," but with designs, which are "relatively complex and are so narrow and so closely spaced as to give a distinctively cramped appearance." They claim that prior to this period other earlier pottery types are in evidence at Guida closely resembling similar ones from parts of New York State, including traditions of Point Peninsula, East River, and Owasco. Also, they claim to find among the Guida sherds evidence of ceramic traits from as far south as New Jersey.

After going into much detail to establish their thesis, they conclude that even if a replacement of Guida occupants by peoples from western and southern adjoining regions did not take place — not probable — ceramic creative ideas flowed into the Westfield area from these outside culture areas. Ignoring important ceramic recoveries made by members of the Massachusetts Archaeological Society in the Connecticut Valley and the Narragansett Archaeological Society in Rhode Island, all carefully recorded and reported, they refer only to isolated recoveries at Ipswich and on Cape Cod in which the senior author was involved, as being too sporadically classified for more than passing notice. Because of this fallacious omission of important central New England evidence, which creates for them a ceramic void in this area, they are deluded into making an unreasonable suggestion. They would have southern ceramic influences diffused into the Westfield area by what seems to this writer to be a devious and unlikely overland route. They would have us believe that New Jersey and East River creative design motifs found their way up the Hudson, then across to the Housatonic River, and finally overland again over the Berkshire Hills into the Westfield Valley. As a native of these regions, the writer feels certain that a more logical route without interference from natural mountain barriers would have been up the Connecticut and Westfield Rivers by canoe; certainly a less circuitous route.

That ceramic influences were coming into New England from outside regions is obvious because of trait similarities, but to go to such length as found in the report by Byers and Rouse in attempting to establish their exact sources seems non-essential. The fact is that native potters of New England were doubtless as human as anyone else, and modified with inventive ingenuity the styling of vessel shapes and development of design motifs, which may have reached them from their neighbors. In fact, Byers and Rouse in their conclusion seem to agree with this probability.
WAS THE GUIDA SITE THE CENTER OF CERAMIC INFLUENCE?

However, it would appear that they are following a questionable course of action in trying to superimpose an arbitrarily created Guida tradition over all central New England ceramics; a tradition including five different types: Guida Cord Marked, Fabric Marked, Incised, Plain, and Stamped. In effect, they are claiming that here at this small Guida site was a master group of potters — a ridiculous hypothesis — who set the style for potters in other parts of Massachusetts and Rhode Island. If this be so, then it also applies to northern areas of Connecticut and other adjacent regions. This conclusion is based on a study of only 664 sherds, of which 54 are from Guida’s collection, 108 from Brook’s, 32 from Young’s, 153 from the Springfield Museum, 224 from Phillips’ collection, the largest single group (surface finds from the Frog Hole area nearby — not from the Guida site at all), and 93 from other sources. And yet, the authors say that on this admittedly small Guida plot more pottery has been found than on any other site in central New England; a fallacious statement which cannot be substantiated. In making this claim they have deliberately ignored extensive work of the Narragansett Archaeological Society in their controlled excavation of the important Sweet-Meadow Brook pottery site in Apponaug, Rhode Island, reported in Bulletin of the Massachusetts Archaeological Society, Vol. 18, No. 1. The reason given is because of failure there to allot classification place names to each type of pottery found. Apparently, they consider unorthodox the classification system as used, which allots type variations to four stages of development. Because of this, the site’s several thousand recovered sherds with a high degree of stratigraphic reliability become, in effect, non-existent and of no account.

To say that any site, no matter how strategically located or how well supplied with highly significant pottery types, is the source from which creative ideas flowed is irresponsible logic, for who can say how ideas were carried. Furthermore, who knows how many superior sites lie still buried or already destroyed by modern building construction. It seems to this writer more logical and of greater value to concentrate on evaluation of pottery techniques and vessel styles for the purpose of assigning them to the temporal stages of ceramic development to which excavation may dictate they belong. Using site names, such as “Guida,” to describe pottery types or what is worse, to name a tradition of types, all for the express purpose of pre-empting ceramic trait sources, is misleading and of questionable value. Once this is done, all similar ware in the area, whether actually influenced by it or not, must of necessity carry the established name, as in this case, “Guida.” Thus, a pot found by Jesse Brewer near Cape Cod Canal must now be called, according to Byers and Rouse: Guida Incised. How much more realistic it would be to follow the system of classification, as used in the Bronson Museum and by members of this Society, and list the Brewer pot as belonging to Stage 4, the last of four stages of ceramic development. For, these stages are generally recognized by all, no matter how many place names may be assigned to different pottery types. After all, it is the chronological significance of pottery types, in the last analysis, which is the ultimate goal in research. And this may only be reached through controlled excavation of pottery sites with due regard to stratigraphic position of sherds. Place names allotted to pottery types are just so much window dressing of no chronological value. On the other hand, identification of pottery shapes, designs, and techniques, as related to their stratigraphic position, provides sufficient descriptive matter, it would seem, without place names to confuse the issue, to permit allocation of variously styled pots to their respective stages of development.

NOTICE

It is with great pleasure that we announce the addition of a new member on the staff of the Bronson Museum, Dr. Joseph H. Waters. A graduate of the University of Michigan, he will make his headquarters at the museum after July 25th. His interest is in the field of paleo-biology and he will make a study of the fauna associated with prehistoric man in the Northeast.

You can assist in this valuable study by sending to the Bronson Museum all bone material encountered in the course of your field work this summer. It is important that as much data as possible accompany this material. Please identify the site, the associations with which the bone was found, depths, type of soil, approximate distance to nearest water (fresh or salt), etc.

At a later date more detailed information will be published. Your cooperation in this study is earnestly solicited.

Maurice Robbins, Museum Director