Bulletin of the Massachusetts Archaeological Society, Vol. 28, No. 2

Massachusetts Archaeological Society

Follow this and additional works at: https://vc.bridgew.edu/bmas

Part of the Archaeological Anthropology Commons

Copyright
© 1967 Massachusetts Archaeological Society

This item is available as part of Virtual Commons, the open-access institutional repository of Bridgewater State University, Bridgewater, Massachusetts.
BULLETIN OF THE
MASSACHUSETTS ARCHAEOLOGICAL
SOCIETY

VOL. 28 NO. 2
JANUARY, 1967

CONTENTS

Page

CREMATION CULT OF THE DEAD AT SWAN HOLD 17
   Richard C. Sautter

THE OAKHOLM SITE: A PRELIMINARY REPORT 24
   Karl S. Dodge

AN ARCHAEOLOGICAL TRAVERSE OF SANDY NECK 27
   Bernard W. Powell

PUBLISHED BY THE
MASSACHUSETTS ARCHAEOLOGICAL SOCIETY, INC.

Society Office, Bronson Museum, 8 No. Main Street, Attleboro, Mass.
MASSACHUSETTS ARCHAEOLOGICAL SOCIETY
OFFICERS

President
Donald C. Wilder .......................... 86 Brewster Avenue, So. Braintree, Mass.

First Vice President
William B. Brierly ......................... 9 Hawthorne Street, Millbury, Mass.

Second Vice President
Theodore P. deLesdernier ................. Box 84, Leverett Road, Shutesbury, Mass.

Secretary
Maurice Robbins ......................... 23 Steere Street, Attleboro, Mass.

Financial Secretary
Mabel A. Robbins ....................... 23 Steere Street, Attleboro, Mass.

Treasurer

Editor

Trustees
Society Officers and Immediate Past Presidents
Harold F. Nye and Arthur C. Lord
Edward G. Bielski  Robert A. Martin  Norma G. Wentworth
Bernard F. Cochrane  George S. Gibb  Frank Kremp

MASSACHUSETTS ARCHAEOLOGICAL SOCIETY BULLETIN, published in four Numbers of one Volume each year, commencing in October.

Price this issue $.75
(Subscription by membership in the Society: $3.00)

Note: Address all requests concerning membership to the Secretary; all orders for back Bulletin numbers (4 for $1.00 to members) to the Editor; and mail Society dues to the Financial Secretary. Exception: Classification No., Vol. 25, #1 — $1.00 to members, $2.00 to non-members, and Classification No., Vol. 27, #3 & 4 at same prices.

BRONSON MUSEUM
Tel. 222-5470

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 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 Assawompsett 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.
CREMATION CULT OF THE DEAD AT SWAN HOLD

RICHARD G. SAUTTER

Early in the summer of 1965 plans were made to investigate through test-pit digging various areas of a relatively high sandy, wooded bluff. This was at the Swan Hold site in Carver, Massachusetts, where numerous members of the Massachusetts Archaeological Society, over the past number of years, have been carrying on an excavation of a long, low sand terrace, which lies just below the bluff. Here, at an elevation varying from nil to some 6 feet above a stream that flows through a nearby cranberry bog, many artifacts have been recovered, revealing evidence of three culture periods: Early Archaic, Late Archaic, and Ceramic. This was reported in the Society Bulletin, Vol. 13, No. 2, in 1952. Since then, Edward G. Bielski reported an important find of 2 Channeled gouges at the site in the low Early Archaic horizon — Society Bulletin, Vol. 25, No. 2, in 1964. However, all test excavations of the high forested elevation, rising about 25 feet above the lower terrace, had proved futile, until our 1965 tests uncovered evidence, the subject of this report.

By late August of that year, at a spot not far from the western bluff of the upper elevation overlooking the low land, where the lower terrace slopes off into the bog, the writer uncovered the fragmented remains of first one, and then another Full Grooved ax (Fig. 2, #7,10). Upon digging the test pit deeper, the broken segments of each were recovered. But what appeared unusual was the burned and partially fire-eroded surfaces of these axes, indicating that they had been in a hot fire such as might have been used for a cremation. At this point, it was decided to carefully excavate the entire area surrounding this find, in order to locate such related evidence as might appear.

Through the help of Edward Bielski and Richard Bent, soon a gouge and a 5" spear point were found, lying in what appeared to be disturbed subsoil. The spot had one or two large trees growing on it over a forest floor of 6 or 8" of humus, with no evidence of...
disturbance from plowing. This was underlaid by yellow sand to a depth of 16 to 20", below which a deposit of white sand extended down to coarse glacial gravel. By now, it had been decided to note carefully various features as they might appear, so as to be able to tell as much as possible about what the ceremonial complex was that we had so unexpectedly encountered.

As the work of excavating progressed, besides the recovered artifacts as enumerated further along, we uncovered a central pit, irregularly round, about 20" in diameter. On either side of it, south and north, there were two relatively large areas of disturbed soil, referred to as A and B (Fig. 1). In, and adjoining area B appeared 3 smaller irregularly round pits, 14 to 16" in diameter. All told, the excavation covered an area of about 30 feet in diameter.

The tops of the disturbed areas A and B were first noted just under the humus in some places, while at others they were as deep as 4" below, at the same level as the tops of all four pits. The disturbed sand of these areas varied greatly in depth, extending down to the white sand in a few places. Both disturbed areas contained chunks of charcoal as big as the end of your finger, along with broken firestones scattered throughout the discolored yellow sand. However, area B proved to be the most spectacular. In addition to its scattered firestones and charcoal chunks, about a third of the area at its southerly end and portions near the 2 pits at the northern extremity had fireburned reddened-sand intrusions, which appeared here and there. In the midst of the lower section occurred a cluster of calcined bone fragments, too minute to be identified as to their source, but presumed to be human. Other similar calcined bone fragments were scattered about near the 2 pits at the northerly end of area B, as shown in the plan of these features. Fire-damaged artifacts were recovered at different levels throughout both areas A and B; no caches of artifacts were encountered. Of especial note was the uncovering of a polished, fire-shattered Wing atlatl weight (Fig. 3, #20) in area B, within the fire-reddened sand section toward its edge nearest the central pit. This artifact is made of a light tan, fine-grained sandstone, which has a well-worked body beautifully shaped with four sides, of which the edges are flattened to produce an octagonal appearance.

The features of the central pit and the three smaller ones, already defined as to size, will now be considered. Contents of the central pit consisted of black charcoal-saturated sand interspersed with very small charcoal lumps; no calcined bone fragments were present. This fill extended in depth to about 20", where it penetrated the white sand. There appeared no discolored reddened sand at its bottom to indicate the action of fire, nor was there red ochre in the pit. Scattered throughout its blackened fill were recovered the following artifacts, all fire-cracked or otherwise damaged from having been subjected to extreme heat: 3 large Corner-removed #7 spear points; 4 Plain drills and one 4" Tapered-stem drill; 5 Full Grooved axes, in various sizes; one Hatchet; one Grooved gouge; and a Rubbingstone. In most instances, stone materials had been so badly fused from the heat, that they were not recognizable.

Three small pits were located as shown in the plan, one within the disturbed area B, and the remaining two just outside its northerly edge. They contained, exclusively, black charcoal-saturated sand interspersed with small charcoal chunks. They extended to about a 14" depth, stopping about 4" short of the white sand. A few firestone fragments appeared in all three, but no artifacts were present. Also, there were no calcined bone fragments in any of the three pits, nor any sign of red ochre.

It seems significant that careful excavation of the areas surrounding the central pit and the disturbed areas A and B produced no occupational litter, such as chips, firestones, or artifacts. Furthermore, besides being sterile this outside area had not been disturbed so far as could be determined. Apparently, only those areas covered by the features just described had been used for ceremonial purposes.

Including those artifacts found in the central pit, the entire assemblage of recovered goods amounted to 75 in number. A selected few, representing important types in the collection, have been illustrated (Figs. 2 and 3). The complete list follows:

<table>
<thead>
<tr>
<th>Type</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Grooved Axes</td>
<td>7</td>
</tr>
<tr>
<td>Plain Gouges</td>
<td>2</td>
</tr>
<tr>
<td>Tapered-Stem Drill</td>
<td>1</td>
</tr>
<tr>
<td>Celt</td>
<td>1</td>
</tr>
<tr>
<td>Grooved Gouges</td>
<td>2</td>
</tr>
<tr>
<td>Worked Graphite</td>
<td>1</td>
</tr>
<tr>
<td>Wing Atlatl Weight</td>
<td>1</td>
</tr>
<tr>
<td>Stem Knives</td>
<td>3</td>
</tr>
<tr>
<td>Projectiles</td>
<td></td>
</tr>
<tr>
<td>Small Triangular</td>
<td></td>
</tr>
<tr>
<td>#4, 6</td>
<td>3</td>
</tr>
<tr>
<td>Small Stem</td>
<td>2</td>
</tr>
<tr>
<td>Eared #4</td>
<td>1</td>
</tr>
<tr>
<td>Side-notched #6</td>
<td>1</td>
</tr>
<tr>
<td>Corner-removed #7</td>
<td>12</td>
</tr>
<tr>
<td>Fragmented points</td>
<td>8</td>
</tr>
<tr>
<td>Corner-removed #8</td>
<td>1</td>
</tr>
</tbody>
</table>

Note: The Corner-removed #8 was a used point with the tip gone. It was not fire-burned and was taken from the backfill. Because of these conditions, and since it was the only recovery of the Early Archaic, it is presumed to be intrusive. All other artifacts of the collection represent types of the Late Archaic (Stone Bowl Age).
Fig. 2. CREMATION GOODS, Swan Hold Site. 1, Plain Gouge; 2, 9, Hatcher; 3, Celt; 4, Grooved Gouge; 5, 6, Rubbingstone; 7, 8, 10, Full Grooved Ax.
Due to the extreme heat to which most of the artifacts had been exposed, most blades had become shattered, so much so in some cases as to make it impossible to determine the type of tool involved. Therefore, it was thought wise, as a precautionary measure, to screen the backfill to insure recovery of burned artifact sections, which might have escaped notice during the excavation. As a result, numerous minute fire-broken fragments were recovered, which have enabled assembly and restoration of most all of the damaged implements.

After reviewing the evidence, the writer was impressed with its uniqueness in suggesting some sort of ceremonial proceedings, in which fire had played an important part. Because of this, he has asked the Editor to write the conclusion, in order to effect a broader interpretation of the data through a comparison with other similar remains, reported previously at other sites in this region.

CONCLUSION

The Swan Hold evidence as presented is complete enough, it would seem, to suggest the presence of certain ceremonial burial rites among the natives of this region. But, just what they were and how performed can only be judged by hypothetical evaluations, based somewhat upon similar occurrences at other sites in the area. To prove that such likenesses exist, one need only review reports, made over the past number of years, of excavations in this locality, in which fire-burned artifacts were uncovered with the attendant remains of pits, as well as calcined human bones and red ochre in some instances. In each case, the remains differ somewhat in detail, but have enough in common to suggest similar ceremonial rituals, all belonging to the same culture period.

In 1941, before anyone was fully aware that cremation was practiced during a long aboriginal period, William Greene, excavating a hearth on a high sand plain on the north shore of Assowampsett Lake, uncovered that which now seems to have been a cremation burial complex—A Grave In Middleboro, Society Bulletin, Vol. 3, No. 3. A disturbance was encountered about 4 x 6 ft. in size and 30" deep. At its base appeared three caches of artifacts lying in powdered red ochre: cache #1 contained 17 projectile points; cache #2 had 15 projectile points, 2 Wing atlatl weights — one was fractured — and a Plain gouge; cache #3 held one Knobbled and 2 Plain gouges, and 7 projectile points. Typologically, these artifacts equate with implement types of the Late Archaic. Intruding from the top into this disturbed area were two small pits 12 and 18" in diameter, one inside the other. The smaller contained burned stone, and the larger one, nothing but crushed charcoal. It is likely that all three features were a part of cremation burial ceremonies performed at this location.

In 1952, Edward F. Rose, digging on a 15 foot elevation at the Boats site in Dighton, on the Taunton River — Caches At The Boats Site, Society Bulletin, Vol. 14, No. 4 — encountered somewhat similar cremation remains. Although the elevation differed in that it consisted mostly of gravel, it yielded five ceremonial pits, in which appeared many artifacts placed at the bottom of each imbedded in red ochre. Some of the pit goods were broken, but most fragments were present, which made restoration of the artifacts possible. Full grooved axes, broad bladed knives and projectile points were all of Late Archaic types, and the totals of each pit were as follows: pit #1 — 20; pit #2 — 19; pit #3 — 16; pit #4 — 12; and pit #5 — 4, making 71 artifacts in all.

In 1958 at Assowampsett Lake, several hundred yards from Greene's 1941 cremation recoveries, Maurice Robbins, directing excavations of the Cohannet Chapter, ran into further cremation evidence at the Wapanucket 6 site—An Archaic Village in Middleboro, a Cohannet Chapter publication. Here on a sand dune, several hundred feet from the shore and at about a 70 foot elevation above the lake, two crematories were uncovered, which may have been associated with Greene's features. However, the Wapanucket 6 remains were from 8 to 10 ft. in diameter, and were lined with slabs of sandstone, which completely covered the crematories. Several bushels of charcoal were removed from each, in which were found the remains of fire-burned and shattered artifacts, as well as calcined human bone fragments. At some distance from these features and located about the outskirts of an excavated seven lodge village, appeared several cremation pits, some large and others small in size. Red ochre was found in some but not all, and likewise, calcined human bone fragments in quantity occurred only in a few. While the artifacts—many fire-burned—found in most of the pits varied in number, implement types suggested a Late Archaic provenience, except in a few instances, in which a Classic plummet, Channeled gouge, and a special-shaped Ulu indicated culture overlapping of some kind from the Early Archaic. This could have resulted from stragglers of the former age, who, remaining behind as fishermen, had mixed with the new comers, with some of the Early Archaics' tools being used in the burial ceremony, when they died. A radiocarbon measure of a charcoal sample associated with the lodges is presumed to date the burial ceremonies—about 4,300 years ago. In the light of recent radiocarbon dating of the stone bowl industry at the Horne
Fig. 3. CREMATION GOODS, Swan Hold Site. Projectile Points: 1, 9, 10, 12, 16, 22, 25, Corner-removed #7; 2-4, 11, Small Triangular #4 and 6; 5, 17, 18, Tapered-Stem; 6, 7, Small Stem; 8, Side-notched #6; 19, Eared #4 . . . 13, 15, Plain Drill; 14, Tapered-Stem Drill; 20, Wing Atlatl Weight; 21, Stem Scraper; 23, 24, Stem Knife.
Hill quarry of the Late Archaic, this Wapanucket 6 date seems to indicate a time during the early phase of this age, which supports the above mentioned theory of Early Archaic culture overlapping.

A year later in 1959, J. Alfred Mansfield, located a disturbed area, marked by a concentration of charcoal—The Mansion Inn Site, Society Bulletin, Vol. 23, No. 1. It was on a sandy knoll with a 20 foot elevation overlooking Lake Cochituate in Wayland. This feature was about 8 by 12 ft. in size and extended in depth to about 46” from top of the ground. A great quantity of fire-burned and broken artifacts at different levels were taken from this disturbed area, presumed to have been the crematory. However, there was nothing but a streak of gray ash here and there to indicate the possible remains of incinerated human bones—no fragments of calcined bone were in evidence. Located around this feature were uncovered five or more pits, some of which contained a limited amount of red ochre. Most of them yielded artifacts, many of which were fire-burned, although some were not. Often, the unburned specimens represented outstanding examples of such articles as wide-bladed Stem knives, beautifully worked from flint and other hard stones. Of considerable significance was the appearance in one pit of a 14” stone bowl of steatite. This, together with Full Grooved axes, and all projectile point types leaves no doubt that this deposit was made by people of the Late Archaic, possibly toward the close of the age, as a copper ax appeared in one of the cremation pits.

Another discovery in 1959 was made by Charles R. Potter, while excavating a plowed field in Charlestown, Rhode Island. At an elevation above a fresh water pond, somewhat removed from the shore of Long Island Sound, he was attracted by a concentration of charcoal at one spot. Here, he uncovered a pit about 6 x 8 feet in size, and 4 feet deep, containing crushed charcoal. And mixed among the charcoal appeared several relatively large fragments of calcined bone, subsequently found to be human—there were no signs of red ochre. At the pit’s base occurred 15 or 20 fire-burned cobbles, so completely fused from extreme heat that some disintegrated when picked up. Lying over them was a concentrated layer of charcoal interspersed with calcined bone particles, presumed to be human. Fire-cracked artifacts—some totally demolished—were scattered throughout the pit, including: many Side-notched #5 points, of which 2 were about 5” long; one Celt; 2 Gorgets; and one undamaged Birdstone, found at the pit’s top. Of added significance was recovery from the pit of the fragmented remains of 7 stone bowls of steatite, including a large deep kettle 20” long and 12” deep (restored), and smaller vessels.

Still another pit was uncovered at some distance from the first, which contained a limited amount of charcoal, about 5 feet in diameter and 2½ feet deep. This pit yielded 4 Side-notched #5 points (fire-damaged), besides 3 Gorgets, one large Stem knife, 2 broken stone bowls (deep dishes without lugs), and many sherds from a large thick-walled ceramic pot of a presumed early development stage.

Pit #1 with its Late Archaic trait remains probably represents the termination of the age because of its Birdstone inclusion—an Adena trait due to infusion of this culture during its transition to the Ceramic Age. This also applies to pit #2 with its potsherds, which doubtless indicate a somewhat later deposition. In addition to the above, it should be noted that surrounding both pits and throughout the plowed field appeared no camp litter to indicate occupation of any kind. This agrees with similar conditions noted at the Swan Hold site. Altogether, a cremation complex is indicated.

Finally, in 1960, Frank Kremp located in East Orleans on the Cape another large disturbance—A Burial Complex On Cape Cod, Society Bulletin, Vol. 22, Nos. 3 and 4. It was in sandy soil on a 30 foot elevation above sea level and near a small inlet. It covered an irregularly oval area 15 x 20 ft. in size. Within this feature were four irregular smaller areas, in which the pulverized charcoal content was much more concentrated than in the surrounding disturbance. In these features were streaks of gray matter consolidated into small lumps in some places, presumed to be incinerated bone remains; several fragments of calcined human bone occurred in other parts of the dig. Artifacts were often damaged by fire-burning, cracked, or completely fractured. In general, they appeared at all levels indiscriminately deposited, except in the case of some of the larger points. These occurred in caches, usually at the bottom near the gravel floor. One cache was in a heavy concentration of red ochre, while only light traces of it were observed in other places. Quantities of Full Grooved and % Grooved axes were recovered, as well as a representative showing of the Clumsy Plummet, Knobbled and Grooved Gouges, Stemless knife, and wide bladed projectile points, all, Late Archaic types.

After reviewing this data and comparing the Swan Hold features with it, certain ideas arise, which will now be expanded in an attempt to relate some of the probable ceremonial practices attending cremation of the dead, which seems to have taken place. While the evidence is such as to merely suggest certain rites,
enough repetition of various ceremonial deposits occurs at the seven sites referred to in this review to permit constructive speculation, as to the ceremonial procedures that may have been followed.

Considering, first, the locale of these cremation sites, it is apparent that sandy elevations were preferred for the ceremony. At Swan Hold, a sandy promontory was selected above and separated from the living abodes of the participants, which at that time may have existed on the sand terrace below; no occupational evidence appeared on the upper elevation surrounding the cremation complex, nor further removed on this upper level. Apparently, the shamans, who probably conducted the ritual, preferred to isolate the ceremony from the people's living quarters. It is important, also, to note that this cult of the dead, because of the implement types involved, belongs to the Late Archaic Age of the stone bowl industry. The period is estimated to have lasted for several thousand years, from about 5,000 years ago to A.D. 500. The cult seems to have run the gamut of it, as indicated by the radiocarbon date of 4,000 years ago at Wapanucket 6, representing the early phase, and the appearance of a copper ax at the Mansion Inn site, indicating the probable late phase of the age.

Second, because of the dearth of calcined bone remains at Swan Hold and elsewhere, it is obvious that incineration was most complete. This may indicate that dry bones were involved, which, after a drying period, were taken from the charnel house in perhaps a skin-wrapped bundle for concentration, in order to effect more complete burning. Evidence, with the exception of Wapanucket 6, suggests that the funeral pyre was made in a somewhat hollowed-out sandy area, without the use of massive stone linings—perhaps because at most places such slabs were not available. Instead, at Swan Hold common firestones took their place. The repeated hollowing, preparatory for successive cremations at this site in areas A and B, probably accounts for their extensive disturbed condition.

Third, during incineration, artifacts considered useful for the departed in the next world were thrown onto the pyre. It is possible that the idea of purification by fire entered into this sacrifice, or even that of "killing" of the artifacts to release their resident spirits, so that the departed would have tools to use, free of any earthly evil spirit—all objects were believed to be spirit possessed. Whatever thoughts entered into this sacrificial act, it seems to have been a universal rite with all shamans. Also, this may have been done with the idea in mind of providing comfort for those who remained, and protection from this world's supernatural spirits.

Finally, the shaman performing the ceremony indiscriminately scooped up a quantity of charcoal-saturated sand with some burned artifacts from the crematory, and dumped them into a prepared cremation pit. This followed the pouring of powdered red ochre—a natural substance, symbolic of blood—into the bottom of the pit at some sites, apparently to give new life to the departed in the next world. This was not done at Swan Hold, perhaps because red ochre was not readily available. At this site, as has already been mentioned, this pit lay between the two disturbed areas A and B, which are presumed to have been used as crematories. While not in evidence at this site, at Wapanucket 6 and Mansion Inn sites this rite was attended by the additional deposit in the pit of several fresh artifacts undamaged by fire. At Swan Hold and elsewhere the gathering of residue from the crematory avoided the laborious recovery of burned human bone fragments, which were left behind. Possibly, in this ritual a distinction was made depending upon the social standing of the deceased, as to the amount of care given the gathering and transfer of burned remains from crematory to the sacrificial pit.

Following or preceding this rite, apparently another ritual was sometimes performed, in which one or more smaller prepared pits—three at Swan Hold—were filled with charcoal-saturated sand void of artifacts taken from the crematory; evidenced by a few fire-broken stones from the pyre found in them at Swan Hold. However, it is also possible at that site that these pits were used only one at a time, one for each burial ceremony, which suggests that three separate cremations may have taken place, with use of the central pit shared by all.

So much for the various cult-of-the-dead ceremonies, which seem to have played an important role during the Late Archaic. As new evidence of a similar nature is uncovered at other sites further afield in New England, affiliation of this cult with that already reported by Ritchie in New York State may well be contemplated, if not now through the evidence already presented. Apparently, the Late Archaic of New England had closer contacts with outlying regions to the west of the Hudson than existed in previous ages, with the resultant exchange of ideas and customs.

Examination of the cremation-artifact traits from Swan Hold places them all in the Late Archaic, but it is of interest to note the appearance of a slightly different elongated shape for the Full Grooved ax from that usually attributed to this tool (Fig. 2 #7). However, this modified form has its counterpart. It is to be found at both the Coburn and Mansion Inn sites in their inventories of artifacts. Also, it is significant that the Swan Hold artifacts include Rubbingstones,
found similarly at the Mansion Inn site and elsewhere. Apparently, these tools were considered essential for survival of the departed in the next world—the flat-faced tool (Fig. 2 #6) perhaps would have been used for sharpening bone fishhooks.

All of this evidence leads to the conclusion that the Stone Bowl Makers of the Late Archaic had a well-established belief in a life after death of a material order, requiring the same tools as those of this world. Also, it is apparent from recoveries and the radiocarbon date at Wapanucket 6 that the source of this belief with its cremation ceremonies extends back hundreds of years among the forebears of this age’s industrialists, before the making of stone bowls had been conceived. In fact, it seems possible that it was brought to the Northeast by the first migrants, who trickled into New England, a family at a time, from points to the west and south. Doubtless, the cremation cult of the dead ultimately became an important element of the Late Archaic’s social structure, and was used by the shamans to insure suitable rapport with a spirit-controlled world. For each conceived himself as society’s ordained medium between the supernatural and man’s material world, and as such received the unqualified loyalty of the people.

Plymouth, Mass.
April 29, 1966

THE OAKHOLM SITE: A PRELIMINARY REPORT

Karl S. Dodge

Situated on the southwest shore of Quaboag Lake, Brookfield, Massachusetts, this site (M.A.S., No. M-31-12, Sec. A) has produced unusual features, which appear to be the organic rot remains of wooden dishes and bowls. Because of these unique finds, a preliminary report about them with a description of the methods used in their preservation and recovery is deemed advisable. While further anticipated excavating may produce additional evidence of value, that which now exists seems worthy of review.

Every human group in the past has had a distinctive culture, and cultures are identified in part by their tools and other products that have survived the ages. Little is known as to how a group lived or the way they thought or acted, other than what may be hypothesized through a study of recovered imperishable artifacts unearthed during the process of excavating.

Various cultures of the Archaic are known to have existed throughout the United States and portions of Canada. These cultures seem to have flourished extensively in the southeastern and northeastern United States, where archaeological research has been active. This writer conceives of the early and late periods of the Archaic as one; that racial continuity existed although a gradual change of customs may have taken place. Early Archaic peoples lived a nomadic kind of existence, subsisting primarily on a hunting, food gathering economy, while the Late Archaics doubtless were more sedentary as was required for their stone bowl industrial activity. Significant evidence of the Late Archaic based on recovered camp remains suggests certain mortuary customs, as identified by hearths, crematories, cremation pits, and secondary burials. In addition, material recovered from areas in and around lodge floor outlines is often quite informative. Hunting and food gathering activities were supplemented by fishing. However, evidence from excavated shellheaps or kitchen middens testifies that shellfish were not added to the diet until the advent of the following Ceramic Age.

Based upon recovered cultural evidence from excavated Archaic sites, most archaeologists conclude that agriculture was not practiced until the arrival of ceramics. Archaic camp sites were small and occupied for limited seasonal periods, by relatively few people at a time. Caves and rock shelters, when available, served as shelters in addition to man-made abodes. A strong and vigorous art may have characterized these Archaic people’s woodworking activities, as inferred from quantities of fine-to-crudely-made Steepedge scrapers of various sizes and proportions, special knives, Notchers, and Shavers, recovered from many
sites. Small gravers or micro blades presumably used for engraving are sometimes present. Archaic peoples possessed no domesticated animals save perhaps the dog. Inhumation of the dead in Late Archaic times probably was not practiced in general, as the presence of crematories and numerous carbon-filled pits containing carbonized fragments of human bone indicate a ritualistic crematory complex, as revealed at Wapunucket 6.

Carbon-14 dating of type sites places the Archaic period in New England between about 6,700 years ago down to about A.D. 300, the beginning of the Ceramic (Woodland) age. The use of bow and arrow for hunting and defensive purposes commenced to supplement, and in some areas, replace the use of spear throwing or jabbing. With arrival of the Late Archaic, steatite vessels were made to supplement wooden ware (wooden dish, Wapunocket 6), which now seems to have preceded stone bowls. The art of producing tempered clay pottery came with the advent of Woodland times, although wooden vessels may well have continued to be made.

Each Archaic site properly excavated and recorded contributes in some degree, through new features previously undiscovered, to our knowledge about this vanished race of people and their mode of life. This fact is amply demonstrated at the Oakholm site, where a group of amateurs, members of the Massachusetts Archaeological Society, have carried on controlled excavations for the past four summers. Besides artifacts belonging to the Early and Late Archaics, clay potsherds attributed to the several stages of pottery making in New England have been recovered at the site, much of which has been found in situ. However, Early Archaic evidence is minimal when compared with that of the Late Archaic, which predominates.

The site was laid out during July of 1962, using the grid system with six foot squares, which were projected from a base line oriented due east and west. The prescribed and accepted system of excavating with trowels or similar tools was followed, keeping the surface of each square excavated entirely level and fully exposed as the work progressed. This adopted method was a success, when in 1963 one careful digger exposed an oval, dark colored ring, apparently of some organic remains measuring about 14 x 16" and at a depth of 10" below the plow-scarred terminus — referred to hereafter as junction — located in apparently undisturbed sandy subsoil.

Careful brushing out of the fine sandy silica from within the oval ring discoloration disclosed a depression nearly 2" deep, with rounded internal walls and a semi-flat dark colored earthen bottom, presumably caused by some kind of organic rot. After the exposed portion of the entire feature had been allowed to dry sufficiently, the exposed surfaces were sprayed with clear liquid plastic. An attempt was made to remove the feature intact, but due to its size and our inexperience in dealing with the removal of such delicate remains, the feature crumbled during the process. A Side-notched #5 point of chert, expertly fashioned, was recovered from the crumbled dark colored organically stained sand, supposedly the remains of a wooden vessel, in which the point apparently had been placed.

During the summer of 1963, several black carbon-stained pits appeared adjacent to the oval ringed feature. One such pit contained a carbonized tooth, subsequently identified by a local physician as a human incisor. Continued digging revealed several additional blackened ringed features like the first, of varying shapes and sizes, at depths of from 10-19" below junction. Five of them occurred in one 6 foot square, and near them was another black pit, presumably used for the disposal of burned human remains. Although these charred pits had small diameters ranging from 12-16" in diameter, and were only 12-15" deep, they suggest possible secondary interments.

By this time, a method for preservation and removal of the round and oval ringed features —4 to 8" in diameter for the former and from 3½ to 7½" in width for the latter— was discovered. Except for a few of these features — previously disturbed by frost heaving, from which samples were taken for biological laboratory analyses — seven of thirteen were successfully removed intact from the site.

The procedure employed is outlined briefly as follows. As the oval-shaped rim outline — referred to as a ring in the text — of the feature's organic rot appeared in the damp sand, all surrounding sand was carefully removed to within a few inches of the outline, and to a depth of from 3 to 4" below the darkened feature. The presumed bowl or dish, resting on its damp sand pedestal, was next wrapped with wet plaster of Paris bandage, then air dried until the plaster cast became rigid. At this stage, a sheet of metal was slipped under the cast, and the bowl-encased cocoon removed. In an inverted position, the cast was allowed to stand for several days or weeks until the silica content surrounding the organic rot had thoroughly dried out. The next step was to cut down one side of the plaster cast with a small saw, and with the use of a soft camel hair brush remove the loose sand surrounding the bowl-form's exterior. After the outside
of the dark colored form was cleared of sand and brought into view in this way, clear plastic spray Krylon was applied. This was repeated several times, but care had to be exercised, for over treatment would have set the silica still in contact with the bowl-form on the inside. Once the plastic had solidified the organic rot of the bowl-form, it was possible to turn it over for removal of the light colored non-contaminated sand from the inside by brushing. When the hollowed interior of the vessel had been exposed in this way, it was plastic-sprayed to complete hardening of the whole. One of the preserved vessels — apparently a shallow bowl — is now on display in the Bronson Museum (Fig. 4).

The discolored ringed features, because of their upright position in the ground in all cases with only vessel edges showing, as well as their symmetrical shapes, suggest that they are the rotted organic powdered remains of wooden bowls, platters, cups, and dishes, in which the organic matter became mixed with sand to produce the darkened outline shells of these vessels. These remains seem to be related to the probable cremation pit as to their depths and horizontal positions, as well as to a large stone Late Archaic hearth (Fig. 5). Indicating its culture source were Late Archaic type projectile points and knives, which appeared in the hearth. These combined features seem to suggest that the wooden vessels, as described, were used for ceremonial purposes associated with the disposal of the dead in Late Archaic times.

A careful study of the distribution of the wooden vessel remains, together with the depths at which they were recovered in undisturbed sand seems to indicate, first that holes were dug, after which the bowls containing food offerings and an occasional artifact for the deceased were placed in the holes, and then covered over with sand to prevent animal and bird marauders from feasting upon the food.

Archaeological wise, much emphasis in the past has been placed upon the value of stone artifacts and other imperishable artifacts to determine cultural traits pertaining to all periods of the stone age. Little attention has been paid to the possibility that during the millenniums the art of weaving textiles from fibers obtained from native plants, roots, and bark took place. Also, that hair from fur bearing animals and feathers from certain birds were probably utilized and fashioned into various woven articles. The acid
soil of the Northeast precludes the possibility, for the most part, of preservation of such remains, and so prevents study of its textiles, which doubtless were an important factor in prehistoric industry. We have only to examine the remains of bone needles, awls, etc., recovered from shellheaps to understand more fully the importance of weaving to the shellfish eaters of the Ceramic Age, and presumably to their ancestors of the Late Archaic. Yet we are familiar from historic accounts of the latter day native use of woven grass mats, porcupine quill ornamented containers, mocca­sins, snowshoes, and basketry.

Quite in line with the presumed existence of textiles, the industry of making articles of wood may have been practiced to a greater degree than might be thought possible. As previously suggested, the existence of such woodworking may be envisioned from the quantities of stone artifacts, such as scrapers, notchers, abraders, perforators, spoke shavers, and certain kinds of knives. It seems likely they were intended for uses other than the cutting out of stone bowls, or the making of projectile shafts.

Due to a heavy concentration of iron oxide in the soil at the Oakholm site, the wooden vessel remains referred to in this paper have probably been preserved from dissipation due to leaching, and have so retained their original shapes.

It is worthwhile to note that for the most part, projectile point types at the site are those of the Late Archaic occupation; there are but 5 or 6 points of Early Archaic types: Corner-removed #5,8,9, with ground shoulders. These few points lay in such a way as to appear unrelated to the rest of the evidence.

Small ground slate knives were recovered at depths of from 9-13" below junction, three of which are worthy of special note. One bore a small pictograph resembling the back and head of a horned animal — possibly a deer (Fig. 6). The other two were found embedded in a pocket of powdered red hematite.

The writer wishes to acknowledge with thanks the kind permission of the Jeppson family to excavate at Oakholm. Thanks are due the editor of the Massachusetts Archaeological Bulletin for his assistance in classifying recovered artifacts—based on the Society's publication, *Classification of Stone Implements of the Northeast* — also for his excellent illustrations as reproduced herein. Likewise, appreciation is expressed for assistance gained from *The Amateur Archaeologist’s Handbook* by Maurice Robbins. Of especial note is the excavating assistance received from several members of the Worcester Elmer Ekblaw Chapter of the Massachusetts Archaeological Society, which is hereby gratefully acknowledged. Their valuable assistance has helped make possible this preliminary report.

Greenville, R. I.
March 1, 1966

AN ARCHAEOLOGICAL TRAVERSE OF SANDY NECK, CAPE COD, MASSACHUSETTS

Bernard W. Powell

Abstract: Stratigraphy and context of artifacts — including pottery — in aboriginal shell heaps on Sandy Neck on the north shore of Cape Cod support the inference they were left by occupants of the Woodland (Ceramic) period. Lack of Archaic horizons is related to the relatively recent formation of the Neck. The larger heaps may represent temporary — possibly seasonal — stone-working stations of migratory groups. The smaller heaps are shelling or cooking stations. Varying ratios of shellfish species may record temporal progression in the deposits going eastward. It is suggested that sharpened butts of saplings, present in some quantity, may be remains of temporary windbreaks or shelters.
Discovery of aboriginal remains on desolate Sandy Neck, lying between the Great Barnstable Marsh and Cape Cod Bay on upper Cape Cod on 11 April, 1965, prompted a foot traverse of the Neck, completed 28 June to 1 July, 1965. Nine prehistoric stations were located along a 4 mile radius east from Bodfish Park, at the western terminus of the Neck (Fig. 7).

Field observations substantiate and extend those of Bullen and Brooks (1948), who reported two “concentrations” of small shell deposits “about two miles west” and “about a mile and a half further west” from Sandy Neck Light, on the easternmost tip of the Neck. Interesting comparisons may also be made with recent work elsewhere on the Cape, notably that by Moffett (1957, 1965), and more recent findings on Martha's Vineyard (Ritchie, n.d.).

**Geomorphology.** The geomorphology of Sandy Neck and the Barnstable Marsh and its estuary has recently been reported by Redfield (1965). Briefly, Sandy Neck has grown eastward as a spit from Scorton Neck through marine action on materials of the Sandwich (Wisconsin) moraine. Redfield illustrates an early stage in formation of the Neck at 3,200 years B.P., with mean sea level 18 feet lower than present. The Neck today is about 6 miles long, and averages less than one-half mile in width.

A tortuous sand hill topography occasionally reaches 60 feet above sea level, with shifting, wind-swept dunes — sometimes showing enigmatic horizontal beds. Vegetation is restricted to discontinuous stands of black oak and stunted pitch pine with a more widespread ground cover of cat briar, poison ivy, beach plum and related beach xerophytes. There is some suggestion the pine — most numerous to the east — is being succeeded by the oak, which dominates the older, western end of the Neck.

**Aboriginal Deposits.** The deposits I found can all loosely be characterized as heaps or mounds, consisting mainly of black greasy sand mixed with marine shell fragments, sparse artifacts, stone chips, and occasional bone fragments. The heaps are numbered 1 through 9, and located as closely as possible by crossbearings (Fig. 7) on the USGS map of the Hyannis Quadrangle. They varied greatly in size, from the smallest, about 6 feet in diameter and 1 foot high, to the largest — in two cases, double mounds — 50 feet in diameter and up to 3 feet high. In several instances, subsidiary heaps — also noted by Bullen, et al.— and isolated groups of cobbles lay at no great distance from these numbered stations. I discriminate roughly two heap types: those with and those without stone-working remains. The largest station was Station 2; a description of it will serve as a prototype for the others.

**Station 2.** This was a multiple mound, 50 feet across its widest dimension and 2 feet high near its center. It lay in a dune hollow east of White Hill, a semi-permanent feature on the USGS map. A test trench to determine stratigraphy and to sample the mound was dug along axis AB (Fig. 8). This profile
showed a top layer of black greasy sand, laden with fine charcoal granules, and somewhat firm and crusty in its upper portion. This black sand layer was the matrix for most of the cultural debris and marine shell fragments. It was obscured from immediate view by a light dusting of wind-blown white sand across the surface of the mound.

Fig. 8. PLAN AND PROFILE, STATION 2, Sandy Neck, Cape Cod, Mass.

Below the black sand layer was a thin, grey sand layer, which in places reached the surface. I suspect the grey sand to be either a mechanical mixture of the black and the white sand, or a leaching product created from the black sand, which mostly overlay it.

Beneath the grey sand layer was the undisturbed, natural white sand, which makes up the dunes proper. In the northeast end of the trench, this white sand phased over without sharp demarcation to a red sand, which reached the surface near the eastern flank of the mound. A pedologist (Hill, personal communication) opines that this red sand may be iron oxides mechanically concentrated by wind or waves. The white and red sand stratum was sterile; was tested to minus 20 inches where the water table was intersected.

Apparently, this heap, like the others, was formed when refuse built up over small, pre-existent white sand dunes. Primary aboriginal deposit was the black sand. Beneath it, reddish oxidized sand may have been present naturally formed within the white sand, or it may have formed later, as most probably did the grey sand, by either mechanical or chemical processes. The more resistant black sand layer has apparently withstood wind erosion and preserved the mounds relatively intact. This has prevented development of a full-scale fragile-pattern area, as described by Hayden (1965).

The irregular hummocky plan of Station 2 (Fig. 8) suggests potholing or other disturbances at some time in the past. However, I do not believe this was extensive, since stratigraphy was not chaotic, and many features — such as clusters or pits of shells — remained intact within the mound. It is difficult to determine re-weathering and in situ adjustments in sand; the main field criterion I used was consistent stratigraphy.

A great quantity of chips, spalls, flakes, discarded cores, and battered fire-burned stones littered the mound and lay about its base upwards of 100 feet from its northern perimeter. These were derived from sea-worn cobbles — mainly silicates, indurated shales, and siltstones. Many were strikingly colored. Their counterparts are still present on the bayside beach today, and I infer that one of the main occupations of the creators of the deposits was gathering and working these stones. In some cases, chips from a single cobble lay on the surface just inches from one another, denoting in situ working of solitary stones. Some sat on little sandy pedestals, reminiscent of the Colorado and Nebraska "sand hill blowout" phenomena. Thin elongate patches of lighter weight shell fragments lay both NE and SW of Station 2, as well as at most other stations. It is thought that these patches were formed by the prevailing wind.

Lithics: One cobble from Station 2, showing definite signs of battering along its periphery, qualifies as an unmodified hammerstone (collection of R. Palson, Medfield, Mass.). The scarcity of finished pieces may suggest they were either carefully cached, or removed from the site. One bifacially flaked, contracted-stem projectile point of purple-grey quartzite was recovered on the surface of Station 2. Fowler (1963) believes contracted-stem points (his "Tapered Stem") to be Late Archaic to Early Ceramic in Massachusetts. Ritchie (1961) also places these points generally in Transitional to Early Woodland times in New York State. Bullen, et al., cite recovery by them of nine projectile points, seven of which were triangular and assigned by them to Late Prehistoric times, also one stemmed and one side-notched point from a deeper level, presumed to be earlier. They cite five additional Large Triangular points in a local collector's keeping.
One small chip of yellow jasper from Station 3 showing minute flaking along one edge is reminiscent of Pennsylvania jasper, and may not be indigenous. Concentrations of worn pea-size gravel, sometimes equaling two or three quarts, were noted in several instances; specifically at Stations 2 and 9. Their meaning is problematical, but perhaps they were tempering stock, although grit-tempered sherds were scarce.

Ceramics. Potsherds were present at Stations 1, 2, 3, 7, and 9, but were mainly small and non-diagnostic. Several sherds revealed light, fine incising. Most had shell temper and reflect well-oxidized firing, i.e., light buff-to-red, including sherd interiors. Very few had grit temper. They appear to conform in general to the ware, somewhat better preserved, cited by Bullen, et al., as cord-maleated semi-globular pots with constricted, chevron-incised necks and everted rims. Such vessels are late or proto-historic at other Massachusetts sites (Bullen, et al., p. 12). [These seem now to be Stage 3 — late prehistoric pots, as deduced from more recent discoveries — Ed.] A fragment of a ceramic pipe stem was recovered on the surface at Station 7. An undecorated, obtuse-angled pipe with stubby stem, illustrated in Willoughby (1935, p. 182, Fig. 104, e) is said to be from a shell-heap in this vicinity.

Sharpened Butts. Unusual items noticed by me at most Stations were a number of wooden butts, varying in length from 3 to about 6 inches, and ranging in diameter from \( \frac{3}{8} \) to \( \frac{2}{4} \) inches. Two types were discriminated.

The first type, to which the majority and all the larger specimens conformed, consists of tapered points on one end, with the opposite end rotted down into the heartwood, leaving a cone-shaped hollow (Fig. 9). All were sandblasted, but on some the tapered ends show presumptive traces of cutting marks. Most were found free at or near the surface of the heaps, or lying near their perimeters at their base. In no case did they reveal discernible patterns or plans, but the suggestion is offered here that they may be terminal ends of saplings or posts driven in for temporary fire-screens, windbreaks, drying racks, or perhaps even lodges of wickiups. When abandoned, such constructions would presumably have been reduced by the elements, leaving only the broken or sand-cut ends sticking up in the ground. In turn, these might have rotted down into the heartwood, and in time have become covered by drifting sand and preserved beneath the dunes. Redfield (personal communication) agrees that the points have "clearly been sharpened," but questions whether they are rotted-off sapling stakes on the grounds they are too short and uniform in length. He speculates that they may be artifacts, and notes that trees buried beneath the sand hills have been found well preserved when once again exposed.

The second type of butt includes several members about the thickness of a man's finger, and sharpened to points on either end. Very superficially, some resemble gorges. Byers (personal communication) states that "... small wood will in time be pointed by drifting sand just as effectively as if it had been put into a gigantic pencil sharpener." Byers also notes that "the pastures" on the Neck were once fenced in, and presumably fence posts were in use at that time. That such explanations as blowing sand and fence-building may explain the presence and condition of the sharpened butts is acknowledged. However, marked predilection of both types of butts on or near the mounds and their rarity elsewhere throughout the dunes may argue for prior association with the mounds.

Shellfish: Gross assessments were made on shellfish remains present at all stations. The major species appeared to be the sand clam (Mya arenaria). Scallops (Pecten irradians) were rare. By visual estimate, over 95 percent of the shells at Stations 1 through 7 were sand clam (Mya). Station 7 was also the only heap yielding razor clams (Ensis directus). At Station 8, only quahogs (Venus mercenaria) and mussels (Mytilus) were noted. There is some doubt that this station is prehistoric, since the quahogs may have come from debris left by gulls. At Station 9, a visual estimate gave about 15 percent of the shell fraction as mussel (Mytilus) and the remainder, 85 percent, as sand clam (Mya).

Thus, the easternmost stations showed gross species differences from the more western stations.
Bullen, et al., do not give percentage estimates on shellfish remains, but do cite (p. 7) presence of oyster shells in the lower portion of their Site 1 (furthest east), and mixed “scallop, quahog, sea clam, soft shell clam, razor clam, and mussel” in the upper part. These shell data, while not commensurate with mine, nevertheless seem to support wide species variation, and presence of mussels in particular at sites going eastward down the Neck.

If true, this may be a significant datum. That is, as the Neck has grown eastward over the past 3,000 years, the older, western parts have presented opportunities for use by man for a longer time. Barring near-simultaneous deposition for all the deposits, it is conceivable my Stations 1 through 9 going eastward, and Bullen, et al.’s Sites 11 through 1 (in this order) eastward may represent successive stages of occupation.

The wider species variation and greater numbers of mussel in the easternmost deposits might indicate: 1) change in aboriginal diet with time; 2) variations, perhaps due to sea level or other geomorphological changes, in shellfish habitats available for human exploitation; 3) interactions of 1) and 2). No diagnostic artifact progression exists, which would enable one to proceed further in this line of inquiry, but future studies might illumine this suggestion. A radiocarbon date of 625 ± 95 years B.P. (1325 A.D.) from charcoal collected by Redfield at Station 1 (Sample 1-1965) has recently been received. This date supports the archaeological inferences advanced herein.

Bone: Osseous material was sparse, but several large fragments were recovered at Stations 2 and 7. Avian material was present, presumably including seabirds, and some large pieces may be sea mammal remains, or even human. At Station 7, careful test-pitting and a series of radiating trenches around an exposed weathered bone, resembling a human humerus, failed to disclose further remains, although it revealed a deep charcoal layer—impossible to excavate as it was below the water table. The bone disintegrated before it could be stabilized in Alvar 7/70. It may have been the sole remains of a human burial exposed by the shifting sands. Over fifty years ago, Redfield noted a human tibia exposed by wind in a shell heap (Fig. X). He excavated the rest of the skeleton except for a foot, and recalls that it was on its left side, flexed, with the upper end of the spinal axis pointing northwest, probably a small adult. Parts of two or three other skeletons, including a small cranium were also found in the heap along with some chips and “arrowheads”.

Among the osseous material I identify deer (Odocoileus virginianus), and Bullen, et al., list “fish, deer, dog, raccoon, turtle, heath hen, and great auk” among species recovered by them.

An item of interest was discovery of several fulgerites (fused tubes of sand grains about the size of a man’s finger, and caused by lightning) sticking up in the surface of the mound at Station 7. Contrary to ancient speculations on the origin of artifacts, these fulgerites did not terminate in “thunderstones”, (de Jussieu, 1723).

Fire. Frequent throughout the dunes are long, dipping streaks of dark sand, with charcoal grains, although Redfield, on a separate survey, failed to confirm presence of charcoal. The streaks are interpreted as cross-sectional exposures of ancient burned-over dunes, many of which lay about five feet below the current dune surfaces.

In the pine thickets and elsewhere, vegetation is dense enough to support brush fires, and the same condition may have prevailed in the past. Fires, driven by the ever-present wind, could have been natural in origin, or man-made. If started by humans, land clearing is not a likely explanation, since the sandy surface is evidence against agriculture. Perhaps fire was used in game drives, for, with water on three sides, the topography of the Neck would certainly have favored game drives to the east.

Summary. Several aboriginal shell heaps occur in dune hollows on Sandy Neck on the north shore of Cape Cod. Presence of pottery, but without Contact material, most probably places them in the Woodland (Ceramic) period prior to full European settlement on the Cape. This is Bullen, et al.’s view, and essentially that of Byers and Fowler. Although sites described by Moffett (1963) and his published material (1957) suggest presence of the Archaic horizon elsewhere on the Cape. Also, current research by Ritchie (n.d.) on Martha’s Vineyard perhaps twenty-five miles SW reveals the Archaic tradition at coastal sites there; no archaic level on Sandy Neck was detected either by me or Bullen, et al., although the latter felt that some of the lower deposits at their Site 1 were earlier than the overlying material.

However, the geology of Sandy Neck, proposed by Redfield, precludes the possibility of sites antedating 3,200 B.P. (Archaic Stage) anywhere east of about my Station 4, assuming current time estimates for the Archaic in southern New England. The formation of most of the Neck in post-Archaic times thus answers Bullen, et al.’s questions on when the Neck became usable to man, and explains their failure to detect developed Archaic horizons.
The creators of the shell heaps may have visited the Neck periodically to work the rich cobble deposits of the bayside beach. Pottery may be evidence of women in the group, for semi-permanent occupancy, perhaps seasonal. The wood butts, if contemporaneous with the heaps, may derive from windbreaks or shelters and further the hypothesis of semi-permanency. Stations 2 and 5 contain the most stone remains; the other stations appear to be mainly shelling or cooking sites.

Presence of women, and therefore presumably children, extends the hypothesis for semi-permanency, and may be evidence for migrants from more inland sites, or more distant coastal sites, perhaps needing safety in numbers. Locus of the sites on the upper Cape near the mainland may favor this supposition.

The relative lack of finished artifacts despite liberal stone remains at several stations, may support the inference that finished pieces were either cached or carried away, thus furthering the view that these people really came from somewhere else in the vicinity. Treks to workshop and quarry stations by people on these presumed time levels have been postulated previously by Powell (n.d.) and other researchers in the Northeast. Absence of finished pieces may also reflect unsuspected surface hunting by pot-hunters.

The black sand may indicate smothered fires, which drove carbons into the white sand. This may also attest the "clambake" method of shellfish steaming beneath seaweed, well documented among the historic Indians of southern New England.

It would be interesting, if support were available, to investigate the possibility that the easternmost stations are younger than the western ones. It would also be interesting to check for artifacts made from the colorful stones of the bayside beach at sites elsewhere in Massachusetts and New England, but their heterogeneous nature probably precludes this.

Acknowledgements. I thank Dr. Arthur Bloom of Cornell University, Dr. Douglas Byers of the Robert S. Peabody Foundation for Archaeology, Dr. David Hill of the Connecticut Agricultural Experiment Station, and especially Dr. Alfred Redfield of the Woods Hole Oceanographic Institution for various comments and courtesies. I also thank Dr. William S. Fowler of the Massachusetts Archaeological Society for the same.

Norwalk, Conn.
February, 1966

REFERENCES

BULLEN, RIPLEY P. AND EDWARD BROOKS

DE JUSSIEU, ANTOINE

FOWLER, WILLIAM S.

HAYDEN, JULIAN D.

MOFFETT, ROSS

Powell, B. W.

REDFIELD, A. C.

RITCHIE, W. A.
n.d. "Early Man to Iroquois". In press.

WILLOUGHBY, C. C.