Bulletin of the Massachusetts Archaeological Society, Vol. 26, Nos. 3 and 4

Massachusetts Archaeological Society

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BULLETIN OF THE
MASSACHUSETTS ARCHAEOLOGICAL
SOCIETY
VOL. 26 NOS. 3 and 4
APRIL - JULY, 1965

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PUBLISHED BY THE
MASSACHUSETTS ARCHAEOLOGICAL SOCIETY, INC.
Society Office, Bronson Museum, 8 No. Main Street, Attleboro, Mass.
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MASSACHUSETTS ARCHAEOLOGICAL SOCIETY BULLETIN, published in four Numbers of one Volume each year, commencing in October.

Price this issue $1.50
(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, $1.50 to non-members.

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 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.
AN ADDITIONAL TYPE FOR THE PROJECTILE POINT CLASSIFICATION OF THE MASSACHUSETTS ARCHAEOLOGICAL SOCIETY

Recently, it has come to our attention that a projectile point type, new to the New England area, has appeared at the Coburn site on Cape Cod, Society Bulletin, Vol. 22, #3 & 4 (Fig. 5, #10) and as illustrated. At the time of publication, its style was noted as possibly foreign, but since then certain Adena publications have given us a new outlook and a growing belief that this type, which we have named — Side-notched #8 — should be included in our classification.

In New York State, Ritchie's classification lists it as "Turkey Tail." In Mounds for the Dead, Dragoo refers to it as Side-notched, double-pointed blade or "turkey tail." He links it to the Red Ochre Culture of Illinois and adjoining states including Ohio, where it is allied to the early phase of Adena of the Late Archaic. At the Coburn site, it was associated with the Full Groved ax and projectile point types of the Late Archaic of the Stone Bowl industrial epoch. Also, a suggested counterpart appeared at the Boats site in Dighton with deposits of red ochre and the Full Grooved ax. Therefore, it is being added to the Society's classification, with Late Archaic affiliation.

This point usually appears as a relatively large blade 5-6" long — although it might appear in shorter lengths. Its form is symmetrical and leaf-like with a point at both ends, the basal end being side-notched. This often occurs nearer the pointed base and with more definition than as shown by the Coburn site illustration — of red felsite. The chipping is uniformly done with meticulous care, which seems to be an outstanding trait.
THE BOATS SITE, EXCAVATION NO. 2

Edward F. Rose

This site is situated at a well-known location, where immense quantities of artifacts have been recovered as surface finds, over an extended period of a hundred years or more. The area has been under cultivation for many generations, and during the last fifty years has suffered further disturbance. Along a two or three hundred foot front, paralleling the Taunton River, dynamite removal of numerous large boulders caused an upheaval of the area. This doubtless lifted early artifacts from low levels, and mixed them with those of later times, while the plow tended to spread them about the field. This may account for recovery of Archaic artifacts with those of Ceramic times indiscriminately scattered over the plowed field. Furthermore, in more recent days, power plowing to a depth of 12" has evidently cut into remains of the Late Archaic and lifted them to the surface. Private collections amounting to thousands of specimens apiece have come from this field, which acquired its name from several old scows, abandoned and sunk in river silt at one end of the plowed area.

The site lies about half way between Fall River and Taunton on the west side of the Taunton river in Dighton, Massachusetts (Fig. 1). Directly in front and lying well out in the river is Grassy Island, excavation of which has already been reported some years ago by Frederick Johnson of the R. F. Peabody Foundation of Andover. The land at the Boats site rises gradually from about a 10' elevation above tidewater and levels off over most of the field, except for three low knolls. The center knoll, selected for Excavation No. 2, as reported in this paper, has an elevation of about 15' above tidewater. The knoll to the north — Excavation No. 1 — composed mostly of gravel, was excavated previously by the writer and reported in: "Five Unusual Caches at the Boats Site," Bulletin of the Massachusetts Archaeological Society, Vol. 14, No. 4. Subsequently, these caches have been shown to be secondary cremation burials of the Late Archaic in the Stone Bowl industrial era. The third knoll to the south, not illustrated, is yet to be excavated at some future date.

Due to comparatively recent discontinuation of surface cultivation of the field by the owner, Frank
Dutra, permission was generously granted by him to excavate in such a way, as to obtain as reliable information as possible about its former occupants. The writer gratefully acknowledges this grant to excavate, and since 1959, when operations started, has returned each summer to continue the work. He selected the central knoll, presumed to be the most productive area, for excavation, since it was slightly higher than the others, and was somewhat removed from the boulder dynamiting, previously referred to. He has carried on the excavation single handed on a daily work basis, during a month's vacation each year, except for valuable assistance received on numerous occasions from Elmer Wood, another Society member. While only about a quarter of the knoll has been excavated up to date, enough valuable evidence has come to light to make a report seem desirable at this time.

EXCAVATION METHODS

Work was started on the river side of the knoll with excavation being extended about a large boulder, one of four, which are so located as to mark the four corners of the knoll. The site was laid out in 5' squares, which were excavated by troweling or its equivalent with a sawed-off garden hoe; a total of about 5,000 sq. ft. has been excavated to date. Work of excavating was confined to 15" benches, each being troweled down across a square, thus exposing the stratigraphic profile to view. This provided the means for measuring depths of artifacts. Proceeding in this way, square after square was fully examined. When artifacts or features were encountered, measurements were taken to the nearest inch. Depths were recorded on field charts, indicating distance to the artifact from top of ground, and from junction. This is the line of demarcation separating soil formations below from the plowed loam cover above. Because of repeated plow action over the years, this line of separation is always clear cut, and so provided a well-defined base line for determining culture relations of those artifacts found below.

As an apparent result of intensive surface collecting over the years, already mentioned, only an occasional recovery worth noting was made from the loam; such artifacts as projectile points, drills, etc. had almost completely disappeared. Only those artifact types found there, which did not appear below junction, were considered as belonging to this latest culture period. These will be listed further along with conspicuous absence of projectile points. They are not illustrated, either for lack of sufficient number, or for failure to be significant due to mutilation from repeated power plowing. Therefore, it will be noted that this paper is concerned primarily with a study of evidence uncovered below junction, in which two early cultures are well defined. From this it may be seen that the work of excavation was carefully controlled, using accepted methods of operation.

ARCHAEOLOGICAL STRATIGRAPHY

As formerly noted, plow disturbance occupies about 12" of loam cover. Below its termination at junction extends a heavy black occupational deposit another 12" in depth, probably, a mixture of much charcoal, decayed organic refuse, and sand. Directly below this black layer, which varies in thickness to some extent, occurs yellow sand subsoil to a depth of 12 or 15", underlaid by a deposit of clay silt. Artifacts appear sparsely, if at all in the loam, due to previous extensive surface collecting, but occur in quantity throughout the black occupational layer, with only a few appearing in the upper part of the yellow sand subsoil. These may have been forced down by accidental pressures at the bottom of the black layer, such as that from foot trampling, or water erosion.

After a study of artifact types as related to their occupational level, and correlation of them with diagnostic culture traits from other well-documented sites in the area, culture zones become apparent. The Upper Zone consists of the plowed loam, which doubtless contains some artifacts out of place from lower zones, scooped up by the plow from underlying crests of high spots in occupational levels. The Middle Zone lies directly below and consists of the upper 6" of the 12" black occupational layer, previously referred to. Underlying this is the Lower Zone, consisting of the remaining 6" of this black layer. Three culture periods, represented by diagnostic artifact types distributed respectively in these zones, are: Ceramic (Woodland) — Upper Zone; Late Archaic (Stone Bowl) — Middle Zone; and Early Archaic — Lower Zone.

OCCUPATIONAL EVIDENCE

While refuse pits probably exist in the black occupational layer, apparently they have merged with the surrounding organic camp refuse to form this black layer, as it accumulated through the ages, and are therefore unrecognizable. Shell deposits in pits of the Ceramic upper zone are non existent. Doubtless, plowing over the years has scattered such shell refuse throughout the loam.

In the limited excavated area, so far examined, Hammerstones and quantities of chips and worked stock have been present, representing extensive occupational activity. Also, firestones were scattered about while 4 stone hearths were uncovered in situ. Appearance of their stones was first noted at junction; their
unsorted masses extended several inches deeper. The largest one, measuring about 6" in diameter, had a heavy deposit of charcoal, but with no evidence of calcined bone fragments. The charcoal remains extended some 12" into the yellow sand subsoil. In the case of the other three smaller ones, measuring about 3' in diameter, masses of charcoal underlay two, but reached only a short distance below. Evidently, these hearths belong to the Middle Zone, although one of their charcoal bases reached into the Lower Zone. Several disturbed areas 4 to 6' in diameter appeared, in which streaks of yellow subsoil were mixed with the black occupational deposit. They extended all the way down to the subsoil, and always occurred near a hearth. They yielded several artifacts, as will be noted further along.

An interesting feature exposed in the Middle Zone was connected with one of the smaller hearths. In this one there was no charcoal, but lying about 12" distant were 8 transversely grooved weights (Fig. 2). They lay in more or less of a straight line, being spaced about 3" apart. They are made of sandstone and argillite cobbles with water-worn natural surfaces, which show no signs of hammering or rubbing. The centrally located transverse grooves are pecked with a pointed stone — peck marks are discernible — although an overall wear from either intentional grinding, or from functional use has smoothed their edges. Two of the weights (not illustrated) are flat, smaller cobbles with the groove pecked on two opposite edges only; evidently, their thickness was not sufficient to accommodate grooving all around — their grooves
show wear like the others. Found among them were 2 Small Triangular points of white quartz, and one Small Stem point of argillite. These grooved weights should not be confused with the standard Grooved weight type, with a pecked groove running longitudinally around the stone, of which one was recovered from the Middle Zone (Fig. 5, #24).

Another unique inexplainable feature that appeared in the Middle Zone consisted of 2 extensive groups of large rocks, each covering a fairly large area. In the first appeared one big boulder in its original glacial-laid position, about which were grouped 30 large rocks of various sizes and shapes of impure granite. Apparently, they were man-placed, as they were arranged on one level so as to enclose three small areas, as if to outline small circular rooms. What they were used for is problematical, since this feature is new to the writer, and to others with whom he has talked. In the second group appeared 11 more large rocks of a similar kind, laid in one or two rows, but not so as to form enclosures like the first.

A unique artifact was recovered in preliminary test digging in the northern wooded area of the site, north of the brook. While it cannot be definitely placed as to its zone source, it is believed to belong to the Middle Zone. However, since it was not found within the limits of the middle knoll, the subject of this
Fig. 5. LATE ARCHAIC ZONE RECOVERIES, Boats Site. 1-5, Small Triangular, 6-8, Small Stem, 9-16, Eared, 17, Tapered Stem, 18-20, Corner-removed #3, 21, Corner-removed #7 Projectile Points; 22, Stem Knife; 23, Stemless Knife; 24, Grooved Weight; 25, 27, Cross, 26, Eared, 28, Plain Drills; 29, Plain Gouge; 30, Celt; 31, 32, Clumsy Plummets.
The stone from which it is made looks like sandstone, and has several small circular surface irregularities, one of which is used for the eye. Unquestionably, this is a rare recovery and one which deserves recognition in this report.

Of recovered stone artifacts in general there are about 1,000 specimens, some perfect and some fractured, but all recognizable as to the type to which they belong. Grouping these types in their respective zones where found, and mentioning the earliest first, recoveries from the site support belief in an Early Archaic period preceding that of the Late Archaic.

**Lower Zone — Early Archaic** (Fig. 4) contains Long Eared, Corner-removed #8,9, and Bifurcated projectile points; Classic plummet; Ulu; Expanded Base drill; Leaf knife. In examining this evidence more closely, it should be noted that the Bifurcated and Corner-removed #8 points, Leaf knife, and small Ulu comb-back fragment appeared in disturbed areas. However, all lay deep at the bottom of these disturbances, except the small Ulu fragment. This was recovered just under junction. Apparently, this fragment was out of context, since the other Ulu half sections from three knives were present in undisturbed areas at the bottom of the Lower Zone. One of these ground slate Ulus measured 3⁄8 in thickness at its base, while the others had only a thin 3⁄32 blade.

**Middle Zone — Late Archaic** (Fig. 5) embraces Eared, Side-notched, Tapered Stem, Corner-removed #3,7, (incl. broad blades), Small Triangular, and Small Stem projectile points; Clumsy plummet; Ulu; Grooved weight; Stem and Stemless knives; Celt; Plain gouge; T, Cross, Eared, and Plain drills — no Grooved ax has yet appeared, although several were recovered in Excavation No. 1. Of these traits, one Stemless knife appeared, apparently out of context at the bottom of a disturbed area.

**Upper Zone — Ceramic** (not illustrated) contains evidence not found below including, Hatchet club, Corn-planter, Side-notched weights (chipped), and potsherds in small fragments, as a result of plow destruction.

**CONCLUSION**

Recoveries from Excavation No. 2, so far, reveal many diagnostic implement types, similar to those found at other sites in the Narragansett Bay drainage. Their stratigraphic position at the Boats site tends to support the same culture sequence as found at other sites, notably, Mill River and Washakumaug, as reported in recent Bulletin issues of the Massachusetts Archaeological Society.

With reference to frequency of projectile point types, it may be of interest to note that Small Triangular points were the most numerous at the Boats site, amounting to about the same number as all other types put together. For the most part, they consist of forms ascribed to the Late Archaic with convex lateral sides. On the other hand, Small Stem points consist of about the same number, as any other type. In connection with these two kinds of points, it should be noted that they were all from the Middle Zone of the Late Archaic; none were found in the Lower Zone of the Early Archaic. An interesting Eared Point from the Middle Zone (Fig. 5, #14) is different in that its blade is definitely beveled. This trait is seldom found among specimens in collections from this area.

What caused the rather large soil disturbances in the Middle Zone, appearing in each case near a stone hearth, is not known. However, since they extended from subsoil to junction, the level at which the hearths occurred, it seems probable that they may have been connected in some way with construction of the hearths. Since all artifacts diagnostic of the Early Archaic in these disturbances appeared at the bottom in the Lower Zone, except the Ulu comb-back fragment, it would seem probable they were not out of context; may never have been dislodged to any great extent from their original position of deposition.

When consideration is given to the grooved weight feature, in which 8 transversely grooved cobbles appeared, no logical explanation comes readily to mind. Although their position might, at first sight, suggest use as net sinkers, more careful analysis would seem to reject this interpretation. The commodious deep grooving around their centers would have been much more than was needed for attachment to nets, to say nothing of the obvious wear appearing in the grooves. Such worn surfaces could not have been made by anything as soft as thongs used for net ties, or for hafting, had they been used as clubs. Instead, such wear must certainly have been caused from friction against some hard object, such as wood, bone, or stone. Whether deliberate or functional this would preclude their use as net sinkers, which, instead, are believed to be represented by chipped Side-notched weights. Such artifacts appeared in the Upper Zone, which supports the belief, as formerly postulated in certain earlier reports, that the taking of fish in nets was a fishing technique, not of the Archaic Age, but acquired much later in Ceramic times.

Editor's Note: Correlation of the Boats site evidence with that at other sites in the Narragansett Bay
A BIRDSTONE RECOVERY IN RHODE ISLAND

WILLIAM S. FOWLER

The following evidence is recorded as told to the author by Charles R. Potter of Wakefield, Rhode Island, who had the good fortune of recovering a Birdstone by excavation, associated with important culture diagnostics. Analyses and conclusions are those of the author.

PIT #1

During the summer of 1959, a large plowed field planted to potatoes in Charlestown, Rhode Island, was searched by Potter for aboriginal remains. The field was removed some distance from the shore of Long Island Sound, but lay close by a fresh water pond. A careful hunt over all of the field revealed the presence of no stone artifacts of any kind, not even a chip or fire stone. However, at one place Potter’s attention was attracted to a large spot, which was covered with charcoal. This was enough to impress him with the importance of finding out through excavation what lay beneath. Biding his time until the potato crop was harvested, he obtained permission to excavate from the owner. Digging carefully with trowel and shovel, and after days of labor, he exposed a large pit about 6 x 8 feet in size, and 4 feet deep. Its archaeological significance may best be understood by an examination and interpretation of the recovered artifacts.

The first artifact uncovered, in the upper part of the pit and toward one edge, was a polished Birdstone (Fig. 6, #1). It is expertly fashioned of banded slate in various shades of gray, with some bands approaching black. Skillful use of bands in the vicinity of the bird’s head has produced life-like eyes on both sides. These take the place of projecting stone knobs found on most Birdstones, which produce the appearance of bulging eyes. Under the upright tail and beneath the neck are carefully drilled holes, which slope obliquely toward each other, and perforate the base a short way in from both ends. The stone material is in a perfect state of preservation with no signs of having been subjected to fire or other kinds of erosion.

Fig. 6. ARTIFACTS, Pit #1, Charlestown, Rhode Island. 1, Birdstone; 2, Gorget; 3, Side-notched #5 Projectile Point.

Sudbury River drainage, in which this same culture trait sequence is indicated, plus appearance of Classic plummet and Ulu in the underlying Early Archaic zone, and this Archaic sequence, appearing now again at the Boats site, supports the validity of using it as an Archaic pattern, separating its two ages.

Long Beach, California

August 27, 1963
As excavation proceeded downward, charcoal was ever present but no signs of powdered red ochre were noticed. Mixed among the charcoal appeared bits of calcined bone, of which several larger fragments were preserved for future study. They have now been identified as human at the Bronson Museum, where they were found to match in every detail calcined bone fragments from Wapanucket 6 site, previously analyzed at Harvard University as being burned human bone, coming from various parts of the human skeleton.

Located among this mixture of charcoal and burned bone appeared important artifacts having widely accepted diagnostic culture significance. These have gone a long way toward providing information about the age and probable use of the pit. What is more important, they have established a probable culture relation for the Birdstone trait.

Broken into many pieces appeared the remains of 7 stone bowls made of steatite (soapstone). Some of the fragments showed signs of having been burned in a hot fire; were charred black all over. They did not always come from the bottom of bowls, but from upper areas as well having no connection with the base. Of the 7 bowls, one large and two small ones have been completely restored, with the remaining ones only partially restored. Of these, there are two more large bowls and two small ones. All appear to be well made with relatively thin walls, scraped smooth inside and out. They compare favorably with those recovered at Lakeville, Massachusetts, at the Hawes site, Society Bulletin, Vol. 23, Nos. 3 & 4.

Examination of the restored bowls reveals relatively large proportions for the big bowl (Fig. 7, #1). It measures 20" long from lug to lug, and 12" deep, and its rim edge is notched all around, obviously for the purpose of decoration. Of the 2 small restored bowls (Fig. 7, #2,3), both about 7" long and 2" deep, one has two lugs, the other only one. The latter vessel is not a bowl like the former, but rather a drinking cup, with a thinned edge at the end opposite the lug or handle to facilitate the drinking of liquids.

In among the bowl fragments appeared one perfect ground slate Gorget, not fire-burned (Fig. 6, #2). Also, there was present the shattered remains of another beautiful maple sugar brown specimen, highly polished, but fire-cracked and completely demolished. Besides these there were recovered 18 perfect projectile points of the Side-notched and Eared types, many of which seemed fire-burned, as well as 2 larger Side-notched #5 blades, 4-5" long, exceptionally well made and apparently not fire-burned, one of which of black porphyry is illustrated (Fig. 6, #3). One Celt occurred, which was broken in two, presumably from fire exposure. Besides these artifacts, there were quantities of broken projectile points, probably fire casualties. They were scattered throughout the pit.

Great importance should be attached to the remains found at the pit's bottom, for it is from them that the age and probable use of the pit may be deduced. Spread over the pit's floor were 15 or 20 fire-burned cobblestones. Deterioration due to exposure to extreme heat was so advanced in some that they disintegrated when picked up. Lying over them was a thick layer of charcoal, through which and scattered among the stones appeared small fragments of burned bone, presumed to be human like those pieces identified, already referred to.

Fig. 7. RESTORED STONE BOWLS, Pit #1, Charlestown, Rhode Island.
To discover the meaning of this pit, reference to site remains at the Mansion Inn site in Wayland, Massachusetts, (Society Bulletin, Vol. 23, No. 1), seems desirable. At that station a nearly parallel experience to that of Potter’s took place. An 8 x 10 ft. area blackened by charcoal was noticed in a bulldozed lot, which was subsequently excavated. It proved to be about 4 feet deep from the top of undisturbed soil, and contained the remains of what was demonstrated to have been a human crematory. Heavy deposits of charcoal, some calcined bone fragments presumed to be human, and many large fire-burned knives and projectile points were encountered. They consisted of diagnostic types of the Late Archaic, including, Eared, Side-notched, and Tapered Stem. With them were recovered 2 Full Grooved axes. However, unlike the Potter find were secondary burial pits located around the crematory, in one of which was a stone bowl with lugs. These recoveries indicate the Late Archaic of the stone bowl industrial age as the culture responsible for this crematory and burials. Evidently, as is becoming increasingly apparent, the Stone Bowl Makers of Late Archaic times practiced cremation with ceremonial rites being performed, accompanied by the redeposit of artifacts and burned remains in secondary burials.

In addition to the above, it is important to mention other burial manifestations, which have appeared over the past number of years at Holyoke and South Hadley, Massachusetts in the Connecticut River Valley. At these locations several burials appeared, containing grave goods, which, while apparently connected to the Stone Bowl Age by virtue of the presence of a stone bowl with lugs, also included exotic relics such as Blocked-end tubular pipes of fireclay (indurated clay), copper spike, copper ear ornament, Rolled copper beads, Marginella shell beads, and Conch columella tubular beads, all diagnostics of the Ohio Adena culture. Years before, at Swanton, Vermont, appeared secondary burials with much red ochre. They contained Adena relics, including 2 Birdstones. This is significant, since the Birdstone — a recognized diagnostic of Adena — is present in Potter’s Charlestown recovery.

With these examples in mind, interpretation of Potter’s discovery seems to suggest a crematory and a cremation burial or burials combined in the same pit. Apparently, here had once existed a crematory placed a foot or two in the ground, the surface of which at that time was at a somewhat lower level than now. With the passage of millennia the present loam cover has been added, and with present day deep plowing, charcoal has been lifted to the surface from the top of the subsoil. Because the Birdstone and some of the stone blades showed no signs of fire exposure, it may be argued that this pit represents a combination of crematory and secondary burials. That is to say, after the body was burned with some stone artifacts thrown onto the pyre, secondary burial rites were performed at the edge of the crematory, with new artifacts placed on top of the burned remains. This would then account for the undamaged Birdstone and other perfectly preserved projectile blades, appearing in the upper part of the pit.

A significant observation to be made is the close association of Birdstone and stone bowls in the same pit. While this might seem to place a coeval stamp upon them, it does not necessarily follow that manufacture of both were contemporaneous. A similar manifestation occurred in a previous recovery reported many years ago in 1840 at East Windsor, Connecticut. A pit deposit, presumably a secondary burial, was uncovered at this location and is said to have contained a Birdstone and a stone bowl of steatite.

**PIT #2**

In the same field with crematory pit #1, Potter came upon another charcoal-strewn area, but somewhat smaller in size. It lay at some distance from pit #1 in another part of the field, and from all outward appearances seemed to have little or no connection with it. Upon excavation, it proved to be a pit measuring about 5 feet in diameter, which reached only about 2½ feet in depth. It contained some charcoal, but not as much as the first pit, and there were no fire-burned stones at the bottom. Scattered throughout the pit were calcined bone fragments, some of which have the appearance of being animal, although certain small fragments may be human, as found for pit #1. Pit #2 contained a number of deer antler tines irregularly broken off about 1” in length. It is possible that these may represent the burned remains of tine projectile points, although no hand-worked markings appear on their surfaces.

Certain stone artifacts were scattered throughout the pit. They include the fractured parts of 3 large Gorgets, a large Stem knife of fine grained light gray felsite (Fig. 8, #1), 4 Side-notched #5 projectile points, and many broken ones. These artifacts appear to have been fire-burned, some more than others. The large Stem knife, thin and expertly made, shows only slight, if any evidence of heat deterioration — a debatable question at best in a case of this kind.

It seems significant that in the pit appeared 2 broken stone vessels of steatite. While the number of recovered fragments were insufficient to effect a complete restoration of the bowls, enough appeared to establish the fact that they were shallow, of medium
size, and without lugs. They may have been used as deep dishes in which meals were served. Along with these stone bowls occurred the broken remains of a ceramic pot (Fig. 8, #2). These potsherds were mixed with the stone bowl fragments and with other artifacts, and therefore all must be considered to be coeval. However, this admission does not necessarily imply contemporary existence for the stone bowl and ceramic industries. On the contrary, as is pointed out further along, all available evidence supports separation of these industries, although overlapping of products of the earlier into the later one is always possible — in fact should be expected as a normal occurrence.

Examination of those sherds which were contiguous, enabling restoration of a rim and neck section of the ceramic pot, reveals a large vessel with proportions that can only be guessed at. However, from the restored section certain traits may be readily observed. It has unusually massive uniform walls, ½" thick, with a cord-marked flat rim. Cord-marking covers the exterior, while the interior is plain. Attention is at once focused upon the extreme size of crushed quartz used for temper, with particles varying in size up to ⅛" in width. The pot's neck is straight, and it has no design embellishment, only the overall cord-marking already mentioned.

This evidence from pit #2 seems suspiciously suggestive of a secondary burial from some crematory pyre. While this appears to be the most likely conclusion to be deduced, it does not follow that crematory pit #1 was the source. Separation from it of pit #2 by hundreds of feet might suggest a more conveniently placed crematory closer to this burial pit, still lying undiscovered below the plow. Nevertheless, there is a suggestion of the two excavated pits being culturally related because of the presence of stone bowls as well as similarity of side-notching noticed on the large blades found in each. Besides this, each pit contained Gorgets, and the stone bowls in each were deliberately broken. Dissimilarity lies in the presence of potsherds in pit #2, and their absence in pit #1. However, as will be shown in the conclusion, this difference instead of suggesting culture separation of the two pits, may tend to support the same culture source for each, but with deposition of each separated by a period of time.

Bearing upon this investigation, it is important to note the separation of stone bowl making from that of ceramics, as shown at the Ragged Mountain stone bowl quarry rock-shelter in Connecticut. There, the remains of both industries were divided by a sterile layer of soil. Breakage of 5 small Stage 2 and 3 ceramic pots occurred in the top layer, at a much later date than that of stone bowl remains, which lay below. In no case did potsherds intrude into the earlier stone bowl zone. At Sweet-Meadow Brook site in Rhode Island, Stage 1 potsherds appeared over the Stone Bowl zone of occupation. Furthermore, at five sites yielding Late Archaic cremation remains — Wapanucket 6, Mansion Inn, Coburn, Hawes, and Boats — no potsherds appeared, although stone bowls at four and Late Archaic artifacts at all five did. And finally, at no stone bowl quarry, other than as explained at Ragged Mountain, have potsherds occurred in quarry workings. Therefore, it seems evident that making of clay pots must have taken place at a later date, and was not coeval with stone bowl making.

What then can be said to explain the presence of 2 stone bowls in pit #2, broken into many pieces and mixed with sherds from a ceramic pot? If this is considered to manifest the overlapping of local industries of the area, then it would seem proper to find remains of a Stage 1 pot with cord-marking inside and out. But the pot found in pit #2 has a plain interior with cord-marking only on its outside. However, since its ware is thick and it has coarse mineral temper with a straight neck, it probably represents a product of early ceramic days. Perhaps, what appears here is an importation of either the pot itself, or new ceramic ideas by new arrivals of people from culture centers outside New
England. This might indicate culture diffusion during early ceramic times, while a few remaining stone bowls were still in use, carried over from stone bowl industrial times.

**CONCLUSION**

In trying to explain the meaning of the several features connected with the two pits as outlined above, the Birdstone alone of all the relics points suspiciously toward an Adena association of some kind. This stone trait is known to have been an important element of the Adena culture of Ohio, which is thought to have been responsible for its introduction into the Northeast.

Reference here is made to a recent report by William A. Ritchie and Don W. Dragoo, entitled, *The Eastern Dispersal Of Adena*, with a synopsis of their conclusion. Since recoveries in the East have often included significant Adena-made objects, such as Tubular pipes and Birdstones, the question arises as to how and why they arrived. What would have caused Adena people to have left their Ohio homeland to journey east into the unknown? Apparently, from excavated evidence now available from the Ohio area the answer to this question is that internal strife or outside force, or a combination of both factors, drove some of the people from the Ohio Valley. When the cause of this disruption is sought, an apparent movement of Hopewell people from Illinois into the area seems to supply a clue. Evidently, here was a more elaborate mortuary cult dictated by new commanding forces press in upon an alien people, which may have tended to dominate and change existing customs.

The suspicion seems clear that any such interference with a well established form of ceremonials would have precipitated a state of social and cultural turmoil within Adena. However, only part of the people, those with more independent leanings, would have elected to move out, leaving a sizable portion of Adena people under the domination of the new Hopewell overlords. It is presumed that those individuals in the Adena social and religious hierarchy would have found the situation intolerable, and would have chosen, or perhaps have been forced to leave the area.

In Maryland, two sites with concentration of Adena evidence are excellent examples of the presence there of ceremonial leaders, who took with them their prized possessions, when they fled the Ohio Valley. Radiocarbon dates of three charcoal samples from the Adena burial site at West River, Anne Arundel County, Md. are the only eastern Adena dates now available. These Carbon-14 measures approximate 75 B.C., A.D. 255, and A.D. 325. It is believed probable that Maryland may have received the first Adena migrants, and from there subsequent movement northward took place. Eventually, this would have brought Adena travelers up the coast and rivers, such as the Delaware, Hudson, and Connecticut, into New York and New England. Allowing for the passage of time required for this long trek, it may have been A.D. 200 before entry was made onto coastal sites, like that at Charlestown, R. I. By then, stone bowl making had either terminated — advent of ceramics into New England occurred about A.D. 300 — or was drawing to a close, with the new method of making pots of clay taking its place.

In view of this, pit #1 might have a date of about A.D. 100, when the first Adena arrivals were being absorbed by an industrial culture, whose stone bowls were the only kind of vessels being used. This might have happened, even though in Ohio the introduction of ceramics had already taken place hundreds of years before, and was well advanced by A.D. 100; knowledge of ceramics could have been lost along the way with the extensive passage of years and the resistance from entrenched alien cultures.

Pit #2, on the other hand, might represent a later date of about A.D. 400, when ceramic pots were being made in place of stone bowls. By then new Adena arrivals doubtless were bringing in ceramic ideas of their own, and introducing new pottery styles. The thick ware of this pit's vessel with coarse mineral temper has some traits of early Adena pottery, which is often quite thick without decoration.

Because Adena Birdstone, Boatstone, and Tubular pipe traits do not appear as a part of New England's Ceramic Age, it seems apparent that the Adena tradition failed to impress itself upon the established culture of the area. Apparently, it was but one of several culture influences from the outside, which pressed in upon the coastal people, causing only minor changes here or there without effecting any sweeping culture transformation. Thus, while pit #2 seems Adena, connected with pit #1, it probably represents a much later deposition in the final stages of Adena infiltration, while still a few left-over stone bowls from earlier times were in use.

Finally, appearance in both pits of broken stone vessels is suggestive of Adena mortuary rites, which embrace this significant feature. Furthermore, both the Adena and Stone Bowl cults practiced cremation. Because of this it is interesting to speculate that merger of Adena with the culture of its adopted New England home might not have been too difficult, with the mortuary custom of cremation forming a sympathetic link.
THE SEMAN SITE: A NEW YORK STATE EXCAVATION

PHILIP W. JOHANNESSON AND ARTUR C. GLAMM, JR.

This site report is written with the intent of presenting artifact data from an adjoining region to New England of primary interest, it would seem, to Massachusetts archaeology. It permits a correlation of artifact types with those found in New England, which lies at the end of trade and migration routes from the Mohawk Valley and nearby areas.

The Seman site, Sdy-120, is located on the west shore of Ballston Lake, New York, north of Schenectady. It is in a campsite area, known to have been used by peoples in the Late Archaic, Woodland (Ceramic), and Proto-Historic Iroquois culture periods, as they traversed the trail from the Mohawk River north along the Alplaus Creek, and thence north and northeast to Saratoga Lake, the Hudson Valley and beyond.

Acknowledgment and thanks are due Mr. and Mrs. Joshua Seman of Rochester, New York, the owners of the property, for their permission to excavate the site. Also, thanks go to Miss Nora Leahey, a resident of the area, for her interest and knowledge of local occupation sites.

THE SITE

The Seman site, located on a small point of land on the west shore of Ballston Lake, lies approximately 9 feet above lake level, and as such, is one of the few loci on the lake having such a noticeable elevation. The site area presents an excellent vantage point from which to view the lake, extending to some 3½ miles in length, allowing a sight to the northern end of the lake, and for a distance of over a mile to the south. Ballston Lake has long been recognized as being on
the trail leading from the Mohawk River at Rexford-Alplaus, north along the Alplaus Creek to the lake and thence north and northeast to Saratoga Lake and the Hudson Valley (Fig. 9). Also, further travel east up the Hoosick Valley is known to have existed, which provided a means of entry into New England.

The area adjacent to the site proper borders the lake shore for some 220 ft., and extends away from the bank for a distance of about 50 ft. Most of the site, excavated, lies where formerly existed the lawn of the Seman camp, so that some artifacts were recovered under the remains of this camp.

GEOLOGY OF AREA

Geologically, Ballston Lake is a part of the remains of the early post-glacial Mohawk River, prior to its diversion into the Hudson River at the Aqueduct Cliffs at Rexford, New York. Torrential waters flowed out of glacial Algonquin Lake and gouged out the site area. Today this is indicated by the presence of shale, which reaches up at the site almost to junction, where it becomes decomposed into a layer of shaly clay. Glacial boulders are in evidence throughout the site area, imbedded in the shaly clay deposit. They lie scattered about, and most of them show signs of never having been moved from their original foundations by the site’s occupants. The humus overburden is extremely black and rich in a mixture of organic matter and charcoal. Quite obviously, it represents an accumulation deposited during occupation of the site. This is discussed more extensively later in the report.

METHODS OF EXCAVATION AND RECORDING

In preparation for the dig, a base line with 5 ft. grids was established over the central portion of the site; an area of approximately 11,000 sq. ft. — only part of which was excavated. This bordered the lake bank. Throughout the dig, vertical excavation was carried down and into the decomposed shale by successive bench troweling. The line of demarcation where humus meets the underlying shaly clay is identified in this report as junction. Above this line in humus is the stratum, which will be referred to as the Upper Zone, while directly below, the stratum in shaly clay will be called the Lower Zone. Vertical and horizontal positions of all artifacts were measured and recorded to the nearest inch. Vertical distances were measured from top of humus at grass roots to the exposed artifact. Grid sheets were used for each excavated square, and all pertinent features and soil stratigraphy were documented on these sheets. In addition, information such as soil texture and contents were also recorded on the grid sheet backs, so that as complete a record as possible of excavated evidence was taken.

STRATIGRAPHY

It appears certain that this site has never seen the plow, since boulders and large stones often extended from the shale stratum up to and in some places protruded through the sod, which must have prevented plowing. Invariably, excavation revealed that there was no black humus under these large rocks, although usually it surrounded them. This seems to indicate that many of the rocks had never been displaced from their original positions, where the post glacial Mohawk River had deposited them.

A black sandy layer of soil, the humus, extends from grass roots to an average depth of 10 inches. Directly below is a layer of shaly clay made up of decomposed shale. This has a maximum depth of 14 inches. Artifacts appeared in both of these layers, and in many instances along side of glacial rocks and boulders, as well as in crevices between adjacent stones. The greatest depth of any recovered artifact was 17 inches from grass roots, protruding 7 inches into the decomposed shale.

Examination of artifact content of the site discloses that typologically, the Upper Zone represents two cultures: Proto-Historic and Woodland (Ceramic). The Lower Zone contains artifacts having diagnostic traits of the Late Archaic. Justification for the Upper Zone cultures is derived from the presence in this stratum of some 140 potsherds of various stages of ceramic development. In addition, there occurred artifacts having important associated traits diagnostic of the times such as Large Triangular and Iroquois points, as well as Sinewstone. The Lower Zone has been diagnosed as Late Archaic due to the presence there of Normanskill (Side-notched #5) points, which appeared at and below junction. This type of point has been Carbon-14 dated from associated organic matter at a New York State site — not reported in print as yet — at about 3,850 years ago.

OCCUPATIONAL EVIDENCE

Note: As an aid to a better understanding of the evidence by members of both the Massachusetts Archaeological Society and the New York State Archaeological Federation, who may read this report, classified names of artifact types and cultures of the Massachusetts Society are placed in brackets directly after Ritchie’s New York State terms. This will serve to indicate similarities that are believed to exist between areas west and east of the Hudson River into New England.

Stone Hearths. Several hearths of the Upper Zone appeared at, or slightly above junction. Their sizes varied from 1-3 ft. in diameter, and they were noted to have irregular scattered placements of stones
in somewhat circular patterns. Large pieces of charcoal were not in evidence, but flecks and small pieces were numerous. It is assumed that all these hearths are associated with the Woodland (Ceramic) and Proto-Historic culture periods, due to the absence of Late Archaic artifacts in any hearth. However, some may have been made by the Late Archaics, who apparently lived at and below junction. There were several instances where definite pockets of fire-burnt bone were found at junction within these hearths. Evidence of clamshell refuse within the vicinity of these pockets of bone were either lacking, or very sparse; might have been intrusive from the Upper Zone. There, shell refuse of fresh water clams was concentrated to indicate a shellfish diet for the people of this upper level of occupation. Therefore, it seems probable that the bone refuse just referred to was deposited by a hunter type culture, at a time of merger between Late Archaic and Woodland before shellfish eating had started.

Refuse Pits. Several features thought to be open hearths may have been refuse pits. Other than these, it was impossible to ascertain whether other small discolored depressions were man-made pits, or just natural fill-in contours left by freshets, which flowed in among the rocks. Consequently, it is assumed that refuse pits of any consequence did not exist within the excavated area. All animal bones, which were found, especially those accumulated in bunches, were well preserved. Doubtless, this good state of preservation was due to the alkaline condition of the soil, brought about by the leaching of lime from the overlying layers of clamshell refuse.

Shelters. Of the 32 features recorded, perhaps the most significant consisted of a 10 ft. diameter semi-circle of large rocks. In this enclosure appeared a 3 ft. diameter stone hearth with an accumulation of fire-burned stones. Charcoal appeared only within the fire-burned stone area; not between this and the semi-circle of rocks. Artifacts of the Late Archaic to Early Woodland period occurred in the space between the ring of rocks and the hearth. This feature seems to suggest that it might have been a wind break of skins held down by the large rocks, with the hearth in front for warmth and cooking purposes. The fact that the semi-circle of rocks faced west, the direction of the prevailing wind, seems to support this hypothesis.

Shell Midden. A second major feature is a shell midden bordering the bank of the lake and located approximately 50 ft. south of the last excavated square. This midden seems to be associated with the

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**Fig. 10. LATE ARCHAIC IMPLEMENTS, LOWER ZONE, Seman Site.** 1, Chipped Ax; 2-7, Normanskill (Side-notched #5), 8, Bare Island (Corner-removed #1) Points.
Fig. 11. WOODLAND (CERAMIC) AND PROTO-HISTORIC IMPLEMENTS, UPPER ZONE, Seman Site. 1-4, Iroquois (Small Triangular) 5-9, Madison (Small Triangular), 10, Jack's Reef Corner-notched (Corner notched), 11, 12, Meadow Wood (Side-notched #7), 12-17, Levanna (Large Triangular) 18-20, Orient Fishtail (Side-notched #6), 25, 26, Jack's Reef Pentagonal (Tapered Stem) Points; 21-24, Drills; 27, Flake Scraper; 28, 29, Stem Scraper; 30, Sinewstone; 31, 32, Stemless Knife; 33, Rubbingstone; 34, Fishhook Barb of bone; 35-37, Net Sinker (Side-notched Weight).
evidence from the site, although at the time of this writing, the midden has not been excavated except for a test trench. This was dug at right angles to the lake shore and through the midden. Clamshells were usually in an unfractured state, but immediately disintegrated, if not handled carefully. The artifact content of the test trench consisted of several Net Sinkers (Side-notched weights), 3 Levanna (Large Triangular) points, 2 pieces of probable worked bone, and several unidentifiable potsherds. Their texture seems to signify that they may belong to Late Point Peninsula (Stage 2) and Iroquois (Stage 4) ceramic periods.

**Implements.** Altogether, there were 253 specimens recovered — projectile points were mostly of flint — perfect and fractured, but recognizable as belonging to various classified types. A selected number divided between the two zones of occupation have been illustrated. The total list of types represented in the collection from both zones appears below.

**Lower Zone — Late Archaic (Fig. 10)** — includes the following implement types: Normanskill (Side-notched #5), Bare Island (Corner-removed #1) points; fractured end of a pestle-type unknown; Chipped ax of flint.

**Upper Zone — Woodland (Ceramic), and Proto-Historic (Fig. 11)** — embraces the following implement types: Madison, Iroquois (Small Triangular), Levanna (Large Triangular), Jack’s Reef Pentagonal (Tapered Stem), Jack’s Reef Corner-notched (Corner-notched), Orient Fishtail (Side-notched #6), Meadow Wood (Side-notched #7) points; Sinewstone; Stem, and Flake scrapers; Stem, and Stemless knives; 3 drill types; Net Sinker (Side-notched weight); worked bone fishhook prong; Hammerstone.

**Pottery.** Potsherds from the Upper Zone include recognizable rim and neck sherds of the following periods of ceramic development: Point Peninsula (Stage 2); Owasco (Stage 3); Chance Horizon (Stage 3 merging with Stage 4); and Iroquois (Stage 4) (Fig 12).

**CONCLUSION**

Reviewing the evidence, there are certain aspects that have an interesting bearing upon the archaeology of the Northeast, especially as it applies to New England. That is to say, there seems to be some similarity between cultures and recovered artifacts found to be present at the Seman site and those that exist on New England sites, as reported in numerous issues of the Bulletin of the Massachusetts Archaeological Society.
For example, at the Seman site its earliest culture occupation has been shown to be that which is called Normanskill in New York State, but which equates closely with New England’s Late Archaic, its Stone Bowl industrial age. While stone bowl quarries, apparently are absent west of the Hudson, they occur in central and southern New England, and have done much to help identify Late Archaic artifact traits. Therefore, it seems important to note a Carbon-14 date for the Normanskill culture, as already mentioned, of about 3,850 years ago.

As evidence is examined upward at the Ballston Lake site, a change of artifact traits and features seems to indicate evidence of occupation by a later people with certain new customs and implements. Among them appears Orient Fishtail (Side-notched #6) points, which are considered to represent a period of merger between Normanskill and Woodland (Ceramic) times, both west, as well as east of the Hudson all the way to the coast. Also, the appearance in the Upper Zone at the site of a considerable number of Levanna (Large Triangular) points and side-notched net sinkers equates well with Ceramic zones in New England. Another feature of the Upper Zone, which ties in closely with evidence to the east is the frequent occurrence of potsherds, indicating the presence of ceramics as a dominant factor in the life of its occupants. Ceramic development is in evidence from Point Peninsula #1 (Stage 2) through Owasco (Stage 3), and continues through Chance Horizon to Iroquois (Stage 4). That there was contact with areas to the east of the Hudson is borne out by such pottery similarities, as indicated in brackets for New England pottery, showing three of its development stages. Apparently, Vinette 1 (Stage 1) is absent.

In the site’s Upper Zone is still another significant feature connecting western areas with those to the east. In this zone appears abundant evidence of shellfish-eating by the Ceramic occupants, while there is a definite lack of it in the Lower Zone of the Late Archaic. This would appear to indicate that shellfish were added to the diet during ceramic days, not before. This is the same conclusion that has been deduced from evidence at numerous New England sites. This adds one more link to the culture chain connecting areas immediately west and east of the Hudson.

From this it appears probable that the network of trails known to have existed in Iroquois days, as shown by the site map, doubtless were made and used hundreds of years earlier. They provided at least one means of contact with New England from the Ballston Lake area. By this route, as well as others no doubt, ideas are thought to have flowed in an easterly direction during ceramic times, and maybe before, which seems to be supported by the evidence presented in this paper.

Attleboro, Mass.
October 10, 1963

The following evidence in Part 1, recounting the finding of two ceramic pipes, is recorded by the author, as told to him by Donald G. Scothorne, who was most fortunate in making this discovery, since it adds important facts concerning ceramic pipe making to those already gathered from other sites.

In Part 2 is an account by the author of evidence as related to him by another Society member, Ruth I. Derby, who made a valuable acquisition of two large ceramic pipes, which were recovered along with significant associated evidence.

Analyses and conclusions relating to these separate recoveries are those of the author.
habitation walls. On the floor of the opening, broken shell remains were in evidence, which, more than anything else, convinced Scothorne that here people had once lived. In fact, they could have made a rock shelter from the existing rock walls, with pole supports for a roof and lean-to of some kind.

Thinking that digging might prove what his instinct only led him to believe, he brought the necessary tools to the site and commenced an excavation of the shelter. As he progressed through the shelter floor, he soon realized he was digging an occupational shell deposit of former occupants. Among the crushed shell were different sized cobbles of various kinds of indigenous stones. They were similar to those present on the shore, from where they had, apparently, been transported; their use is unknown. No stone chips appeared to indicate the making of implements at the shelter. After digging part way into the shell-covered floor, a refuse pit appeared, identified by frequent occurrence of whole shells in its contents. However, of far greater importance was recovery from the pit of a quantity of potsherds. They proved to be the partial neck and collar remains of 2 pots. They have significant traits, including 2¾" collars, castellations (indicated in the case of one at least), and collar design treatments (Fig. 13, #3,4). Fortunately, the collar sherds from each pot respectively, when held closely together, as illustrated — although not contiguous, present the well-known contour of Stage 4 collars. One is decorated with line dentate markings, while the other is more elaborate with an incised chevron design, outlined top and bottom by prominent stylus jabs. The rim of the first is rounded, while that of the second is rounded with an inward slope.

Although not enough sherds were present to reveal full contours of the pots, the 2¾" pressed-out collars and design treatments are quite definitely parts of Stage 4 pots of about A.D. 1600. The ware has shell temper; is smooth inside, with smooth outside finish of constricted necks underlying the collars. No body sherds are present to indicate what the outside body finish might have been.

Nearby, a crevice was noted with a sort of
adjoining shelf on the inside of a rock outcrop, which formed one of the walls of the shelter. Several inches of humus had collected on the projecting ledge, which seemed to suggest a natural lay-away shelf for objects worth preserving. Almost immediately, upon excavation, Scothorne's trowel struck something hard, and, after careful removal of part of the soil, a long-stem ceramic pipe came into view. It was noted, at once, that it was soft with moisture, and would have broken in two if lifted from the dirt. Therefore, earth and pipe were taken out in one solid unit and placed in a container for removal from the site.

Continued exploration of the shelf soon uncovered a second elbow ceramic pipe with stem somewhat shorter than the first. This was removed encased in dirt like the first. The two were taken home and thoroughly dried. After this, the dirt fell conveniently away from the pipes, leaving them dried out and hard, and in perfect condition with no breaks having occurred (Fig. 13, #1,2). They are obviously handmade, and expertly fashioned. The clay has shell temper, and has been well fired. The pipes have plain smooth surfaces with small stem perforations. Evidently, these were formed by small stick inclusions, subsequently burned out in the final firing. Their bowls have commodious openings, which have been hollowed by hand molding, rather than by reaming. They taper down to a small opening at the bottom, which connects with that from the stem.

CONCLUSION — PART 1

This unusual recovery is important because it reveals long-stem elbow ceramic pipes being made at the end of the Ceramic Age, associated as they are with Stage 4 pots of that time. Other ceramic pipes, all elbow in shape, except two straight ones, have been recovered in this area over the years, but with only a few exceptions, definite temporal associations are lacking to show to which part of the Ceramic period they belong. These other pipes have shorter stems and are smaller, while such associated evidence that exists suggests they belong to ceramic periods earlier than that of Stage 4 pottery. Therefore, it may be surmised that, as the Ceramic Age progressed and potters became more skilled, larger pipes with longer stems were sometimes successfully fabricated. Of course, variations of one kind or another must always be anticipated, such as the flanged pipe bowl type of one of those from this Scituate recovery. These two pipes are without decoration, and reviewing the report: “New England Ceramic Pipes,” Bull. Mass. Arch. Soc., Vol. 22, No. 1, it seems that this is usually the rule for New England pipes. Apparently, decoration on the bowl of a ceramic pipe is the exception, although other forms of plain finished elbow pipes are occasionally encountered, as is shown by the following report.

PART 2

In August of 1949, Mrs. Derby was driving by Bonny Rig Four Corners, Becket, Massachusetts, where she noticed an industrial excavation was under way. A small pond was being made as a part of an entertainment development called, “Happy Land.” In digging out a gravel deposit on the site, the workmen had run into some artifacts. These they had tossed carelessly up with the gravel, and they were being examined just as Mrs. Derby stopped to see what was going on.

Upon investigation, she discovered that several artifacts, which appeared to be aboriginal, had been picked up from the gravel. However, no effort had been made to take them out with care, so that any existing associated evidence could have been missed completely. She saw no signs of a skeleton, nor bone fragments of any kind. Furthermore, in talking with the men, no mention was made of the presence of bones, to indicate the possibility of a human burial. Of
course they might have been there all the same, and were smashed beyond casual recognition by the digging machinery being used.

Recovered artifacts consist of 2 large ceramic bowl-type elbow pipes, made for attachment of perforated wooden stems; a narrow bladed iron tomahawk (solid blade with no perforation for a handle); stone Celt; and a chipped stone blade 4 - 4½" long (knife or large spear point). Because of the interest shown by Mrs. Derby in the recovery, she was presented with the 2 ceramic pipes, which are illustrated (Fig. 14). Specimen #1, slightly damaged, was subsequently donated to the Bronson Museum, where it was restored and placed on display. The other one has been retained by Mrs. Derby as a part of her private collection in Lee, Massachusetts. These elbow pipes are similar to the Scituate ones, in that they are large and handmade, have plain smooth surfaces, but differ in that they show no signs of temper. If temper of any kind was used, it has become fused with the clay beyond recognition. Also, they have more massive bowls and stems with thicker wall construction; have shorter stems, perforated with tapering holes and diameters at their ends, respectively, to accommodate insertion of reed or wooden stems. Their large bowl apertures appear to be hand molded like those from Scituate, and taper to a ½" opening at the bottom, which meets a similar one from the stem.

All artifacts, other than the pipes, were retained by other interested parties, and are not available for illustration. However, Mrs. Derby made careful note and recorded them in her written records. She remembers the shape of the iron hatchet as having a relatively narrow cutting blade that curved gracefully to a heel toward the handle side. It had a solid blade throughout without perforation for a handle, with a relatively small head. These traits seem to make it coeval with iron tomahawks of the 17th century, as made at colonial iron foundries like that at Saugus, which were used in barter with the natives.

CONCLUSION — PART 2

Whatever the Bonny Rig find represents, a burial or just a cache, association of ceramic pipes with an iron tomahawk of the 17th century clearly places the recovery in contact times. There were Indians living in different parts of the Berkshires during those years, and many facts about them are related in a previous report: "The Housatonic Indians," Bull. Mass. Arch. Soc., Vol. 19, No. 3. However, since with the pipes also appeared a stone Celt and probable knife blade, it is more than likely that the date of this deposit occurred several years before King Philip's War in 1675, rather than later, when stone tools would have been displaced by metal ones. Also, the iron tomahawk of small proportions seems to equate better with those hatchets from colonial foundries in about 1650, than the more massive ones made earlier in Europe and used in trade by the early explorers a century before.

The two pipes have similar styling with a ridge jutting out from the bowl in front, possibly used for a finger grip. From this it seems probable they were made by the same potter, as well as for the reason that both have shortened stems with wide openings to receive wooden stems. This would appear to exclude the possibility of their source being other than that of local artisans. If this is so, then it is probable they were made by aboriginal labor, because that alone would have had required skill, acquired over hundreds of years of ceramic production. No slave labor of an African source, even if it had existed in the Berkshires at this early date, could possibly have had the knowledge of how to prepare the clay paste, mold it into well-shaped pipes, and fire it successfully to produce the hard durable products of this Becket recovery. Furthermore, the fact that these pipes show no signs of temper suggests presence of superior know-how, permitting satisfactory firing of possibly temper-free paste. Such knowledge has never been accorded the wretched African slaves sold to the colonists by Dutch traders in the 17th century. All of this seems to point to a native aboriginal source for the artifacts from this deposit, which may have been an Indian burial.

Finally, the sequence noted of bowl-type ceramic pipes, following a time when pipes were fired with clay stems attached seems to correspond with a similar stylistic sequence noted in the manufacture of stone pipes, from evidence appearing at the Sweet-Meadow Brook site in Rhode Island.

Bronson Museum
September, 1963
A test pit in May 1959 confirmed presence of undisturbed aboriginal material at a rock shelter in Norwalk, Fairfield County, Connecticut. Arrangements were therefore made with the landowner to conduct full-scale, controlled excavation.

In the Fall of 1961, investigations were begun and completed. This is the report on the site.

**PHYSIOGRAPHY**

Bitter Rock Shelter is located near 41° 07' 48" N. lat. and 73° 25' 00" W. long. as derived from the Norwalk North quadrangle map (U. S. Geological Survey, 1947). It lies at the foot of a high cliff on property of Mr. Otto Bitter, in the Winnipauk section of Norwalk (Fig. 15).

The cliff is in a massive ridge of exposed bedrock. In front of the shelter is a remnant of glacial terrace formed by the Pleistocene Norwalk River. The nearest spot on the river today is short of a mile away. As the river joins Long Island Sound only 3 miles below here, it places the shelter, generally, within the southern Connecticut Littoral — and in ancient times assured accessibility to tidal flats (apparently confirmed by quantities of marine shells at the shelter).

Locally, rocks are granitoid gneisses and associated intrusives of the Hartland Formation (Rodgers, Gates, et al, 1956). Vein quartz abounds, and there are pegmatite dikes nearby. Ground moraine covers the top of the ridge — but the terrace presents a nice array of ice-worn quartz cobbles and other stones, which must have been welcome to a lithically-oriented people.
AREA HISTORY

Norwalk, on Long Island Sound, is like much of the surrounding region, an archaeological terra incognito. I find only one previous report of anthropological investigation in the area (Smith, Wilbur F., 1946), and its conclusions are irrelevant to the problems at Bitter Rock Shelter.

The immediate area of the site is still wooded and undeveloped (owing no doubt to its steep and rugged nature), and lies well within the settled, older part of town. That the shelter’s true nature was not recognized and exploited by the uninformed in years past is one of those happy turns of fate all too infrequent in crowded southern New England.

Interestingly, the current landowner, a man in his middle years, has lived in the vicinity all his life. His recollections seem pertinent. As a boy, he dug here for “pirate treasure.” Digging was with the hands only, and fortunately did not impair stratigraphy. No artifacts were found then, though where he played was one of the richest areas of the site with some material within 6 inches of the surface (Fig. 16, No. 10). More recently, he recalls a find by children of 15 to 20 “arrowheads” in one spot. This I tentatively identify as a projectile point cache (Fig. 16, No. 1). Unfortunately, no one knows where these arrowheads are today, so they cannot be assessed for style, shape, material, or workmanship.

One local resident found a full-grooved, polished greenstone axe about 6” long on top of the ridge. Several people recall an old man who wintered horses in the shelter 50 to 60 years ago. And one resident’s father, in the animal rendering business, used to pile bones and carcasses “higher than the house” in the backyard. This is scarcely 200 feet from the shelter, and undoubtedly explains some osseous anomalies found here (Table 4).

Such was the state of knowledge about the site prior to our excavation. No one truly suspected its secrets, and none of the chance finds over the years had aroused undue local curiosity. Its days were doubtlessly numbered, however, for this city harbors a multitude of pothunters.
EXCAVATION AND METHOD

A standard 5-foot grid oriented on 330° north magnetic was staked out embracing all the shelter and the slope in front of it (Fig. 16). East-west axes were designated ON 5N, 10N, 15N, and 20N, respectively, in terms of their distance in feet north of the datum point. North-south axes were designated alphabetically. Square designations derive from the southeast corner. The datum point was chiseled permanently into the rock face at the back of the shelter wall. Map control was obtained from existing photogrammetric maps in the City Engineers' office, plus limited plane table work at the site.

Among other statistics relating to our work at the site, possibly useful in planning future excavations, are the facts that we expended about 200 manhours, and moved an estimated 53 tons of dirt and rock (allowing 166.7 lbs ft.3 as an acceptable figure for weight, and figuring an average excavation of all squares to 18 inches).

Initially, all debris, broken glass, and rusted ironmongery from recent times was removed by lightly raking the surface. It was smooth and showed no evidence of prior disturbance. To guide us, and to determine vertical profile and stratigraphic relations present, I bisected the entire deposit with a trench (Fig. 16, Trench A) down the 5.2N line.

It was apparent that the aboriginal material occurred at or just under the surface down to an undetermined depth. Modern contaminants, with few exceptions, were confined to the 0-3" level. Potsherds were mainly confined about 18 inches. With the increasing depth of the deposit, as revealed in Trench A, there appeared automatic suggestion of temporal superposition. Painstaking examination of the vertical faces of Trench A in all lights and under all conditions did not reveal stratigraphic differentiations fine enough to control digging. Resort was thus made to the archaeological convention of excavating in 6-inch levels to preserve natural relationships. This control was confirmed in later analysis of the materials, but importantly, it was related to and integrated with certain stratigraphic discriminations even in the field.

Thus, we distinguished with ease in Trench A, two basic soils: 1) topsoil — the rich, black topmost 6" over all the shelter, and 2) subsoil — a yellow-tan soil devoid of organic staining and penetration ultimately determined to lie everywhere at some depth below the shelter. Additionally, there were two other

soil "types". One might be characterized as a sub-type of the topsoil, since it consisted of topsoil plus heavy admixture of charcoal grains and marine shell fragments. Most, but not all, artifacts were found in this soil (called midden soil, and analogous with "Aboriginal Material" in Figs. 17 and 18). The remaining soil was encountered only infrequently and mainly south of the 5N axis. It was sterile and chocolate brown in color. I secured good color, texture, and content matches to this minority soil by mechanically mixing portions of topsoil and subsoil. I conclude, in fact, that this soil is just that, and probably formed by activities of subterranean rodents and root intrusions. I do not regard this soil type as invalidating or even seriously challenging the profiles as we derived them, for the disturbance was mild and near the periphery of our plat. Interestingly, this disturbance probably transpired before the modern era, since few modern intrusives were associated with it.

The profile of the south face of Trench A is shown in Fig. 17. Excavation was carried to fully sterile soil. Where we encountered rocks beyond the ability of three men to remove, we used a 1-inch earth auger to sample beneath them. Such soundings were always sterile, so we are confident no deep cultural deposits were overlooked.

As depicted in Fig. 17, a mound of subsoil rose in ancient times near the center portion of our trench. Apparently, some early occupants in the shelter carried on activities just behind this low rise and in front of Ledge A. At least a zone highly charged with quartz flakes was interpreted as a stone-working station right in front of Ledge A, and one of the most interesting finds was location in situ of a rough sandstone celt (Fig. 22, a) on a small rock shelf in this ledge. Archaeology is ordinarily the statistical study of remains left by anonymous populations; discovery of such a small workshop — almost certainly the abode of a solitary individual — personalizes our discipline and gives added meaning to our privileged view back through the millennia of time.

An abandoned rodent den near the junction of midden soil and subsoil, contained a glass bottleneck. This find helped resolve earlier anomalous finds of rusted wrought nails beneath sherds in the upper levels.

On completion of Trench A, I ran another trench, Trench B, at right angles to it along the B axis (Fig. 16). The profile derived is shown in Fig. 18. In general, similar conditions soil-wise to the finds in Trench A, were noted. There was slight suggestion that certain flat rock slabs were deliberately placed along the junction between midden soil and subsoil. Two interesting phenomena discriminated in the east face of this trench were trampled layers of unconformities in the otherwise homogenous midden soil (Fig. 18). They were thin lines of compacted shell and stone flakes, all with long axes horizontal. I regard them as ancient surfaces in the shelter, packed by the feet of former inhabitants.

After these two trenches were completed, all squares shown in Fig. 16 were dug in uniform 6-inch levels. Space prohibits a minute description, unit by unit, of our finds. Our field notes on these units, however, are quite complete, and record many interesting finds and observations. It is necessary, however, to generalize somewhat, and to mention only one or two squares in particular.

All of Ledge A was ultimately exposed by stripping (Fig. 16). Here I found a peculiar bright green stain, perhaps 8" across, near the upper surface. The
stain was comparable to, but not wholly analogous with, lichens and stains on nearby rocks. It faded rapidly on exposure to light, and is mentioned since it may have been cuprous oxide from a disintegrated copper artifact. Other stains noticed on the back wall and roof of the shelter are probably smoke stains from ancient fires. Schrabisch (1909) reported this during his early researches in northern New Jersey and nearby southern New York. It occurred to me that such blackened rock walls may preserve micro-layers of soot, which could be interpreted archaeologically.

Most squares yielded stone artifacts, potsherds, and bone, shell, and stone fragments. To avoid tedious verbal treatment, the ceramic analysis is given in Table 1 and specific ceramic finds are illustrated and identified in Fig. 19. Projectile points are summarized in Table 2, and illustrated and identified in Fig. 20. Artifacts and Trait Distributions are given in Table 3; faunal remains appear in Table 4. In the Discussion section, I will integrate and interpret these finds. Square 10N/A proved the richest, and contained the deepest deposit (minus 58”). The appearance of this square on removal of the 0-6” level is shown in Fig. 21. The caption explains various points identified on the photograph.

Nearly 5 feet beneath the surface in 10N/A, and intrusive about 1 foot into the subsoil, we found our deepest cultural material. This was a crude, coarsely chipped, lunate quartz knife (Fig. 22, f), and a bifacially-flaked crude chopper (Fig. 22, e). These were associated with badly disintegrated charcoal
grains and calcined bone flecks. One burned and semi-calcined bone fragment was recovered, and expert opinion\(^\circ\) concurs that it is probably from a human cranium.

Another interesting square was 5N/B, at the intersection of our trenches. Mention was made of the chipping station found along the front of Ledge A in this, and the adjoining square, 5N/A. Notable here were many slabs of schistose rock, at times almost interlocked like shingles. At first we thought they might be artificial, perhaps covering a burial or some other feature. But we encountered this phenomenon repeatedly in the shelter, and concluded the slabs were simply frost and weather spalls from the roof. It is interesting, however, that slabs in this quantity and condition are not currently forming at the surface. The occurrence of cultural refuse between and around many of these rocks prompted their interpretation as artificial flooring, deliberately laid to promote drainage. However, we cannot demonstrate this. Some of these rocks, though, showed weathering and rounding which seems to imply importation to the shelter rather than spalling in situ.

While most cultural materials were found either in the topsoil, or the midden soil, it is notable that some were not. These included the materials in the deep level of 10N/A as just mentioned, and a few other finds from various places in the shelter. These other finds were all made either just at junction of midden soil and/or topsoil with subsoil (that is, lying on the top of the subsoil), or else only a short way down into the subsoil (maximum extent for one or two pieces: about 6\(\)'). Beneath this, the subsoil proved sterile in every deep sounding, which included at least two test pits, and numerous borings. Very little material was thus so recovered. The field notes reflect that only the projectile points (1) and (r) in Fig. 20 were definitely in the subsoil. The only other identifiable artifacts from the subsoil were the lunate quartz knife and the flaked chopper mentioned previously for the deep levels in 10N/A, and they may have been intrusive as components in a cremation pit whose outlines were not discriminated. Perhaps less than a dozen white quartz flakes and amorphous chipped forms came from the junction and upper six inches of the subsoil. There were also some black flint, red chert, and bluish silicate flakes that may represent exotic stones. The specific loci on our grid for these subsoil finds are 0.2N/B, 10.5N/.5A, and 10N/.5C. These subsoil occurrences were concentrated at these spots, and not randomly encountered.

Several natural crevices and formations in the rocks lay just beyond our grid. All were investigated,
## Table 2

**PROJECTILE POINT DISTRIBUTION**

<table>
<thead>
<tr>
<th>Vertical Depth</th>
<th>Triangular Small</th>
<th>Triangular Large</th>
<th>Side Notched Narrow</th>
<th>Straight Stepped Narrow</th>
<th>Expanded Stepped Narrow</th>
<th>Corner Rounded Broad</th>
<th>TOTALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 6</td>
<td>2</td>
<td>1</td>
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<td></td>
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<td></td>
<td>3</td>
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<tr>
<td>6 - 12</td>
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<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>12 - 18</td>
<td>1</td>
<td>5.0</td>
<td>1</td>
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<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>18 - 24</td>
<td>5.0</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>24 - 30</td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>30 - 36</td>
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<td></td>
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<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>42 - 48</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>48 - 54</td>
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<td>4</td>
<td>20.0</td>
<td>10.0</td>
<td>30.0</td>
<td>5.0</td>
<td>28.0</td>
</tr>
</tbody>
</table>

* top figure is number of specimens; lower figure is percent of total; ss equals subsoil

## Table 3

**ARTIFACT AND TRAIT DISTRIBUTION**

<table>
<thead>
<tr>
<th>Vertical Depth</th>
<th>Art, chipped stone</th>
<th>Bone, polished</th>
<th>Polished, carinated</th>
<th>Ceramic, polished</th>
<th>Chipped</th>
<th>Laminar, stemmed</th>
<th>Heated, stone-lined</th>
<th>Human bones in midden</th>
<th>Kiwi, stemmed</th>
<th>Lead fragments</th>
<th>Mica, book</th>
<th>Nails; rusted, wrought</th>
<th>Pendant, notched slate</th>
<th>Pedestal, Heart-shaped</th>
<th>Penannular, Split</th>
<th>Scrapes</th>
<th>Serrate, Tine of</th>
<th>Stone, cuneiform</th>
<th>Stone, slaty</th>
</tr>
</thead>
</table>
and may be identified from Fig. 16. Perhaps one other special area within the shelter deserves mention; this is the most inward recess (Fig. 16, No. 10). Technically, it too, lay beyond our grid, but it was systematically investigated, and its contents where possible related to the stratigraphy and master control of the grid. It was a difficult spot to excavate, and in many places I had to lie prone and dig with a long-handled shovel. Naturally, control was loose, but the inventory shows the interesting notched slate pendant (Fig. 22, d) came from here: I suspect it was near the subsoil junction, but this is uncertain. Two or three unmodified, but rounded cobbles were found deep in this recess. How they came there, I do not know. Perhaps they are evidence from glacial times, when topsoil had not formed; weathering had not dislodged spalls from the shelter roof and walls; and ice-rafting or other phenomena associated with the glacial terrace in front introduced these cobbles into this recess.

**DISCUSSION**

So much for the history, fieldwork, and recorded finds from Bitter Rock Shelter. The problem now is to integrate this material, relate it to relevant work in contiguous areas, and propose an interpretation of prehistoric events apparently recorded here.

At some unknown point in postglacial time, the first human inhabitants chanced on the shelter (Fig. 23). To them are attributed a few enigmatic flakes found in the upper levels of the subsoil. There is just a chance these materials may be very early, indeed. Byers (1958, 1959) mentions an Unspecialized Lithic as a possible cultural phenomenon associated with subsoil zones at the E. D. Prey Site, near East Killingly, Connecticut, about 90 miles northeast of here. Ritchie (1958) reports “numerous flint rejectage” for a transition zone between subsoil and later levels at his Bannerman Site on the lower Hudson River, about 40 miles northwest of here. Both these archaeologists mark relative scarcity of recognizable artifacts with this material. This condition is also reminiscent of Mianus Gorge Rock Shelter, about 12 miles northwest of Bitter Rock Shelter (Powell, MS). If these are citations of genuine phenomena, then maybe the lowest materials in Bitter Rock Shelter are coterminous with them.

Acceptance of such an Unspecialized Lithic manifestation for Bitter Rock Shelter, however, is tempered by presence of some known artifacts either associated with the “unspecialized” or “rejectage” materials, or closely superposed on them (Fig. 20, (1) and (r), and Fig. 22 (e)). If amorphous flakes with cutting edges are workshop scrap of people who made the more familiar items, then we can posit an Archaic group first present in Bitter Rock Shelter (Fowler, personal communication, opines the early levels here are Late Archaic). But if the unspecialized material truly precedes the earliest bearers of an Archaic Pattern, then

*Editor, Bulletin of the Mass. Arch. Soc'y
Unspecialized Lithic remains as a possible explanation. Unfortunately, neither our finds nor our notes from Bitter Rock Shelter illumine this problem further. But we shall be especially on guard for it in future work, and we hope other researchers will be, too.

The deepest feature in the shelter — the zone of crusted subsoil, possible calcined human bone fragments, charcoal flecks, and associated lunate knife and crude chopper, may suggest a cremation. Ritchie (1955) posits an Early Woodland Burial Cult for the Northeast with cremation a principle aspect. Further, he sees this Early Woodland phenomenon with roots in the Archaic horizon. Robbins (1959) cites cremation burials at this time level for the Wapanucket 6 Site in southeastern Massachusetts.

On the basis of the foregoing then, I suggest presence of a very weakly developed manifestation falling somewhere in the Archaic. An interesting parallel to statistically-sharper demonstrations for several nearby eastern New York sites (Ritchie, 1958) and for the Stony Brook and Wading River Sites on Long Island (Ritchie, 1959), is appearance of a Lamokoid projectile point in the lower levels. The deepest points are a slender expanding — stemmed and a slender side-notched form. Reference to Table 2 shows these narrow forms, associated by Ritchie in central and western New York with the Lamoka Culture, but showing temporal persistence in the eastern New York and Long Island sites, are similarly distributed at Bitter Rock Shelter. The latest specimen occurs 6-12” deep. To the first makers of these points may also be attributed the workshop site and associated celt (Fig. 22, a), rough choppers and unpitted hammerstones, elongate percussion flakes, deep stone-lined hearth, notched pendant, and miscellaneous flakes and scrapers of local and perhaps exotic stones, all found stratigraphically in the lower and middle portions of the midden soil. To these deeper levels, also, belong the faunal remains of

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Fig. 23. BITTER ROCKSHELTER. As it may have looked in winter, about 4,000 years ago.
turkey, bird, wolf, raccoon, and some of the deer given in Table 4. Shellfish exploitation, if any, would seem to be evidenced only by a few recovered valves of the Sand Clam, some Eastern Oyster, and possibly the ubiquitous remains of the White-lipped Land-snail (Table 4). Incidentally, one of Ritchie's eastern New York sites, the Bannerman Site, is still the only radio carbon-dated site in the lower Hudson Valley — a date for an early occupancy there is given as 4,480 ± 300 B.P.

These early and not-too-extensive occupations of the shelter were probably not continuous. An ash-and-charcoal-free hearth found at depth here could be evidence for this, since I suggest such a hearth may be cleaned by wind and rain when abandoned, and prior to natural burial. Hearths with ash and charcoal, however, could be evidence for deliberate covering, thus recording continued occupancy. Thus, there may have been unknown intervals of abandonment, during which the ancient cultural patterns of the Northeast evolved, and the ancient populations waxed and waned under influence of myriad still unknown factors.

There is a time, however, rather sharply recorded in our stratigraphic column, when the Archaic Pattern vanishes and is replaced by the familiar ceramic evidences of Woodland times. This material is confined mainly above 18". Elimination of degraded and too-small sherds in a field total of 600, gave a corrected total of 231 for analytical treatment, and the results appear in Table 1. The three six-inch levels therein seem to record stratigraphic variation in ceramic traits. No whole or restorable vessels were recovered, but one large pot section (Fig. 19, 1) suggests affinities with a wide range of Middle Woodland ceramics (see caption). A rimsherd (Fig. 19, d) suggests more specifically the type Bowmans Brook Stamped, thought by Smith (1950) to be associated with the East River Aspect in coastal New York sometime after 700 A.D., and also thought by him to show affinity with the Owasco Aspect in central New York. Table 1 presents data mostly in keeping with similar data derived elsewhere (Smith, 1950). Briefly, my seriation shows smooth or plain surfaces increasing slightly with time; fabric-marking and net-marking always strictly minority wares; cord-marking on exteriors as the most popular treatment at all levels, and indeed, constituting the majority ware at Bitter Rock Shelter. This contrasts some with demonstrated decline in time at sites in nearby coastal New York (Smith, 1950). Interior-and-exterior cord-marking (Vinette I types) falls off in time, which is consistent with many demonstrations for the area; edge-stamping techniques are minority preferences, and incising shows a slight but persistent increase with time — in keeping with prior demonstrations. The one anomaly in our analysis is complete inversion of the anticipated temper ratio, for at Bitter Rock Shelter, the record apparently shows grit increasing in popularity with time, and shell decreasing. This is not in keeping with other demonstrations for our area known to me; I offer no explanation for it.

All sherds were examined in strong light with free use of optical magnification. Shell, where present, was verified by fuming in dilute acid; where leached, casts of shell fragments were used as the index. A small but perfect leaf imprint was noted in the interior of a rather flaky sherd. This is a fern pinnule, probably Osmunda. * Perhaps it indicates the time of year the vessel was made.

These woodland people were the makers and users of most of the triangular points found in the shelter. The distribution of these forms is given in Table 2; suffice it to say their association with Woodland times is well known and often demonstrated. Of these, four may permit typing as Levanna Points [Large Triangular], per Ritchie's typology (1961), common as Middle and Late Woodland manifestations, and characteristic of the Owasco. The possible Bowmans Brook Stamped vessel with Owasco affinities was previously mentioned. As Table 2 further suggests, the Lamokoid types continue and overlap with the triangular points, and there is just one representative of a broader-bladed, corner-removed type (Fig. 20, t) which might be Laurentian in inspiration — all of which, while based on very limited statistical grounds in this shelter, is in keeping with Ritchie's general demonstrations in the lower Hudson Valley (1958), and on Long Island (1959).

It remains to say that these latter woodland peoples left the axe head (Fig. 22, c); polished celt (Fig. 22, b); upper stone-lined hearth with possible associated ceremonial cache; the tabular paintstone fragments of hematite showing abrading facets on their peripheries; human bone fragments in midden trash; majority of the book mica fragments, if they are not natural occurrences (Smith apparently regards them as cultural associations (1950)); the polishing and sinew stones; and the pottery. Their dietary preferences may reflect increased use of shellfish, with addition of hard-shelled clams and mussels to previous remains, and many of the faunal members indicated above 18-24" in Table 4.

Apparently the shelter was abandoned forever by the aborigines in pre-Columbian times; at least no

clear association of their artifacts with Contact items was apparent. The kaolin pipe fragment, while not a very sensitive type, can logically be placed around 1779, according to Omwake.* This is the date of a Revolutionary War battle less than one-half mile away. Perhaps the pipe fragment, and some of the lead fragments, relate to this military event. The Indian Head Penny was lost sometime after 1883 on the site, and the various tin cans, broken bottles and rusted nails at the surface relate to times in the modern era.

Such then, is the physical evidence and a suggested interpretation of History and Prehistory in this rock shelter, as derived therefrom.

ACKNOWLEDGMENTS

I thank Mr. Theodore Jostrand, my co-worker at the site, for sustained effort in the field and during artifact analysis; Mr. Otto Bitter, owner of the site, for many courtesies and full cooperation; Mrs. Cynthia Judell, for several days voluntary fieldwork; and numerous local residents who contributed relevant information.

I also thank Mr. H. Geiger Omwake, of the Delaware Archaeological Society, for an opinion on the chronological position of the kaolin pipe fragment; Mr. Everitt Stow, of the City Engineering Department, Norwalk, for permitting access to certain maps; Dr. George C. Goodwin, The American Museum of Natural History, Department of Mammalogy, for osseous identifications; and Dr's. Becker and Irwin of The New York Botanical Garden, for botanical identifications.

Norwalk, Conn.
December 1963

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U. S. GEOLOGICAL SURVEY

*Personal communication, H. Geiger Omwake, Delaware City, Dela.
DISCOVERY: AN IMPELLING FORCE IN RESEARCH

EDITORIAL

Many collectors who join archaeological societies, do so because they want to know more about the artifacts in their collections. Their frequent questions are: How Old are they; Who made them; and, What were their functions? Over the past fifteen years or more much has been learned as a result of discoveries at sites being excavated. Most of this knowledge has already been reported in scientific journals. New members of this Society are reading for the first time reports of new finds and resultant hypotheses about the people and events of prehistoric New England. However, because of their recent affiliation they are doubtless ignorant of much information published by the Society during preceding years. And yet, many of these newcomers are anxious to carry on research in the hope of making important discoveries. Most join a Society Chapter, whose members are engaged in a site excavation. Here they are assured of coordinated effort with direction of how to excavate and record their recoveries. Others prefer to undertake private digs in some area not served by a Chapter group. In either case, they are to be encouraged, for much information is still to be dug up and reported for publication, so that knowledge may be disseminated.

When anyone starts to excavate a site, the first thing that is needed is to know what to look for. After becoming acquainted with the various types of artifacts to be anticipated, the digger is next anxious to find out about the significance of each. Right here is where reading of reports in the Society Bulletin concerning discoveries and postulated deductions helps to focus the reader’s attention upon important research being carried on in the Northeast. He is able to apply what he reads to his own site excavating, to the end of making it possible some day for him, also, to write a site report for publication. Aid may be obtained to help him realize his goal from the Editor and his associates.

To the excavator who is searching for new discoveries, suggestions of facts and events still to be deduced from the evidence should serve to clarify his thinking, and make his research more objective. With this in mind, some of the many facts about prehistoric existence, which are as yet ill-defined, or not understood at all, are listed as follows in cultural sequence.

In the Paleo period of fluted point hunters, method of killing mammoths and other prehistoric game; disposal of dead, if any; confirmation of 9,000 years ago as date when Paleo man arrived in New England; source of flint used for most Paleo artifacts during the early phase of the period.

In the succeeding Early Archaic era, following are some of the facts to be looked for: kind of huts used, skin covered or otherwise; information to support 6,500 years ago as the beginning of the age; clarification that spears (javelin-like) were used exclusively in hunting, and stone pointed as well as bone harpoons for seal and other marine mammals; added evidence of use of Corner-removed #5,8,9, and Bifurcated point types, Channeled gouge, Ulu, and Leaf knife; kind of burial, if any; evidence of caribou hunting, and probable movement of hunters north out of New England following retreat of ice, tundra, and caribou; objects showing art accomplishments, if any.

The Late Archaic (Stone Bowl) exhibits many activities about which much is still to be learned, as for example: confirmation of 5,000 years ago as the start of the period; origin dates of stone bowl quarrying, stone pipe making, and the respective periods of duration for each; spiritual beliefs, and reasons for cremating their dead; extent of woodworked household eating utensils; significance of the “Thunder Bird” in their rituals — its origin; source and use of Birdstone and Boatstone traits; confirmation of Grooved weight as a possible substitute for the plummet (Clumsy type).

For the last culture period, Ceramic (Woodland), following are some of the facts yet to be established: confirmation of advent of Stage 1 pottery as A.D. 300, or earlier; more positive proof of various scraper uses both here and in previous ages; further proof of racial continuity from the preceding age; more evidence of spiritual and social decline — its cause; origin of ceramic pipe making; evolutionary styles of ceramic pipes; use of the Large Triangular point; method, or methods of cooking shellfish; origin of steam bathing through use of water thrown over hot stones in sweat huts.

These lists, while limited to only a few of the many facts about prehistoric living, which are needed for a fuller understanding of what went before, will serve, it is hoped, to inspire the excavator with renewed determination for careful recording and analysis of evidence.