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BULLETIN OF THE
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BRONSON MUSEUM

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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.
A Message from the President

As we approach the 32nd annual meeting, congratulations to the Massachusetts Archaeological Society are in order. This society has now grown to a total of 1,175 members. Some factors responsible for this are these: the discoveries of various chapters and individuals, whose work has often been presented as illustrated articles placed in the Bulletin. The artistic drawings by William Fowler, and the good photography of others has inspired many to become active or armchair archaeologists. The work of Maurice Robbins and the Cohannet Chapter has excited and interested others in the subject.

When I became your president I felt that I would like to accomplish two goals. First, I found that our museum had that old-time look it had grown up with. Collections that occupied cases were stagnant with repetition, and had little that was educational. The Cohannet Chapter began some beautiful and meaningful exhibits, in which the artistry of Jean Jacque Rivard was used. The results have pleased one and all. We look forward to further inspiring displays. This is not meant to demean the efforts of others, who have created some of the previous, still exciting exhibits. Secondly, there has been a real need for mutual cooperation between amateurs and professionals. To this end, professionals have kindly participated and enriched our recent programs. This is an important marriage due to the approaching need for salvage archaeology, now in the works with the state and federal highway programs. Amateurs can seldom be available, while, hopefully, professionals can field teams of graduate students on short notice and follow through in a manner that might be expected, in view of the timing and financial responsibilities required.

Soon, the State of Massachusetts may vote to create an office of State Archaeologist. In this the Massachusetts Society has an important role, and our initiative will help insure that the person chosen will be satisfactory to both groups.

I invite you all to involve yourselves in this fascinating hobby and share in the satisfaction of contributing to the prehistory of Massachusetts.

Guy Mellgren, President

SOME EARLY HOUSE FLOORS

MAURICE ROBBINS

Prior to 1959, when the report of the Wapanucket #6 site at Assawompsett Lake in Middleboro, Massachusetts was published (1), very little had appeared in the archaeological literature concerning the type of habitation in use during the Archaic period in the Northeast. A review of the literature, available to the writer, prior to 1960 reveals an unfortunate tendency to assume that, because no one had published definite data, habitations from that early period were practically non-existent.

Writing concerning the northeastern Archaic in 1952 Griffin says, “Shelters were almost certainly of a very transient nature with little evidence now remaining of their exact type. In all likelihood they were merely a lean-to structure, in others dome-shaped wigwams, or perhaps even a teepee-like shelter” (2). Even as late as 1965, Spencer and Jennings stated that, “No house structure—except at the Stahl site—has been identified with the archaic” (3).

Although they frequently mention the finding of post molds in their excavations, archaeologists have been reluctant to draw definite conclusions as to their authenticity or meaning. Arthur Parker (4), in describing the post molds found during the excavation of an Erie village in Ripley, New York in 1907, says: “A large number of post molds, that is small holes from 18 to 24 inches deep, filled with substances somewhat different from the surrounding soil were discovered in the village layers. The position of these holes were carefully charted and were found to bear a certain relationship to one another. The character of the soil enclosed by the lines of these holes was carefully noted and seemed to indicate the dirt floors of lodges. The post molds therefore, were probably the holes made by stakes that formed the uprights of dwellings.”

By 1968 Jennings had overcome some of his reluctance to accept evidence of substantial houses in
the Archaic period. In his Prehistory of North America he refers to the Wapanucket #6 report, writing, "Its importance, however, is derived from what appear to be well defined twin-post patterns outlining a total of seven round lodges or houses with an entrance formed by overlapping walls. If these patterns are actually associated with the artifacts they are the oldest evidence of house construction in the east" (5).

It is difficult to understand the reluctance to accept the association of house floors and artifacts at this site. All of the area within and about the seven floors was excavated and all of the artifacts found were reported in detail. If we are to assume that the house floors were those of a different period than the artifacts, presumably later, we must also conclude that the people who occupied the houses left absolutely no artifacts behind them. Is it not more logical to accept the association?

That there is an association between these floors and the Archaic artifacts reported is further attested by the discovery of three additional house floors of the same type again accompanied by the same artifact types at Wapanucket #8 a scant quarter mile from Wapanucket #6.

That post molds and house patterns from the Archaic have survived the elements to the present and may yet be found, is amply proven by the evidence cited by Ritchie from his Lamoka site in New York where he has found and described houses from the same time period as Wapanucket (6). These houses are of a different type and pattern.

The type and general character of the houses in any given area or at any time level will depend upon a number of conditions, namely: the state of culture of the group that built them; their living habits; social level; the influences of neighboring groups; and, perhaps of greatest importance, the environment including climate and the materials present from which to build.

In the Northeast in all periods, a simple type of construction, which involved the use of poles, bark or rush mats, was prevalent. This kind of structure was practical and serves to illustrate many of the initial steps in the evolution of aboriginal structures, hence they are well worth careful consideration by all students of culture history.

An example of the influence of habit and environment upon the type of house used in a given area is provided in the case of the Great Basin Shoshone. These people were called the "Digger Indians" by the early white explorers. Mark Twain described them in 1861 saying of them, "they are the wretched-est type of mankind I have ever seen up to this writing . . . . they produce nothing at all, and have no villages, and no gatherings together in strictly defined tribal communities . . . . a people whose only shelter is a rag cast on a bush to keep off a portion of the snow, and yet who inhabit one of the most rocky, wintry, repulsive wastes that our country or any other can exhibit. The Bushmen and our Coshoots are manifestly descended from the self same gorilla, or kangaroo, or Norway rat whichever animal—Adam the Darwinians trace them to." One would expect that a people living in such a harsh and forbidding climate would invent some sort of substantial house at least for use during the winter. But their living habits ruled otherwise. Peter Farb, in his Man's Rise to Civilization (7) says, " . . . . the Shoshone populace always rejected houses because their food supply was precarious and the family continuously had to abandon its shelter and move on to new foraging territory. The white settlers should have applauded the Shoshone for having had the intelligence not to be tempted by anything so ostentatious, yet so useless, for their culture as a house."

**EVIDENCE OF HOUSE PATTERNS IN THE NORTHEAST**

Evidence is accumulating that, despite the semi-nomadic character of the Late Archaic people of the Northeast, the habitations of the period were larger and more substantial than those of the later more sedentary people who followed them. Of course, the only remaining evidence of these house patterns is the molds of the posts, which once supported the framework of the houses, and, in some few instances, what appear to be the molds of other elements of the superstructure lying horizontally on the ancient surface. Rarely one encounters an indication of a hardened and discolored area within a pattern of post molds, which represents the actual floor of the house.

Post molds have certain characteristics which enables the excavator to recognize them quite readily. Upon removing the topsoil or loam and exposing the lighter colored surface of the lower horizon, the tops of post molds appear as small round stains in definite contrast with the surrounding soil. After recording the position and size of the suspected post mold, a vertical cut should be made to reveal the cross-section of the mold. If no vertical extension of the stain is present the record should be disregarded. If a true post mold is present however, its presence will be confirmed by the shape of the cross-section. The majority of post molds will have smooth curvilinear sides meeting to form a blunt point, at various depths. Occasionally a mold with straight sides will be encountered. Most molds will be at a right angle with the surface, but molds at various angles are some-
times found. The depth or length of the mold can now be recorded. The content of the mold will commonly be a dark brown to black substance resembling loam. This is assumed to be the decomposed remains of the wooden post, which once occupied the mold. In some few instances charcoal will be present. Modern root fibers are often found in the mold, these probably entered in search of moisture which collected in the soft content. That these stains are actually the remnants of decayed posts, which once formed the wall of a structure, is indicated by the appearance of repetitive patterns in an area exhibiting other unmistakable signs of ancient human occupancy.

The smooth appearance of the points of a majority of post molds, together with the occasional presence of granular charcoal, has led to the belief that the stakes were sharpened by burning. This may also account for their preservation.

The measured diameter and length of the post mold should be regarded as only an approximation of its original size. It seems probable that the pressure of the surrounding soil would tend to compress the softer material within the mold as the wood slowly disintegrated. Also it must be remembered that the surface of the yellow soil from which the depth measurement is made is usually an arbitrary surface created by plowing and is not a true archaeological horizon. The extreme upper portion of the mold may have been present in the loam above the yellow surface but cannot be distinguished because of color. In other instances, in which the top of the mold appears somewhat below the top of the yellow horizon, the upper portion may have been destroyed by tree roots or other natural agency. In many instances the round stain on the yellow soil surface, which at first appeared to represent a post mold, will be found to have been caused by some natural agency such as a tree root or a rodent burrow. The writer has seen many illustrations in the archaeological literature of patterns of alleged post molds, which had been excavated by removing the dark content from the surface without making a vertical exposure. While this technique produces a most convincing picture it is not dependable. One can easily create a post mold out of a mere root stain in this manner.

From a series of post molds, which form a recognizable pattern, one is justified in inferring the presence of some sort of structure. The pattern will reveal the size of the house, its probable point of entrance and orientation. The cross-section of the mold gives an indication of the inclination of the missing above-ground portion of the post. Occasionally one will note stones arranged about the lower portion of the mold as if intended to stabilize the post. I have even seen instances in which a post being driven into the ground struck and was diverted or broken off by a stone. Pointed posts indicate that the post was driven from the original surface and was not simply set in a pre-dug hole. I think that one is also entitled to assume that a driven post would not protrude more than three or four feet above ground as green poles of any greater length are almost impossible to drive because of their flexibility.

HOUSE FLOORS AT WAPANUCKET #6 — (Fig. 1).

Since 1950 the Cohannet Chapter of the Massachusetts Archaeological Society has been engaged in the investigation of an archaic site or series of sites located on a sand dune, which parallels the north shore of Assawompsett Lake in Middleboro, Massachusetts. During the ensuing years a large area has been excavated, and at a number of points signs of aboriginal occupation have been discovered. It would be incorrect to think of these sites as unassociated, although it has been necessary to assign numbers from 1 through 8 to distinguish them. Of particular interest in this paper are the sites numbered 6 and 8 at which the remains of house floors were found. Site number 6 is located on the western end of the dune where seven house floors were recorded; site number 8 is at the eastern end of the same dune approximately 1500 feet from site number 6 and has produced three house floors to date (1969). The floors at Wapanucket #6 have been fully described in a publication by the Cohannet Chapter entitled, An Archaic Village in Middlebrough, Massachusetts (1). The floors at Wapanucket #8, with the exception of Floor #2, have not heretofore been described in print. House floor #2 at Wapanucket #8 was that of a ceremonial or charnel house, and in it was a large pit which contained eleven secondary burials. This house and its contents were fully described in a publication of the Massachusetts Archaeological Society, Inc., entitled, An Archaic Ceremonial Complex at Assawompsett (8).

Undoubtedly the two sites were associated both geographically and chronologically. A radiocarbon date on charcoal from a hearth at Wapanucket #6 yielded a date of 2292 yrs. B.C. ± 300 (M746 Crane and Griffin, 1961), a second charcoal sample from four burials at Wapanucket #6 furnished a date of 2341 yrs. B.C. ± 250 (M969 Crane and Griffin, 1961) while, from Feature #206 of House Floor #2 at Wapanucket #8, charcoal was obtained, which gave a date of 2340 yrs B.C. ± 140 (GX. 1104—Geochron Inc. Cambridge, Ma. 1967).

Not only were the house floors at Wapanucket #6, "the oldest evidence of house construction in the east", but they were, as far as the writer is aware,
the first to be recognized and reported, in which the
calls were allowed to overlap so as to form a covered
entrance. We have called this pattern of floor the
snail-shell, because of its resemblance to the shell of
that creature.

At Wapanucket #6 post molds were encountered
in great numbers. A total of five hundred and forty-
six were recorded and are shown on the site map. Of
these two hundred and eighty-seven were a part of
recognizable structures or directly associated with
them. The average post mold diameter was 6.6 cm.
(2¾ in.) and the average length was 25 cm. (14½
in.). The largest mold found was 14 cm. (5½ in.)
in diameter and had a length of 61 cm. (24 in.) Two
hundred and thirty of the molds appeared at or with-
in 5 cm. of the top of the yellow soil horizon. The
majority of molds were in pairs on opposite sides of
an imaginary line that outlined the floor of the house.
Some few molds by their inclination from the ver-
tical, and their relationship with other molds, are
assumed to have been those of posts which supported
broken or weakened upright posts. The outlines of
seven structures were sufficiently complete to be
recognized. Six were between 9.5 to 15.5 m. (30 to
46 ft.) in diameter and one floor (#4) was 22 m
(66 ft.) in diameter, Floors #3 and #4 are illustrated
(Fig. #1).

Pairs of posts had been driven about the circum-
ference of a rough circle or oval of the desired di-
ameter. The posts were driven straight into the
ground at an approximate right angle with the sur-
face. The walls were allowed to by-pass each other
at one point so as to form a sort of covered or pro-
tected entrance way. The pairs of posts were in a
radial line from the center of the structure. The dis-
tance between the posts of a pair varied from 25 to
40 cm. (10 to 16 in.) This spacing seems to have
been a function of the diameter of the posts. Occa-
sionally a third or even a fourth post accompanied
the pair, these supplementary posts were assumed to
have been added to support a weak or decayed mem-
ber of the original pair.

One of the house structures was reconstructed
in order to learn more about its appearance. There
was some difficulty in obtaining poles for rafters of
sufficient length and yet not too large in diameter at
the base or too heavy to be supported by the walls. It was discovered by this means that a single wall post would not support the roof structure but that two or twin posts, if cross-braced, would do so with ease. Possibly this was the reason for the twin-posts about the wall of the house. However, at the point where the walls by-passed to form the entrance only a single post was needed, as the roof rafter rested on both walls.

On the eastern end of the dune at Wapanucket #8, three house floors have been recorded to date. All are of the same snail-shell pattern as those found at Wapanucket #6. One of them was of the small, nearly round variety; the other two were considerably larger and were oval in shape. At Wapanucket #6 we had speculated that, because of the internal arrangement of roof supports and features, house floor #4 was that of a ceremonial structure. This was rather dramatically confirmed at Wapanucket #8, when a large pit was encountered within house floor #2, in which were eleven secondary burials with elaborate grave goods and red ocher.

**HOUSE FLOOR #1 AT WAPANUCKET #8 — (Fig. 2).**

This floor was approximately 14 meters long by 10 meters wide (42 by 30 ft.). The oval pattern was outlined by 30 post molds arranged in the usual radial pattern. The thirteen pairs of posts were from 18 to 20 cm. apart (7 to 8 in.) on opposite sides of the line of the house wall. There were also four groups of three molds each. From the spacing about the perimeter it is apparent that four or five pairs of molds were destroyed by some disturbance prior to excavation of the site. The orientation of the structure was southeast-northeast and the entrance, which was approximately 2 meters (6+ ft.) long, faced the south. There was no indication of internal roof support. Within the house a short distance from the entrance a secondary cremation burial containing red ocher and an oval atlatl weight appeared, (Fe. #166 Ceremonial Report). Whether or not this burial was placed within the structure intentionally could not be determined.
HOUSE FLOOR #2, WAPANUCKET #8 — (Fig. 3,#2)

This large, oval structure measured 22 meters (66 ft.) north-south and 18 meters (54 ft.) east-west. It was outlined by sixty-eight (34 pairs) of post molds. Two of the peculiar entrances found in this period were present, one at the north and another at the south both facing toward the east. A great portion of the area within the walls was occupied by a pit about 1 meter (3 ft.) in depth, 10 meters (30+ ft.) north-south and 8 meters (24+ ft.) east-west. Two ramps from opposite the inner end of the entrances to the structure led from the ancient surface to the floor of the pit. Within the pit were eleven secondary cremation burials with red ocher and grave goods, (see, An Archaic Ceremonial Complex at Assawompsett, for details). Within the outer walls and about the perimeter of the burial pit were a series of eight large post molds 9.5 cm. (4 in.) in diameter by 41 cm (16 in.) in length, arranged in a rectangular pattern. It is assumed that these represent an interior roof support structure made necessary by the large roof. The posts of the outer wall average 24 cm. (9½ in.) in length and had an average diameter of 7 cm. (2½ in.) As in the other floor patterns at Wapanucket the majority of post molds occurred in pairs across the line of the wall. In a few instances groups of three or four molds were present. Within this structure at a point opposite the outer end of the north entrance a hearth appeared at a depth of 10 cm. (4 in.) below the yellow surface. This was an oval basin containing burned stones and charcoal. From it were taken several fragments of hematite ore and a number of charred acorns.

HOUSE FLOOR #3 AT WAPANUCKET #8 — (Fig. 2).

A third snail-shell type house floor, 16 meters

Fig. 3. ROCHESTER SITE AND WAPANUCKET 8 HOUSE FLOORS. 1, Rochester Site Test 4, House Floor 1; 2, Large Ceremonial House Floor 2, Feature 206, at Wapanucket #8.
in length (48 ft.) north-south and 14 meters (42 ft.) in width east-west appeared at this site. Thirty-nine of the wall posts were in the usual pairs across the line of the wall. The single entrance faced south and was shorter than usual, only 2 meters (6 ft.) in length.

An unusual but very interesting discovery at Wapanucket #8, which was not noted at Wapanucket #6, was the presence of the molds of poles and posts lying horizontally on the top of the yellow soil (Figs. 4 & 5). These appeared in groups to the north of House floors #1 and #3. Although the majority of the horizontal molds were incomplete, having been partially destroyed by tree roots and other modern disturbance, several appeared to be complete as evidenced by a sharpened point at one end and a crotch at the other. One such mold represented a pole about 6 meters (19 ft.) in length, two were about 4 meters long (12+ ft.) and one especially long mold measured 11 meters (33 ft.) in length, and had a basal diameter of 20 cm. (8 in.). Whether these were surplus unused parts of a structure or the remains of a destroyed house could not be determined.

Fig. 4. HORIZONTAL MOLDS, north of Floor 1 at Wapanucket #8.

The presence of ten house floors at Wapanucket all of which were of the same general pattern tends to confirm our thesis that the round or oval snail-shell construction was typical of the Late Archaic in New England. As will be related later in this paper similar evidence is present at other sites in the general area. This offers further support for the thesis.

In a series of seven radiocarbon dates on charcoal taken from pits, hearths and burials at the Wapanucket sites, all dates fall between 3500 and 4700 years ago (1500 to 2700 yrs B.C.) The charcoal is not directly from any of the post molds and the house floor dates are necessarily by inference. However, the total absence of any traits except those demonstrably of Archaic provenience, indicates to our satisfaction that all of the features at the Wapanucket sites are from that period.

Fig. 5. HORIZONTAL MOLDS, north of Floor 2 at Wapanucket #8.

HOUSE FLOOR AT THE ROCHESTER SITE (9) —
(Fig. 3, #1).

In an article entitled, Report of a Lodge Floor, Rochester Site Test #4, by Walter Thomas Jr., an-
other of these snail-shell type house floors is described. The description follows: "Twenty-two post molds on the perimeter [of a house floor] were found. Of these, ten were in pairs 30 cm. (12 in.) apart, and separated by an amazingly even distance of 42 cm. (17 in.). The remainder of the post molds conformed to the arc and distance, giving us an outline of a circular structure some 9 meters (30 ft.) in diameter. On the south side, additional post molds indicated a complex entrance. When the outline was completed the squares inside [the house] were excavated disclosing another group of post molds, six in number, all having the same diameter of 6 to 8 cm. (2 to 3 in.). This group developed the entrance into a recessed shelter type. A slight angle to some of these [post molds] indicated their use as braces, two of them being reinforced with stones packed around their bases . . . . The inside of the lodge was surprisingly barren of artifacts . . . . The post molds seem to indicate the use of saplings for framing. These were evidently burned to a point . . . . The average diameter of the posts was 6 cm. (2½ in.). The average depth of penetration into the yellow soil was some 10 to 20 cm. (4 to 8 in.), which, added to the above junction measure of approximately 15 cm. (6 in.), gave an overall length of 25 to 35 cm. (10 to 14 in.) that the posts were buried. The artifacts recovered from the site indicate that more than one culture period was represented. The site had been considerably disturbed by plowing so that it was almost impossible to establish the correct horizon for the Ceramic culture." . . . The conclusion was finally reached that, "a depth of 10 cm. (4 in.) below the grass roots or 16 cm. (6 in.) above the disturbed junction was a good level at which the Ceramic culture probably existed." The snail-shell pattern suggests that the floor was associated with the Late Archaic horizon.

SOUTH WOODSTOCK SITE (10) — (Fig. 6).

The South Woodstock site is located in the northeastern corner of Connecticut, in Windham County, approximately 14 miles from the Massachusetts and Rhode Island borders. The village site is situated between the towns of South Woodstock and Putnam on state highway #91. Mr. Arthur Basto excavated areas of the site from 1936 to 1939. In 1940 a party headed by Mr. Alexis A. Praus and sponsored by
Yale Peabody Museum continued the excavation and published the final report of the site in the Bulletin of the Archaeological Society of Connecticut. In this paper we are concerned only with the area excavated by Mr. Basto.

Attention is called to the following passage from the report which describes the technique used by Mr. Basto in the excavation of post molds. “Post molds were excavated after their diameter and location from the section stake had been taken. The depth, manner of termination [i.e. blunt or pointed,] and position [i.e. vertical or at an angle], were placed on record.” I take this to indicate that each post mold was so excavated as to reveal its vertical cross-section before being accepted as an actual post mold. As heretofore stated, this is, in the opinion of the writer, the only technique by which a true post mold can be recognized.

Over 70 post molds were found and recorded by Mr. Basto. They ranged from 2 to 6 inches (5 to 15 cm) in diameter, 80% falling in the 2 to 3 inch (5 to 8 cm) category. Almost half of these had a pointed base, and only 6 were driven into the ground at an angle.

In Fig. 6, a portion of the site map is reproduced from the report. In the report Mr. Praus calls attention to an arc of post molds in the upper left quadrant of the grid, about a fireplace which is labeled 4 B, which he says, “may represent the outline of a wigwam.” Praus also mentions seven post molds which form two sides of a right triangle located a few feet south of an arc of three post molds. Aside from these three groupings Praus says, “The remaining post molds were haphazardly scattered over the excavated site and did not fall into any recognizable pattern.”

Placing a copy of the Praus Map upon a blank sheet of paper and pricking through the post molds, leaving out all of the other features shown on the original map, a plan of post molds only was obtained. On this second map the three groups previously mentioned by Praus can be identified. In addition the outlines of one complete and one partial of the now familiar snail-shell pattern appear. These two house floors are not readily discernible on the original map but are obscured by other detail. This focuses attention upon the fact that many excellent site maps by their very detail are so cluttered up by hearths, pits and spots designating post molds, and further complicated by letters and figures that one literally cannot “see the forest for the trees.”

The Basto Site or the South Woodstock Site resembles the Rochester site in that both appear to have a multi-component content. The presence of some clay pottery in limited amounts makes it probable that a Ceramic culture of later provenience was superimposed upon an Archaic horizon. The South Woodstock site was excavated long before the advent of radiocarbon dating so that we must depend upon typology and analogy to place it chronologically. In the opinion of the writer the typical pattern of the snail-shell house floor indicates that this feature is of Late Archaic provenience.

**HOUSE FLOOR FROM THE AULT PARK SITE (11) — (Fig. 7).**

The Ault Park Site is located five miles west of Cornwall in eastern Ontario, Canada, on the edge of the Long Sault Rapids of the St. Lawrence River. The site has now been flooded by the St. Lawrence Seaway. It was excavated by Dr. Emerson of the National Museum of Canada. The accompanying illustration represents a house floor from that site. While this pattern is not typical of the snail-shell type there is a suggestion of the familiar pattern. If a few post molds were missing the typical pattern might appear.

Only one pair of posts are shown. Culturally the site is largely Middle Woodland (Ceramic) or Point Peninsula 2 variety. The house floor is included here only as a possible bit of evidence to indicate that the snail-shell pattern may have been present in early Woodland in some fringe areas.

**CONCLUSION**

From the evidence cited, the writer has concluded that the typical house pattern of the Late Archaic in New England has been discovered in the snail-shell house patterns represented by ten floors at
the Wapanucket sites in Middleboro, Massachusetts. This conclusion is strengthened by the appearance of similar structures at the Rochester site and at the South Woodstock site.

Houses of the Late Archaic period ranged from 12 to 22 meters (36 to 66 feet) in diameter, and were round or oval in plan. The walls were constructed by pairs of posts driven on radial lines from the center of the floor, the post being on opposite sides of the house wall from 18 to 20 cm. (7 to 8 in.) apart. The pairs were spaced around the perimeter of the floor about 1 meter (3 ft.) apart. Sometimes the lineal spacing is less, near the terminal ends of the overlapping walls. Occasionally groups of three or four posts appear instead of the usual pair. The smaller structures were probably used as dwellings and were provided with a single entrance. (Fig. 8). The larger houses were ceremonial in nature and sometimes had two entrances.

We have been conditioned to think that the semi­nomadic people of Late Archaic times did not build substantial houses, but, that they, like the Shoshone of the Great Basin, were contented with mere piles of brush to shelter them from the elements. There are numerous passages in the literature to that effect. Many writers, in the absence of definite data have stated that in all probability the houses of the Archaic "were of a flimsy or transitory nature."

We now know that the Late Archaic peoples were capable of building quite respectable dwellings. The evidence indicates that Late Archaic structures were larger and more substantial than those of the following Woodland or Ceramic period.

The villages of the Late Archaic period known to the writer are located in exposed places, where their presence would be obvious for a considerable distance. There seems to have been no attempt to seek concealment. For example, the Wapanucket village was situated on the crest of a sand dune some thirty feet above the level of Lake Assawompsett. The smoke from the camp fires in this location could be seen for many miles across the lake. It has been suggested that these Late Archaic people possessed little of value, no stores of food that might incite the envy of their neighbors. Consequently there was little warfare or raiding in their time and no need for concealment. In Woodland times, however, when stores of maize and other staples were available, it became desirable to conceal the presence of a settlement as much as possible. Because of this the houses were smaller and were often enclosed within the walls of a stockade. Is it possible that the plan of the Late Archaic house with its narrow enclosed entrance became the plan of the Woodland stockade? Willoughby (12) referring to the villages of the Woodland period, says, "Most communities have as their head-

Fig. 8. SNAIL-SHELL HOUSE, from Diorama at the Bronson Museum. Suggested reconstruction of one of seven house floors excavated at Wapanucket #6.
quarters one or more fortified enclosures, where people dwelt at certain seasons, or into which they moved in times of danger. The larger forts consisted of a score or more of cabins enclosed in a palisade. The smaller ones were forty or fifty feet in diameter and contained a single house. The construction of the forts was the same whether they contained one house or fifty. The smaller forts had one entrance while the larger had two, one on each side, formed by overlapping the ends of the stockade leaving a narrow passage between them. During the early Colonial period there were numerous Indian forts in various sections of New England.” Except that the walls of these forts would be represented now by a continuous line of post molds set close together, the plan would be identical to that of the larger snail-shell house of the Archaic.

The houses of the Woodland period found within the forts were small and round, closely resembling a half hemisphere in appearance. Morton says, “They gather Poles in the Woods and put the Great end in the ground, placing them in the form of a circle or circumference and bending the tops on them to form an Arch they bind them together with the Bark of Walnut trees which is woundrous tuff so that they make the same round on the top.”

Verazano, writing in 1524 tells us, “We saw their houses made in circular or rounde forme 10 or 12 foote in compasse . . . . They move the forsaid houses from one place to another according to the commodite of the place and season, wherein they will make their abode and taking only the cover, they have other houses builded incontinent. The father and the whole famillie dwell together in one house in great number; in some of them we saw 25 or 30 persons.”

According to Roger Williams, “two families will live comfortably and lovingly in a little round house of some fourteen or sixteen feet over.”

The same sources furnish information concerning the materials which were used for covering these “little round houses.” As there has been little change in the environment from Late Archaic times, it is safe to assume that this also applies to the house coverings of those more ancient structures.

Gookin says, “The best sort of their houses are covered very neatly tight and warm with the barks of trees slipped from their bodies at seasons when the sap is up; and made into great flakes with the pressure of weighty timbers when they are green; and becoming dry they will retain a form suitable for the use they prepare them for.”

William Wood adds that, “the bark was fastened to the framework so that the upper pieces overlapped the lower. Poles were sometimes laid over the bark to aid in keeping it in place. Lodges thus covered, deny entrance to any drop of rain, though it come both fierce and long, neither can the piercing North wind find a crannie through which to convey its cooling breath, they be warmer than our English houses.”

Gookin mentions the use of mats woven from the leaves of cat-o-ninetail flags but comments, “mat covered lodges were indifferent, tight and warm, but not as good as those covered with bark.”

Diamond Jeness (13), speaking of the Indians of eastern Canada says, “when there was no longer sufficient wood for their fires, or when the land, long tilled, produced scanty crops, they abandoned their villages entirely and erected new homes in another locality. Any dwelling that provided tolerable shelter for ten or fifteen years would satisfy their needs; to expend time and labor on buildings that would outlast this period was useless. Naturally they transported only the coverings of the dwellings — whether bark, skin, or rush mats — since they could procure new poles at every halting place. Each kind of covering had its advantages and disadvantages. Skin was wind-proof, non-inflammable, and easily rolled into a bundle; but when it was rain soaked it could not be dried under twenty-four hours. Bark was rain proof, but it became brittle in cold weather and required warming before it could be rolled or unrolled. Rush mats, if skillfully made, also shed the rain and made warm lodges in the winter, but they were heavier and bulkier to transport than the rolls of bark. The Iroquois usually used cedar bark but it was so inflammable that many preferred the bark of elm or ash.”

The use of skins or hides for covering the large houses of the Late Archaic period would not seem too practical. The large number of hides required and their great weight in the case of a forty to sixty foot house would seem prohibitive. It seems more probable to assume that bark or rush mats would have been used.

Bronson Museum
March 1970

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The Lone Pine site is situated on a high ridge overlooking the beautiful Connecticut River Valley. Located in the town of Rocky Hill, eight miles south of Hartford, Conn., it occupies a relatively small flat area on mile-long Shipmans Hill. This hill was named after a famous tavern that once stood at the southwest end of it in colonial times.

The site lies about 50 feet above sea level on a basalt (traprock) shelf, which drops off rather precipitously to the valley below. Here, Goff Brook flows in a southerly direction, emptying into the Connecticut River some half mile distant. On the north side of the site is a spring with a good flow of water through all but dry seasons of the year; doubtless it had a permanent flow in aboriginal days (Fig. 9). Few places along the river command a more impressive view of the valley, with a vast panorama stretching from vistas of Hartford and Glastonbury to far-away Mt. Tom, 20 miles up the river to the north.

Back in 1962 fill was removed from the hill for the foundation of Route 91, which now passes about 2 miles to the north of the site. At that time much of the top soil was removed from a large section of the easterly slope, leaving the traprock base exposed in many places. As a result of this road building disturbance, archeological evidence was brought to light in the form of projectile points, knives, scrapers, etc., which the writer and his friends picked up. This led to trench and pit testing, in which flakes and artifacts occurred in encouraging numbers. These recoveries appeared on the increase near the bulldozed area at a place, which had been left largely undisturbed, except for a pile of topsoil that had been pushed off from a section of it. Enough land at this spot had been left undisturbed to make it appear worth excavating.

Fig. 9. LOCATION MAP of the Lone Pine Site.
Another factor that made the place favorable for a dig was the realization from all available evidence that the land had never been plowed, always an important asset for accurate recording. Eventual excavation proved this to be true, but showed that other minor disturbances had occurred over the years, such as the burrowing of rodents and the upturned earth from wind-thrown trees. Large decaying tree stumps were numerous, attesting to the fact that lumbering operations had taken place more than once over the past. But that which more than anything else attracted one's attention to the site was an ancient pine tree with a ten foot girth. It stood alone at the southeastern extremity of the site like a sentinel on duty, suggesting a fitting title for the site.

A decision was made to excavate at this location and work commenced in the Spring of 1963, and was terminated in 1969. Grateful acknowledgement goes to the former owners of the land, the John Caruso Brothers of Rocky Hill, for granting permission to excavate the area and retain for study all artifacts recovered. Their generosity has enabled another part of this region's prehistory to be recorded for posterity. Also thanks go to all those members of the Archeological Society of Connecticut, who participated in the dig. To these members, the Lone Pine site has provided a valuable educational experience, which fortunately took place before the site fell to the march of progress, with high rise apartments soon to appear. Further, the writer is indebted to Dr. W. S. Fowler of the Bronson Museum for his restoration of the site's stone bowl; his assistance in the preparation of this report; and for his illustrations of site recoveries.

SOIL STRATIGRAPHY

There were essentially three well-defined layers of soil at the Lone Pine site. From the surface down to a depth of about 12 to 14", occurred the usual layer of loam, the first half of which was sterile. The lower half contained artifacts, revealing a moderate degree of occupation.

At the bottom of the loam appeared about an inch thick wavy line of mixed loam and subsoil, called Junction. Directly below this occurred a compact light brown subsoil, which extended down another 10 to 14". Throughout the first half of this layer were found the heaviest concentration of artifacts.

Underlying the light brown subsoil was a sterile layer of sandy gravel, approximately 8 to 10" in depth, below which existed a solid basalt base, which outcropped all along the exposed eastern side of the ridge. It was this stone material that the aborigines utilized extensively for the making of their larger tools such as axes, gouges, and celts. In more recent times, around the turn of the century, a traprock quarry was opened at the southeastern end of Shipmans' Hill, and once more the basalt of the ridge was put to use.

METHODS OF EXCAVATION

In laying out the site, first a 185 foot base line was marked along a dirt road, which ran north and south on one side of the area to be dug. Another 85 foot line was marked out at right angles to the base line, and from this were plotted 5 foot squares to cover the area. These were labeled, following the usual practice, numerically in one direction and alphabetically in the other.

During the six years spent on this project, 10,875 sq. ft. were excavated and a total of 739 identifiable artifacts, perfect and fractured, were recorded. Numerous refuse pits and stone hearths were encountered and recorded, but no post molds were identified.

Excavation was performed by means of shovel and trowel. The former was used to remove sterile fill, while the principle work of excavating was performed by troweling. This was confined to 2 inch width horizontal shelves or benches, which facilitated more accurate vertical measuring. Each artifact, as it was uncovered, was recorded on 6 x 6" file cards, one card being used for each 5 foot square. Both horizontal and vertical measures were made to the nearest inch. Vertical measurements were taken from the artifact to the approximate center of Junction, and from the artifact to the top of the ground, with a note made of the soil layer and square in which the artifact occurred. These records were then transferred to a master chart for the purpose of accumulation of data, and for study as the work progressed. While a large number of artifacts were found fractured, only those which could be definitely identified were recorded.

ARTIFACT DISTRIBUTION AND CULTURE IDENTIFICATION

There were two occupational horizons at the site, based upon the changing of artifact types, beginning at 7" below Junction and extending to 5" above it.

Lower Zone — Late Archaic (Stone Bowl Age). While a few recoveries were made as low as 7" below Junction the heaviest concentration of this horizon commenced at 3" below in subsoil, and extended to 2" above in loam. This Lower Zone had the greater quantity of artifacts suggesting a more extensive use of the site during the earlier days of its occupation.
Also, as proof of this, all stone hearths in situ and most refuse pits were encountered in this zone, as well as several caches of quartz blanks, indicating implement-making activities.

The major culture determinant of this zone was the presence of stone bowls of steatite, represented by 43 bowl fragments. There were enough in one group appearing near a hearth to permit restoration of a small unique bowl, to be fully described further along in the report.

**Upper Zone** — Ceramic (Woodland). Artifacts identified with this occupation appeared within the span of 2" above Junction up to 5" above, in the loam. Recordings were relatively light for this later use of the site, although they included well-defined types of implements like those associated with the Ceramic era at other sites in Rhode Island, Massachusetts, and Connecticut. But the chief recovery in this zone, to distinguish it from the Lower Zone, was the appearance of Stage 1 potsherds, beginning at 2" above Junction. They will be fully described in the section dealing with artifact recoveries.

**SITE FEATURES**

**Refuse Pits.** The level of origin of the first pits encountered appeared in the Upper Zone. Few in number, only one contained noticeable refuse, such as decomposed shellfish remains, and a few fragmented and unidentified animal bones. Other pits contained fragments of charcoal, minute calcined bone bits, and a few Small Stem points of quartz. Several more pits seemed to start in the lower part of the Upper Zone and to extend into the subsoil. While the origin of these pits was somewhat in question, it is presumed that at least, one, belonged to the Upper Zone. In it occurred a unique clay disc, to be fully described in the section dealing with recovered artifacts.

In the Lower Zone most pits had their level of origin just below Junction in the subsoil. Some were quite large in size with diameters that varied from 2 feet up to as much as 6 feet, while depths ran from a few inches, down to the basalt bedrock. Contents consisted of some charcoal, occasional bits of calcined bone and artifacts of Late Archaic types to be defined further on. It should be noted here that more artifacts seemed to occur immediately around the pits than within them.

**Stone Hearths.** As previously stated, these hearths were discovered exclusively in the Lower Zone. While some stones appeared out of place, the hearths did exhibit rough flat-faced fire-cracked stones, which covered their floors for the most part, with some cobbles mixed in. In general, they appeared irregularly circular in shape with some overlapping of one hearth into another. Stones were in a scattered condition, as though they had had no prearranged position in the hearths' construction. They contained some charcoal and calcined bone, much the same as the pits. Their depths varied anywhere from about Junction to as deep as the bedrock itself.

**Caches of Quartz Blank s.** Several caches of worked quartz pebble blanks were uncovered in the Lower Zone, seemingly indicative of a source of semi-finished stock for making points, knives and scrapers.

**ARTIFACT RECOVERIES BY ZONES**

**Stone Bowl** — Lower Zone. Of the more significant recoveries from this Late Archaic zone were steatite fragments of stone bowls, known to be a product of this culture period. In general, they were relatively thin, indicating that they came from small bowls or cups; no fragments of large bowls were recovered. In the case of 4 fragments, drilled holes appeared, possibly indicating repair attempts of cracked bowls.

As previously mentioned, the remains of a small bowl without lugs appeared near a hearth, which eventually was restored, and is illustrated (Fig. 10, #1). It exhibits several interesting traits, which are worth noting, as they seem to have a bearing upon its appearance at the site. Fashioned from a small block of steatite, this bowl shows careful workmanship, in that its walls have been scraped down to a uniform 3/16" thickness, which are finished smooth inside and out. It measures about 7" long, with a height of 6", a condition rarely ever seen in small bowls of this size. Its rim is simply decorated by casual notching, and at one narrow end the rim is cut down in such a way as to form a spout for the convenient pouring of liquids. The bowl's base is blackened; that which appeared to be a thin layer of charred organic material still clung to it when first recovered, apparently indicating its use over a fire as a cooking utensil.

About 30% of the fragmented remains of another small bowl with similar traits was found, but without a charred blackened base. However, too few fragments were recovered to make its restoration possible.

**Grooved Gouge** — Lower Zone. There were three specimens of this implement located in the Lower Zone, which confirms similar evidence at other sites, where this tool has been held to be diagnostic of the Late Archaic. In the case of this
Fig. 10. ARTIFACTS FROM LOWER ZONE, Lone Pine Site. 1, Stone Bowl; 2, 3, Small Triangular; 4, 10, 17, Small Stem; 11-14, Side-notched; 15, Side-notched; 16, 24, Corner-removed; 18-24, Corner-removed; 25-27, Side-notched; 28-32, Eared; 33, 34, Corner-removed; 35-39, Stem scraper; 40, Stem Knife; 41, Flake Knife.
site's specimens, the blade hollowing is slight, and the lateral groove over the stem's back is just discernible. However, all specimens found have carefully worked bits, which on 2 are highly polished (Fig. 11, #4, 5). The bit of the third specimen shows wear from much use, and appears to have been reworked.

**Full Grooved Ax — Lower Zone.** Of this well-known tool, 4 specimens were uncovered, all in the Lower Zone. This again supports evidence from quarry and habitation sites elsewhere, which places this tool in the Late Archaic, of which apparently it is an important diagnostic. Except in the case of the illustrated ax (Fig. 11, #3), the remaining three recoveries show extreme use, as indicated by their chipped and reworked bits.

**Grooved Adz — Lower Zone.** Recoveries of this tool, of which there are 7, all came from the Lower Zone. Their bits differ from those of gouges in that they have flat rather than hollowed faces. Also, they have much thicker stems throughout, which taper rather sharply to a polished straight edged cutting bit. However, like gouges they have a groove across the stem's back for hafting, and, similar to all large implements at this site, are made of basalt (Fig. 11, #6). This is the first site, so far as is known, at which this Grooved adz has been found closely associated

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![Figure 11. LARGE IMPLEMENTS FROM LOWER ZONE, Lone Pine Site. 1,2, Celt; 3, Full Grooved Ax; 4,5, Grooved Gouge; 6, Grooved Adz.](image-url)
with Late Archaic deposits. Therefore, it now seems valid to consider it a diagnostic of this culture age. Besides the 7 well-defined specimens, there appeared 4 roughly chipped ill-defined basalt blanks with adz proportions, which suggests that they may be semi-finished ones in the process of manufacture.

**Celt. — Lower Zone.** Only 2 specimens of this implement were found; both are illustrated (Fig. 11, #1, 2). They have a sharp ground bit, each with the cutting edge centrally located. Both are made of basalt like all the other large tools, and were uncovered in the Lower Zone. While they have ungrooved stems, like all Celts, it seems likely that they could have been hafted just as well. This find seems to indicate that Celts were a part of the Late Archaic, beside the Ceramic, where they have also been found at other sites.

**Pitted Stones — Lower Zone.** These artifacts were all recovered from the Lower Zone and are of one or two varieties. They are usually made of relatively soft stones. One exception displays a conglomerate of quartzite with green inclusions. One of its two flat faces has a pit centrally located, while the other is quite flat showing considerable wear, as if used as a Muller. (Single Pitted stones appeared at the Ragged Mountain quarry in Connecticut in such a way as to suggest their use there as anvils for cracking hickory nuts — Ed.) It seems likely, therefore, that Single Pitted stones may have occurred whenever nut cracking was required, and that the site's specimen with one ground face might have served a dual purpose in the final mashing of nuts in preparation to be used in cooking.

**Muller and Pestle — Lower and Upper Zones.** Quartzite cobbles with a worn face on one side only, 17 in number, are thought to have served as Mullers. They appeared more frequently in the Lower Zone, although they were present in the Upper Zone, also.

Recovered from the Lower Zone are 3 rudely worked columns of basalt about 8' long, which have polish as though from wear at each end. Although ill-defined, they appear to be of the short type of Late Archaic Pestle, referred to by Fowler in the Massachusetts Society's Implement Classification, as appearing in Late Archaic culture recoveries, probably for the grinding of nuts before the arrival of maize.

**Hammerstone — Lower and Upper Zones.** Numerous Hammerstones of all sizes, 32 in number, usually made of quartzite, appeared in both zones. These were often found in association with finished or semi-finished projectile points at the site, and with quantities of flakes, suggesting their use as percussion tools.

**Stem Scraper, Stem Knife, and Flake Knife — Lower Zone.** With but few exceptions the major type of scraper at the site was the stem variety. All specimens were found in the Lower Zone. Most of them are made of quartz and vary from very small to medium sized ones (Fig. 10, #35-39). One unusual specimen is of the asymmetrical kind, with its expanded bit bending obliquely away from center (Fig. 10, #36). It is made of hard chalcedony, a translucent silica stone uncommon to this area. (The asymmetrical shape is believed to have been intentional for the purpose of providing a suitable method of attaching the stem to a handle, with the bit obliquely positioned so as to allow a more effective application in scraping — Ed.) A large flint flake, retouched along one edge also appeared in the Late Archaic zone, and is believed to be what has been referred to as a Flake knife, (Fig. 10, #41). Still another recovery is a good example of a Stem knife (Fig. 10, #40). While all of these tools were uncovered in the Lower Zone, they could just as well have appeared in the Upper Zone, had its occupants been more numerous. For such implements have been found frequently at other sites in both zones, and do not seem diagnostic of either period.

**Drills — Lower Zone.** There were 7 T-base drills recovered, all from the Lower Zone, which agrees with similar evidence at other sites in Rhode Island and Massachusetts (Fig. 10, #16). Apparently, this type of drill was used extensively during the Late Archaic, and is held to be diagnostic of that age.

**Pottery — Upper Zone.** All told, there were 14 potsherds recovered, all from the Upper Zone. As stated before, the first one to appear was at a level of 2" above Junction. A study of these sherds indicates that they belong to Stage 1 pottery, since they show cord-marking on both sides of the ware; are relatively thick with coarse mineral temper; and, as shown by the illustrated sherd, tend to separate along coiled edges, where the clay was weakly joined together (Fig. 12, #16.). All sherds are insufficient in size to show the shape of the vessels they belonged to, and no rim sherds were found to aid in this project.

**Clay Disc — Upper Zone.** Two specimens of this problematical object were uncovered in the Upper Zone. One had a normal deposition, the other came from a pit apparently originating in the Upper Zone; the top view of one is illustrated (Fig. 12, #17). These discs measure about ¾" in diameter, and have one flat face while the opposite side is convex. One contains a circumferential ridge giving it the appearance of a button. They are not natural concretions of
indurated clay, but rather they seem to be carefully made of fire-hardened clay without temper. It is tempting to speculate that they may have been gaming discs of some kind, used by the Ceramic occupants of the site. There seems to be little or no knowledge about such artifacts in the Northeast, and information is solicited.

Hatchet Club — Upper Zone. A single specimen of this kind of club appeared in the Upper Zone and is illustrated (Fig. 12,#18). It has a hatchet shape, which conforms to this type of club, and is made of a hard-packed sandstone. Its occurrence in the Ceramic zone, of which it is thought to be diagnostic, confirms similar recoveries at several Rhode Island sites.

Shaft Scraper — Upper Zone. Of this well-known tool, only one was identified and this came from the Upper Zone, although it has appeared in all culture zones at other sites, and is not thought to be diagnostic of any one of them. It is made of quartz and has a concave edge worked on one side (Fig. 12,#15). This tool is presumed to have been used in woodworking, for scraping spear and arrow shafts.
down to desired proportions.

War Club Prong — Upper Zone. In this category, 7 specimens were located, all in the Upper Zone. They are made of quartz except the one illustrated, which is of felsite (Fig. 12 #20). Conforming to the recognized shape with a prong at one end, they are thought to have been set in the end of handles, and to have served as clubs in warfare.

Stem Spades — Upper Zone. In this class of implements 8 specimens were encountered, all in the Upper Zone; one more appeared just below, probably slightly out of place. They are all made of semi-hard sedimentary stones such as sandstone. The bit end is usually chipped into an oval shape, while the opposite end is shaped as a stem, presumably for a hand grip, or for hafting, whichever was desired (Fig. 12, #19,22). They are believed to have been used as pit-digging tools, and may have been employed as such even at this site, where the subsoil was of a compact rocky consistency. Similar tools have frequently appeared at other sites, usually in the Ceramic zone as here, and are thought to be diagnostic of this culture period. (Late Archaic digging tools are found to be less sophisticated and usually do not hold to any definite shape — Ed.)

Pendant — Upper Zone. Two pendants, small in size, were taken from refuse pits of the Upper Zone. Both are made of flat schist pebbles, and have one small perforation near the edge. They are not incised or otherwise decorated (Fig. 12, #21). Pendants, quite generally, are reported from the Ceramic occupation at other sites, and are believed to represent this last culture period more than any other.

Projectile Points — Lower and Upper Zones overlapping. Type names are derived from the Massachusetts Society's Stone Implement Classification, Bulletin, Vol. 25, #1, as used also for the larger tools. Point shapes will only be briefly defined here. More complete descriptions may be had from the classification. Each point type will be noted in the zone, of which it is believed to be diagnostic. Interestingly, this site's zone-finds support similar point-culture affiliations as found at other sites. Representative exhibits are illustrated (Figs. 10 and 12).

In the first group to be considered are point types which occurred in both zones. These are as follows: Small Stem — 273 recoveries, less than 1 ½" long, they have a relatively thick cross section with little attempt at base thinning; Corner-removed #3 — 123 recoveries 1 ½" long or more, usually they have thick short stems, generally well-proportioned; Small Triangular — 54 recoveries, they measure 1 3/8" or less across the base with lateral sides that appear slightly convex, when from the Lower Zone, (type #4), and straight to slightly concave in the Upper Zone, (type #5), as well as some that are somewhat elongated, (type #6), in both zones; Side-Notched #5 — 25 recoveries, one was from the Upper with the balance from the Lower Zone, showing only a slight overlapping. This point has a relatively broad blade with well-defined side notching.

Projectile Points — Lower Zone. In the second group of projectile points to be discussed are those appearing only within the Lower Zone of the Late Archaic. They were diagnostic here as they are elsewhere, Corner-removed #7 — 15 recoveries, including several large spear points, have relatively broad blades with broad truncated stems, generally with slightly sloping sides. Four specimens were in close association with stone bowl fragments; Side-notched #1 — 7 recoveries, always quite broad bladed, generally they occurred in large sizes, with a contracted relatively narrow stem widely side-notched; Side-notched #6 — 34 recoveries were made throughout the Lower Zone, where several appeared in close proximity to stone bowl fragments. Relatively narrow in shape, their lateral sides tend to be slightly convex, and wide side-notching terminates in a stem base that often is slightly concave. This point has its counterpart in Ritchie's Orient fishtail of Long Island, referred to again in the conclusion that follows.

CONCLUSION

Evidence as presented from the Lone Pine site by virtue of its stratigraphy, which seems quite reliable, reveals two well-defined culture periods. They are typologically recognized as the Late Archaic — the first occupation at the site — and the Early Ceramic (Woodland) that followed. A much heavier concentration of artifacts in the former than in the latter suggests, perhaps, that more significance was attached to the site by its earliest occupants for activities, which now are but imperfectly understood. However, some reasonable postulations may be made from the evidence unearthed.

The first comers to the site were stone bowl makers of the Late Archaic period, as evidenced by the steatite bowl fragments left behind. More than this, it is probable that this hilltop location was something other than a permanent village, since evidence of large stone bowl kettles was nil, only small bowls being present. However, heavy settlement remains in the Lower Zone indicate considerable use of the site, which should be related, probably, to the immediate surroundings. Here were to be found extensive outcrops of basalt along the side of the ridge. This was a highly prized stone material used in the making of many large tools, of which 5 kinds were
present in considerable number in the earliest zone of occupation. Not only is this sizeable quantity of heavy tools unusual — most sites are limited to only meager recoveries of such implements, more than one or two being a rarity — but at the Lone Pine site along with axes, adzes, gouges, and celts, many of which were found in an undamaged condition, there appeared numerous semifinished basalt blanks. All of this seems to represent a display of basalt tool-making on more than an infrequent make-as-you-need basis. In more precise terms, the occupation here, besides hunting for survival, appears to have concentrated to a considerable extent on basalt tool-making.

Another industry might also have been present because of this tool-making activity, as one thing often leads to another. It is more than likely that at some nearby location dugout canoes were being made with the tools from the site, and the exact spot — usually a large area of charcoal accumulation — awaits discovery.

To carry our investigation still further, it is possible to say with some assurance that the site's occupants comprised the whole family, since occurrence of hearths and stone bowls is definite proof of the presence of women. Further, because the bowls are small, they doubtless served well for travel, and seem to indicate the movement of family groups to and from the site for short periods of occupancy. The adjacent spring of fresh water on top of the ridge was reason enough for the continued use of the camp over perhaps a long span of years.

In the Upper Zone, the presence of pottery indicates a change in the social life of those days, but probably by descendants of the former occupants. For the overlapping of several kinds of projectile points tends to suggest racial continuity. Another piece of evidence also points to a culture in transition. This is the appearance in the Late Archaic zone of Sidennotched#6 projectile points in quantity. (Ritchie's fishtails). In his book, The Archeology of New York State, pp. 163-177, Ritchie considers these points as a trait of the Orient culture of Long Island and places them in a time of transition from the pre-ceramic Late Archaic to the Early Woodland (Ceramic) stage, which was becoming established in that area toward the close of Orient times. Stone bowls, which Ritchie says probably had their source in southern New England quarries, such as those existing near Providence, R.I., and Portland and Bristol, Conn., were found at Orient associated with sherds from early pottery.

At the Lone Pine site evidence of a similar kind provides reason to believe that the same transition from Late Archaic to Ceramic times was taking place, not necessarily confined to the site, but rather to that region of New England. As to the source of the site's stone bowls, quarries at Portland, Bristol, Ellington, and at Ragged Mountain in the People's State Forest lie only some 25 miles or so distant and might well have supplied the steatite.

Southbridge, Mass.
December 6, 1969
The occupational area of the site extends approximately 1,500 ft. by 250 ft. along the south side of the tributary of the southwestern branch of the Rancocas Creek. To the south the site is bordered approximately 200 yds. removed by the old Tuckahoe Stage Road; to the east by farm houses; and to the west by a housing project called Heritage Village.

In August of 1966 Milan Savich and the writer dug 6 test pits in the garden just northwest of the farmhouse. This area was in the open and was wind-blowen with no stratification. The test pits produced 14 stone artifacts and 9 potsherds. On September 4, 1967, we dug another test pit 310 yds. west of the farmhouse, which showed distinct strata. This pit yielded post molds, large points, and numerous chips; and because of this showing was included in Excavation 1. This excavation covered an area of 1,250 sq. ft. Excavation 2 was opened 100 ft. east of the datum stake of Excavation 1, and as of December, 1968, has extended over an area of 3,795 sq. ft., in which were found the burials.

SITE STRATIGRAPHY

The humus in Excavation 1 in area A-4 on the ridge has a depth of 10" with a reddish-brown sand forming the second level, which averages 9" in depth. Directly below, level 3 had a greenish-gray sand content, which extended about 4" in depth and rested upon a clay pebble base of undetermined thickness. The strata in area A-1, for example, had 10" of humus resting directly on the greenish-gray sand of level 3 with a thickness of 9"; this shows a variation from A-4 with absence of the reddish-brown sand of level 2. Square A-1 slopes toward the wooded area bordering the stream. Excavation 2 proved to have about the composition as area square A-4 in Excavation 1. Dr. Steven Toth, Professor of Soil at Rutgers University, processed soil samples, resulting in a reading of PH of 6.6 to 6.3 in the occupational zone.

OCCUPATIONAL EVIDENCE

Pits. In the 1967-68 season 14 Woodland (Ceramic) refuse and/or fire pits were uncovered. Also, there appeared 35 Terminal Archaic-Early Transitional pits with their respective midden material. These pits will be described individually in the final report as well as 5 stone hearths.

Caches. In Excavation 1 only one Woodland cache of grinders or Mullers was uncovered, but in Excavation 2 there were 4 recoveries of the same period excavated. Of the Terminal Archaic-Early Transitional period in Excavation 1 there were only 2 caches found. Shaft smoothers composed the contents of one, while Hammerstones and a reworked gouge were in the other. In Excavation 2 there were uncovered 18 caches, in which appeared Mullers, Hammerstones, Wing atlatl weights, Celts, finished and unfinished points, Pestles, and Shaft smoothers.

Burial. One osseous burial was found in Excavation 2 in an extended position. It lay at a depth of 12" from the present surface. The bone condition was fairly well preserved, but at this shallow depth, a plow had cut through the burial about every 19", and most of the cranial portions were lost except for a few fragments and two teeth. These were the first and third molars, of which the crown of the first molar was completely worn away. Also some wear was noted on the third molar, indicating age. Grave goods consisted of a cache of deer tines or points, which rested on the wrist and forearm of the left arm. The body was buried in shallow refuse containing charcoal stains, deerbone fragments, potsherds, and jasper and argillite chips.

Cremations. In Excavation 2 were found the remains of 41 cremations in the form of secondary burials, of which at least 2 were multiple interments. Twelve interments were in pits of a refuse nature, or possibly back fill. The rest were interred in small pits just large enough to receive bone fragments; only the soil within the fragmented bone area was stained.

Cremation burials and offerings consisted of: 10 secondary burials containing Wing atlatl weights; 1 secondary burial with a pair or Eocene fossil shell molds; 5 secondary burials with Whetstone or sharpening stones; and other secondary burials containing various types of points, knives, chipped adzes, a Full Grooved axe (celt-like), and several drills. One interment had a stone flaking tool in the back fill.

Illustrations of 3 of the secondary burials containing Wing atlatl weights are shown, with some of the recovered artifacts appearing in position as uncovered (Fig. 13).

Feature 44 was a small interment, which contained a considerable amount of calcined bone fragments. Its ceremonial artifact offerings consisted of a crescent-shaped Koens-Crispin variety of atlatl weight [Wing type]. It was made of light brown steatite with red and yellow colors appearing throughout. With this artifact was a crude plain-stemmed argillite point in the upper right hand corner.

Feature 55 was a large pit, 10 ft. in length. It contained 4 different cremations with a considerable quantity of calcined bone in each. The offerings consisted of the following styles of Wing atlatl weights: 1 grooved, 3 drilled, and 1 drilled and mended. Also included were 1 chipped adze, 5 right angled-stemmed argillite points [Corner-removed#7], and 1 Whetstone. Illustration shows the southern end of the pit and one cluster of offerings.
Fig. 13. SECONDARY BURIALS, features 44, 55, and 62, Savich Farm Site, New Jersey. Cuts show burial goods in positions as excavated.
Feature 62 represents a cremation of great importance, revealing a small quantity of calcined bone fragments, a slightly used Wing atlatl weight of banded slate, a Full Grooved axe (celt-like of sandstone), and 2 large points of argillite with different style bases. Cremation deposits, such as these, are of a secondary interment type; the crematory, or crematories are yet to be discovered. Red ocher was used but only in very slight proportions, sometimes only a few grains in certain cremations. However, one large pit contained a great amount of this powdered ocher but only a small amount of cremated bone.

STONE IMPLEMENT INDUSTRY

Of the 1,536 catalogued artifacts recovered, 350 of them were complete projectile points and another 783 were point fragments. Sixty-five per cent of the points were spearheads, if you use the 2½" scale as a guide; but 90% of these points would be javelin or spearheads, when consideration is given to stratigraphy or point typology. Many of the large points appear to have a similarity to those from the New Jersey Koen-Crispin site. A few Small Triangular points were found of chert, flint, jasper, and argillite, in that order of frequency. Only a couple of side-notched points, and a fishtail point were recovered. Uncovered were 54 stone drills of wide base [T-base] and secondary types. Also, there have been found, so far, many scrapers of the small thumbnail and side types. One complete and 12 axe fragments have been found. Celts and adzes were represented only in fragments except for one small chipped celt with a polished blade. Besides these recoveries, 6 small Pestles were found, of which one was used as a Hammerstone and then used as a Shaft smoother. The team of excavators has uncovered 35 complete hammer or rubbing stones and over 187 fragments. These totals do not include feature artifacts totaling about 300, while 30 squares have not been catalogued at the time of this writing. Unquestionably, the most significant artifact in quantity and importance is the Wing atlatl weight, of which a total of 25 complete and 15 fragmented specimens have been unearthed, including those from cremated burial offerings. Finally, 108 Shaft smoothers were sifted out of the top soils and sub-soils.

CERAMIC RECOVERIES

Of the potsherds found, most of them are small and have come from Excavation 1. However, it is known from surface collecting that this excavated area was located in the Woodland (Ceramic) period section of the entire site, as indicated by its Small triangular points. In the final report the Transitional and Woodland potsherds will be fully described. Work is continuing this season of 1969, and our sincere thanks go to the University of Pennsylvania Museum, Umami Chapter members, University of Delaware Anthropology Club, and local historically-minded individuals.

Lindenwold, N. J.
July 10, 1969
tensive pipe-making evidence appeared. This leads to the belief that some sort of concentration of the stone pipe industry took place at Oaklawn, the reason for which is still not understood.

However, because of the existence of this pipe activity at Oaklawn, it seems only natural that stone pipes and pipe-making remains are in evidence on Rhode Island camp sites. These site recoveries reveal steatite and chlorite being used with qualities comparable with like stones occurring at Oaklawn. The further one goes away from Rhode Island into other regions of New England the scarcer becomes stone pipe evidence. This may suggest that for some unknown reason there existed over this northeastern area a more or less universal dependence upon Oaklawn for the procurement of stone pipes.

Recently an extremely well-shaped Elbow pipe-form, made of what appears to be greenish-gray Oaklawn chlorite, was recovered from a burial in Potowomut, Rhode Island, the only artifact appearing as grave goods in this deposit. It has the rudimentary start of a lip or flange around the bowl’s top, and the stem has a somewhat smaller diameter than is usually found with pipe-forms of this kind. However, as Oaklawn quarry lies only a few miles distant, it seems probable that this pipe-form came from there.

Occasionally, pipe-forms at the quarry assume fantastic shapes. That is to say, would probably have had such shapes had they not become broken before the work was completed. Two of these unusual pipe-forms were found at Oaklawn, and one of them is illustrated in Society Bulletin, Vol.29,#1, p.9, and is repeated here for ready reference (Fig. 14). This one together with the one not shown have their platform stems broken off. However, in each case enough of the stem remains to indicate that a most unusual deep concavity at the bowl’s base would probably have tipped both ends of the stem downward in a pronounced curve. Perhaps it may be difficult for some to accept this suggested projection of a sharply curved stem. For this reason, a finished specimen of a stone pipe discovered in the aboriginal exhibit of the Rhode Island Historical Society in Providence should dispel any doubt that it once existed as a distinctive but rare Platform pipe style in prehistoric times.

Realizing the scarcity of this kind of pipe the writer obtained permission to remove the specimen from its case. A careful drawing was then made of it, which illustrates its unusual steeply curved stem (Fig. 15). Also, a thin prominent flat lip or flange formed about the bowl’s top adds to it a note of distinction, which is accentuated by the bulbous form of the bowl. All of these traits could well have been obtained from the illustrated Oaklawn pipe-form after it had been drilled and made ready for shaping. For in all pipe-forms, as in this one, ample stock is left around bowl and stem to allow for drilling, so as to reduce the danger of breakage. The surplus stone is then scraped and rubbed away in the final finishing of the pipe to obtain whatever shape may be fancied by its maker.

Fig. 14. PLATFORM PIPE-FORM (extremely curved stem). From Oaklawn Steatite Quarry.

Fig. 15. RARE PLATFORM PIPE of Chlorite (extremely curved stem). From Indian Grave, Westerly, Rhode Island.
The Rhode Island Historical Society pipe is made of chlorite, a stone much preferred for pipes, as suggested by the preponderance of chlorite pipe-forms at Oaklawn. It is reported to have been taken from an Indian grave in Westerly, Rhode Island, probably during the early 1900's, and displays extremely fine aboriginal workmanship. Its stem is drilled with a small diameter hole, which tapers to the point where it perforates the base of the bowl's aperture. It extends 2" in length through a straight stem that has been expertly narrowed down to artistic proportions. The fact that the pipe was found in Westerly, some 20 or 30 miles distant from Oaklawn, does not mean it was necessarily made there. It might just as well have had its origin in some locale nearer Westerly. Pipes of this caliber are rarely ever found in as perfect condition as this Rhode Island specimen. It is damaged only slightly at one place on the bowl's flange. Otherwise, it is in perfect shape; is uniformly finished and polished with a relatively thin-walled bowl. The fact that it appeared in a grave that could be recognized as such, presumably because of preserved skeletal remains, suggests that it could not be too ancient, perhaps not more than 400 years old. This then seems to point to the probability that expertly made artistic pipe styles like this came toward the end of pipe-making, as a result of skill developed over years of effort making simpler shapes.

Bronson Museum, January 1969

SMALL STEM POINTS OF THE NORTHEAST

RICHARD Q. BOURN, JR.

Regardless of what classification system you as the reader prefer (Massachusetts in brackets, or New York), it should be of importance to note that more than one cultural group is responsible for the use and manufacturing of Small Stem points in the Northeast.

In central New York State at the Lamoka Lake site (Ritchie, 1932; 1965, pp. 36-79) many Small Stem points were found. From this site the Lamoka complex has received its name. Lamoka points are described as "small, narrow, thick points, with weak to moderately pronounced side notches, or straight stemmed with slight, usually sloping shoulders". Most points have an unfinished base often showing the surface of the flake or pebble from which the point was made. The Lamoka complex has been radiocarbon dated from "about 3500 B.C. to 2500 B.C.", and a majority of New York State Lamoka points were made from local materials, "principally flints, quartz or quartzite" (Ritchie, 1961, pages 29 and 30).

Many Small Stem, and small Side-notched points are found in southern New England, including Long Island, New York. Most are made from local quartz — a material in abundance as glacially smoothed pebbles — and a majority have an unfinished condition at their base. It would appear as if these points were related to the Lamoka complex. This, however, is not true, for outside of western and central New York, the Lamoka as a culture complex does not seem to exist. A majority of the projectile points referred to as Lamoka-like or Lamokid are part of the Late Archaic, Squibnocket complex.

This complex has been radiocarbon dated from Ritchie's Hornblower II site on Martha's Vineyard at 2190 B.C. ± 100 years. A radiocarbon date of 2210 B.C. ± 140 years has been obtained from Ritchie's Sylvan Lake complex of the Hudson River Valley, and it is believed that this complex is closely related to his Squibnocket complex (Ritchie, 1965a; 1969a).

There are several projectile point types associated with the Squibnocket complex. The first type, which is the characteristic point form of this complex, has been named the Wading River point, from Ritchie's excavations at the Wading River site on Long Island (Ritchie, 1959, pp. 78-88). "Because the Bare Island points [Corner-removed#3] and the [Small Stem Points] represent an intergrading size continuum and are definitely related culturally and temporally, I have decided to refer to all as Wading River Points" (Ritchie, personal correspondence, March 1966).
The Bare Island complex has been defined, chiefly on the basis of the Kent-Hally site (located on Bare Island, in the Susquehanna River, Lancaster County, Pennsylvania), as a Late Archaic hunting culture characterized by Bare Island points as the major type, Poplar Island points and large corner-notched points as minority forms, T-shaped drills, slate crescents, bipinnate atlatl weights, various rough stone tools including choppers of several shapes, mullers, milling stones and cylindrical pestles, and steatite bowls. The presence of the latter would assign the complex to Transitional stage, as I regard it. The proximity of the Kent-Hally site to steatite outcrops in Pennsylvania and Maryland probably resulted in the earlier use of this material in that area than in New York" (Ritchie, 1965, page 143).

At three coastal Connecticut sites, located in Old Saybrook, the writer has recovered many artifacts which are related to the Squibnocket complex. The first site, Oyster River I (S1), is a plowed field just off Ingham Hill road along the Oyster River. This site has long been known locally as the "Wig-wam Lot".

The second site, Oyster River II (S9), located up stream, and on the opposite side of the river from site one, was discovered several years ago when the area on the north side of the Boston Post road — near the intersection of the Old Boston Post road — had been bulldozed in order to build the "Saybrook Ten Pin" bowling lanes.

The third site, Back River site (S11), is a plowed field located near the Back River, north of Dunks Island. All three sites are adjacent to open marsh lands, and are less than 15 feet above sea level. Representative specimens are illustrated (Fig. 16).

Wading River points and Small Stem make up the largest number of artifacts found at these three sites. Ninety Wading River points were found; 68 of these had an unfinished basal condition, and 34 had a quartz pebble surface showing at the base. Approximately 11 of these Wading River points found at the three sites had

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Fig. 16. OYSTER RIVER I & II, and BLACK RIVER SITE RECOVERIES, southern Connecticut. 1, Grooved Adz; 2,3,13,14,24, Corner-removed/3, 4-10, Small Triangular/4,5, 11-13, Side-notched/3, 15-23, Small Stem, 25, Side-notched/5 Projectile Points; 26-28, Chunky Knives.
very narrow stems. Two of them found at the Back River site, were relatively longer than the others. Four of them have small ears at their base, while 7 have an unfinished condition of the base — one specimen was made of flint, four had a pebble surface showing at the base.

Within the total Squibnocket complex, many small side-notched points are also found. A majority of these points could be classified as Sylvan Side-Notched points (Ritchie, n.d., revised edition of A Typology and Nomenclature for New York projectile points). Seven Sylvan Side-Notched points were found at the three coastal Connecticut sites. All were made of quartz, 4 of which had an unfinished condition of the base, and two had the pebble surface showing.

Three small, quartz, unnamed side-notched points were also found at the two Oyster River sites. Two large, quartz, unnamed side-notched points were found at the Oyster River II site, and another has been found at the Back River site. Although they were surface finds, the writer believes that these larger side-notched points and the 3 smaller ones are a part of the Squibnocket complex.

Another point type associated with the Squibnocket complex is called the Squibnocket Stemmed [probably Small Stem] (Ritchie, 1965a; 1969a). This type is a small, narrow, and thick lozenge-shaped point which usually has a rounded or roughly pointed base, and is almost always made of quartz. Forty-five Squibnocket Stemmed points were found at the three coastal Connecticut sites. All were made of quartz, 20 had the unfinished condition of the base, and 15 have the quartz pebble surface showing at the base.

One large lozenge-shaped, Poplar Island-like point [Corner-removed#8], was found at the Oyster River II site. This projectile point was also a surface find. However, it too is probably part of the Squibnocket complex, but it is “Much too large to be Squibnocket Stemmed” (Ritchie, personal correspondence, February 1969). I do not believe that this point is a true Poplar Island type point. The workmanship is not of the same quality as most Poplar Island points.

The next point type related to this complex is called the Squibnocket Triangle [Small Triangular] (Ritchie, 1965a; 1969a). This type is almost always made of quartz. Dr. Fowler has this to say about it: “Small Triangular Points — Their Culture Differences: These relatively small points have been generally referred to without regard to any change in shape from one culture zone to another until quite recently. At Wapanucket 6 and subsequently at other sites a significant shape trend has been in evidence, which resembles the Small Triangular type except for the presence of ears. They appear to be displaced later on in the Late Archaic by Small Triangular points, which consistently have convex lateral sides and concave bases [Small Triangular#4]. As the Ceramic zone is reached, lateral sides of this type tend to become straight to concave [Small Triangular#5], while bases are more often straight than concave. Hence, Small Triangular #1,3,4, and occasionally #6 are generally found in the Late Archaic zone, while Small Triangular#5 and its variant with concave sides and base appear above in the Ceramic zone?” (Fowler, 1964).

The Small Triangular points which are referred to as Squibnocket Triangle would be the number one, three, four, and six types [Late Archaic]. Nine Small Triangle points were found at the three coastal Connecticut sites, 5 were of the Squibnocket variety. One was made of quartzite and the others were made of quartz. Probable manufacturing methods of Squibnocket complex projectile points follows: These points could have been made from the cores of small quartz pebbles. The pebble core would be shaped into the general outline of a projectile point with a hammerstone, and then finished off by controlled percussion. Another method would be to prepare these quartz pebble cores by the removal of several flakes until it became the required pyramidal shape. The next step would be to remove large flakes, which would then be reworked by controlled percussion into the various types of points.

At the three coastal Connecticut sites, 33 quartz cores were found, 50 being glacial pebble cores. Eighteen quartz ovate knives [Chunky knives] were found at the two Oyster River sites; none were found at the Back River site. Most of these ovate knives utilize pebble cores (Fig. 16,#26-28). A Double Grooved adz was found in the Squibnocket section of the Oyster River II site. Its cutting edge has been resharpened, it may have become broken and was resharpened during long continued use, or found broken and resharpened by Squibnocket [Late Archaic] people (Fig. 16,#1).

“As your sites are apparently only surface sites I do not feel certain that you can establish a clear association for all of your specimens, but as a group, including the adz and ovate knives, I think the assemblage is closer to what I have defined as the Squibnocket complex than to any other known entity” (Ritchie, personal correspondence, February, 1969).

It might be of interest to note that only one stone bowl fragment was found at one of the three
coastal Connecticut sites (Back River site), and no potsherds have been found at any of the three sites.

A small percentage of the small quartz, unnamed side-notched points [Eared#3?, and certain specimens of Eared #4] found in southern Connecticut belong, according to Ritchie, to the Susquehanna tradition of the Transitional period (Fig. 17). "They come closest to a small form of the Susquehanna Broad point [Eared#3] but there is enough difference here, too, to lead me to suggest that you consider this group a possible new type. I think you could consider them a new Late Archaic form" (Ritchie, personal correspondence, March, 1969). [These points as illustrated should probably be classified as Eared#4 points, not Eared#3. The slight changes in form are merely variations and do not represent a new type of point. Susquehanna Broad blade points would seem to be best represented by Side-notched#1 — Ed.]

The Frost Island culture of the Susquehanna tradition (Susquehanna Soapstone culture; Witthoft, 1953, 1954) at the O'Neil site in Cayuga County, New York was radiocarbon dated at 1250 B.C. ± 100 years. "Witthoft has suggested 1500 B.C. for the beginning of the Susquehanna Soapstone culture in Pennsylvania" (Ritchie, 1965, page 156).

CONCLUSION

Approximately 400 years after the Lamoka culture had ended in western and central New York, the peoples of the Squibnocket complex were migrating into the Northeast from the southern coastal region. The projectile points of this complex are almost always made of quartz. In southern New England, including Long Island, quartz is very abundant, whereas flints and jasper are not available. Therefore, it would appear as if quartz would not be used in areas where other better stone materials are available. However, "at the Kent-Hally site nearly 50 percent of these points (Bare Island type) were made of quartz. Other locally available stone in order of preference are: siltstone, rhyolite, argillite, and a very few of flint, gneiss and schist. No attempt was made to utilize the available flint and jasper sources. The reason for this cultural preference are unknown" (W. F. Kinsey III; in Ritchie, 1961, page 15).

About eight hundred years after the Squibnocket complex had arrived in southern New England, including Long Island, the Susquehanna tradition made its appearance into this area from eastern Pennsylvania.

It is now apparent, there were at least three different cultural groups who made [Small Stem points], including small stemmed and small side-notched forms in the Northeast.

A majority of Small Stem, Corner-removed#3, and Side-notched#4 points, as well as the Diamond, Tapered-stem, and certain of the Small Triangular points are all part of what has been referred to by Ritchie as the Squibnocket complex of the Late Archaic period.

The Eared#3, and certain specimens of the Eared#4, according to Ritchie, are part of what has been referred to [incorrectly according to Fowler] as the Susquehanna tradition of the Transitional period, and therefore, cannot be considered as a part of the Squibnocket complex.

One should remember that the peoples of the Laurentian culture (for Laurentian see Ritchie, 1965), overlapping the Squibnocket complex time-wise, also made small eared and small side-notched points. However, these Laurentian points should not be confused with either the point types of the Susquehanna tradition or the point types of the Squibnocket complex. [Small Stem points, as classified by the Massachusetts Archaeological Society appear stratigraphically not only in the Late Archaic, as at Squibnocket, but also in the following Ceramic (Woodland) culture period — Ed.].

Old Saybrook, Conn.
April 12, 1969
REWARDS FOR PERSISTENT HUNTING

WILLIAM S. FOWLER

The mysteries of archaeology are endless, for those who seek to discover the unknown. Sometimes, a recovered artifact reveals traits that tax the imagination to the limit, in an effort to determine what it represents, and how it may have been used by early man. This is as true today as it was a century ago, before collectors had supposedly cleaned the plowed fields of all aboriginal artifactual remains. Perhaps the chances of finding anything exceptional have become progressively less over the years, but diligence and patience still seem to bring to light, occasionally, something new and exciting to prove man's ingenuity did exist in primitive times.

This was never more fittingly demonstrated than when a comparatively new Society member, Ronald Vinal, recently brought into the museum a collection of artifacts found by him surface hunting. Perhaps he acquired what it takes to bring success from his tour of duty in Vietnam. At any rate, he gathered information from Society back Bulletins, to the extent of those issues which were available, including both classifications, and then proceeded to put this knowledge to work. After several months in the field, he has found some unusual worked stone objects among numerous recoveries, which have been put on display in the Bronson Museum. They have come from sites in the Pembroke-Marshfield-Duxbury area, which he has been hunting. A few of his more unusual finds have been illustrated so as to portray their unique traits more effectively, it is hoped, than words alone could do (Fig. 18).

Exhibits #1 and 2 are drills, which seem exceptionally well made from exotic stone materials. The larger of the two is a Side-notched drill of light brownish-gray flint, expertly chipped and with an expanded body. As this stone is not indigenous to New England, it is obviously an importation from some outside area such as the Hudson Valley, where several kinds of flint exposures exist. Either the stone itself was brought in and worked here in this area, or the drill was made and brought in from some region nearer its flint source. This could well be, since its wide body is not common to Side-notched drills of New England known to the writer, and therefore is considered to be a variation of this type. The second drill is expertly chipped from a not-too-thick flake of quartz crystal, a stone that is extremely hard and most difficult to work. Since the stem has an expanded base without stem identification conforming to any known type, the intention may have been to shape it so as to be held by the fingers without a handle haft, and so to be used as a hand drill.

Exhibit #3, a Stem scraper, has an unusually broad blade. As it is coarsely flaked, the chances are...
it was used in the preliminary scraping of skins, and probably was hafted with a sturdy handle.

Next in order are three outstanding recoveries, which require close scrutiny before a calculated guess can be made as to what they may have been used for. Exhibit #4, the first of the three, is of graphite, soft enough to mark with, and shows much wear on its pointed end. Because of this, it seems probable that it was deliberately ground into this convenient shape as a marker — the forerunner of a pencil. Such a marking tool would have been helpful, perhaps, in outlining skin garments in their making to insure more accuracy in fitting. Or it could well have been employed to outline a pipe or bowl on a block of soapstone, before the final pecking took place.

Exhibit #5 is more difficult to interpret because it suggests nothing in the way of a tool familiar to modern working techniques. It appears to be a piece of slate that has been worn down by abrasion into a cylindrical pin, 13" long. Each end is decidedly worn, so as to produce beveled pointed tips. But that which attracts more notice still is a row of 6 incised lateral marks more or less equispaced, as shown by the illustration. The mystery of what this pin could have been invites general speculation. Its worn ends seem to the writer to suggest use as a polishing tool of a kind that would accommodate itself to working out narrow grooves. But just what product would have been involved is hard to imagine. It seems improbable that it would have formed a part of a fishing implement, such as a multipronged spear composed of several expanding pins, because of the incised decoration on the pin. This embellishment suggests either tally marks, which is unlikely because of their even spacing, or a definite decoration of a tool, or of a pin for personal adornment.

Exhibit #6 appears to be a deliberately worked trinket that was shaped from a relatively thin flake of chalcedony. This stone tends to be translucent and is beautifully colored by rusty-pinkish patches here and there, indicated somewhat by the darker areas of the illustration. That this object satisfied certain aesthetic emotions of its maker is indisputable, but beyond this its form seems to suggest the shape of a fish, with broad tail and open mouth. In fact, it appears to be a small fish effigy, but without evidence of just how it was used. Often, effigies of this kind have a minute perforation, indicating suspension as a charm. Perhaps the extreme hardness of chalcedony prevented drilling in this case, which makes one wonder how this choice effigy would have served for adornment or otherwise.

Exhibit #7 is shown because the wings of this Wing atlatl weight have a decided upward tilt, which rarely is the case in recoveries of this implement. Of course, it should be obvious that the higher the wing tilt, the wider would have to have been the stone block from which the weight was cut, increasing the labor of manufacture that much. Furthermore, note that drilling of the center is evenly done, representing a hole with about a ½" diameter, somewhat smaller than that found in most atlatl weight specimens.

Exhibits #8-10 are good examples of spear points belonging to the Early and Late Archaic cultures. Specimen #8 is a Corner-removed#5 of the Early Archaic, made of a fine-grained quartzite; note its typical triangular body shape and narrow stem with a slight bifurcation at its base. Specimen #9 of the Late Archaic is a Corner-removed#7 with a broad body and relatively wide truncated stem. It is made of what appears to be a hard flinty indurated shale with a poor conchooidal fracture that has weathered to some extent with a slight patina — possibly may be an importation from some Hudson Valley flint deposit. Finally, specimen #10 represents a large point of the Late Archaic. It belongs without doubt to classification, Side-notched#1, but has an unusually long extended blade for this type of point. Beside this, it is deeply beveled, as may be noted by the dark shadow in the illustration, on the opposite side of which, hidden from view, is a corresponding reverse bevel. The point is made of a light brownish felsite, an indigenous stone. The usual explanation, right or wrong, for the bevel is that it was made so as to induce a twirling motion in flight, in order to effect a deeper penetration in the quarry being hunted. Whatever the reason, the fact is that beveled projectile points are of rare occurrence in the New England area.

When it comes to accounting for the presence of chalcedony, as found in the small fish effigy, it may seem somewhat difficult. This choice piece was recovered from a Duxbury site, which may help explain the presence of this exotic stone. It is known that in this Plymouth-Duxbury area, over the years, artifacts made of chalcedony have appeared, and collectors in that locality believe they can trace its provenience to rounded nodules of this stone in the glacial till. Existence of such stray deposits left behind by the glacier is quite possible, and this would account for an occasional artifact being found of this exotic stone — no known worked outcrops of it exist in the Northeast. On the other hand, this fish effigy might represent an importation from the far West, where chalcedony is more readily obtainable.
WHO WERE THE BUILDERS?

EDITORIAL

Stone-built structures of various kinds, which keep appearing in various localities of New England as new discoveries are made, usually provoke questions as to their origin. The first thought expressed by most is that they were made by Indians of colonial times, although it is common knowledge of those who have conducted archaeological investigation that the aborigines of this area rarely, if ever, built structures of stone. An exception may be certain crudely constructed rock formations in South County, Rhode Island, which are said to have been made for a fortification by the Narragansetts, although this theory is doubted by some. But when it comes to more sophisticated stone works, in which walls of an abode are involved, there is no likelihood that this sort of a structure was ever built by aborigines. If this is so, then who were the builders of the many small round-shaped stone enclosures — generally referred to as "Stone Beehives" — which are scattered throughout the region?

In a former Society Bulletin, Vol. 25,#3&4, Frederick Pohl presents his opinions on the subject in an interesting report. He argues that they may have been built by certain of the colonists during years of Indian warfare, when settlers were faced with the threat of attack and pillage of their homes. If so, he believes they were used as secret retreats to which embattled families could have fled, and from which they could have better defended themselves. In offering this explanation he refers to certain Stone Beehives in Deerfield, West Leyden, Montague, Shutesbury, and Pelham, Massachusetts. According to his description they are round corbeled stone structures, with about a 5 foot diameter and a 6 foot height inside. They are built into a hillside, each with a 2 foot square opening flanked by vertical stone walls topped with a lintel that extends out enough to offer a shelter from driving rain. They have an earthen floor, while on top is a capstone, which is covered with about a foot of earth. The bottom of the entrance is about 4 feet above the structure's floor, which represents this much of a drop for anyone entering to use it for an abode. Evidently, Pohl is confining his remarks to one kind of stone building, exclusively, that is circular in shape and looks something like a beehive. However, there are other remains that have different forms and sizes, although practically all are built into the sides of rising terrain, partly covered with earth.

Now it is well known that many underground stone structures, generally in a rounded shape, were built by colonial farmers to provide them with winter storage for different kinds of vegetables, upon which they depended, since present-day storage facilities were then not even dreamed of. These buried store rooms preserved such vegetables as potatoes, carrots, turnips and the like, and are said to have been proof against freezing and rotting of the produce during winter months. However, once in a while a more unique stone structure is discovered with a different shape that suggests a use other than those which have been mentioned. Because of this it seems worthwhile to pursue still further this absorbing subject.

Perhaps the best known stone abodes, if that is what they were — certainly the most talked about — are those stone houses located above ground on what is known as "Mystery Hill" in North Salem, New Hampshire. They have been partially excavated, with a report at least by one group that such associated evidence, as was recovered, was of colonial origin. There is no interest here to discuss the origin and purpose of these man-made stone structures, since enough has already been written by those who have examined them at close range. The subject of this paper concerns a single stone underground structure with some characteristics similar to the beehive type, but with others which seem to suggest a totally different use from what has been suggested.

In Harvard, Massachusetts, on an old colonial homestead, now owned by Anthony J. Capo, is a small structure built of large field stones, with all but its front side buried in a rising hillside (Fig. 19 — profile and view). It lies about a hundred or so yards to the rear of what once was the farm house, at a spot where a wide meadow rises abruptly to form a prominent hillside. At the foot of the rise, at some time in the past, an excavation was made, and in this a small stone building was constructed of large common field stones. Since its masonry and unique shape contribute largely to its probable use, as suggested by this report, a brief description follows, based on observations made by the writer when he visited this stone structure several years ago.

Entrance is had between stone walls, not roofed over, about 2 to 3 feet high, through a passageway that makes a right angle turn almost immediately about 3 to 4 feet from the front door: a narrow opening in the front wall (Fig. 19 — top view). With difficulty entrance is had through this constricted opening, which measures in width about 1 foot at the bottom and 1½ feet at the top, by 3½ feet in height, and is capped with a stone lintel. With the doorway passed, one enters a small rectangular room, roughly about 6 x 14 feet in size, by about 5½ to 6 feet in height, allowing easy movement of body without
To attempt to answer the last of the query requires a little more imagination, and yet the theory that is suggested seems to the writer a valid explanation. Let us review conditions that pertained on many New England farms, when this stone abode probably was built — the town people of Harvard have known of its existence over a great many years as a relic of early historic times, although no authentic account of its origin has been handed down. It is a known fact that Negro slaves formed an important part of the economy on some farms in the middle 1700's. Male slaves helped in the field, while their female partners assisted in household duties. Evidence of their existence is amply confirmed by slave pews — usually, plank benches — which may be seen in the back balcony or rear section of several old meeting houses still standing. Here the reminder of such past inequities has been carefully preserved. While this much is known, reports by early commentators and later historians, so far as is known, are silent as to what constituted slave living quarters at the farms of their New England masters. The reason for this omission is difficult to understand, when consideration is given to historic reports about southern plantations, in which slave quarters are invariably described as an integral part of the master's estate. Furthermore, an investigation of the many preserved New England farm houses of the 1700's has failed to find evidence of any section or room said to have been reserved for slave use. In some cases, no doubt, where only a single slave was involved, the back shed or house garret might have been appropriated for a bed of some kind. However, when more than one was involved, such as a family group, of which there must have been some, early colonial houses were not commodious enough to provide room both for the farmer's growing family — often as many as 10 or more children — and for a family of slaves as well.

This discussion furnishes the basis for what seems to be a reasonable deduction that the Harvard stone structure was in fact a house, built originally for the use of a slave family. Either the colonial slave owner, or possibly the male slave himself were skilled in laying stones, and with the help of oxen and a stoneboat succeeded in adequately constructing a durable abode, which has lasted doubtless for more than two hundred years. — — — — — It is even suggested by some old residents of Harvard that the rectangular stone house in their town is thought to have been used at a later date as a secret hide-out during pre-Civil War days, for the temporary quarters of fugitive slaves on their removal into Canada by the often referred to "Underground Railroad."

The answer to the first part of this query would seem to be, unquestionably, an emphatic yes. The living area is large enough to accommodate several people, both as a shelter from bad weather and as a sleeping room. Cooking could have been done outside over an open fire; preference for outdoor fires used for boiling water in laundering was common among Negro women in Florida as late as 1936. The narrow front entrance and angled passageway between stone walls might well have served to discourage marauding animals at night from entering.
Comments by the Editor in Bulletin, Vol. 31, #3 and 4, regarding my hypothesis that a Gorget may have had a functional utilitarian use other than an ornamental one have interested me. His objections to my thesis, while reasonable, impell me to offer a rebuttal for each — the Editor’s comments are placed in quotes.

1. “... excessive lengths ... would have been a hindrance if strapped crosswise ... would have been serviceable only, if strapped lengthwise. However, this would have been impossible ...” While I agree with the first part of this, a 5 to 7 inch guard lashed lengthwise would have afforded even better wrist protection than that which I suggested (Fig. 16, p.31, Vol. 31, #3&4). In fact, Peets (1965:114) points out: “... that a high-strung bow usually needs a long arm guard, but a low-strung bow requires protection of only a small area on the wrist at the base of the thumb.” Contrary to the Editor's statement, the long gorgets can be attached lengthwise. One way to do this is to run a thong down through one hole and up through the other, tying knots at both ends. A strap can then be run around the wrist between the guard and the thong, holding it in place.

2. “... Peets’ Gorget reference is to the ‘spud type’, and is not comparable to Gorgets of the Northeast.” While Peets does compare a “spud gorget” with a leather arm guard in his Fig. 5, the intent of his article is not to restrict his hypothesis to this type alone. That Gorgets occur in a number of varieties does not in itself imply different functions for each variety. Let us not forget that “bannerstones,” for example, occur in a number of different forms.

3. Gorgets as wrist guards “... would seem more convincing if Gorgets were of frequent occurrence on camp sites ...” I certainly agree that this is so, but there are problems. I would like to illustrate what I mean through analogy. I have spent six seasons excavating in both ceremonial and domestic precincts of a single ancient Mayan site in Guatemala. It is well known that the Mano and Metate were standard equipment in every Maya house, for the grinding of corn. One might suppose from this that Manos and Metates would be common finds around house sites. In fact, they are no more common there than around temples. One reason for this is that, when people abandoned a house, they did not leave behind serviceable belongings. A broken Mano or Metate was one thing, but a usable one was another. I would suspect that the same principle would apply to wrist guards. Furthermore, where would breakage be most likely, in the camp, or off in the woods on the hunt?

4. Finds of Gorgets are “... usually confined to ceremonial deposits, suggesting a more restricted ornamental use.” This is certainly a reasonable suggestion, but I would pose the question: How often are ceremonial items fancy copies of utilitarian prototypes? This phenomenon is far from unknown. After all, some of the exceedingly fine long, bayonet-like slate points from graves of the “Moorehead Complex,” found in Warren K. Moorehead’s, Report on the Archaeology of Maine, 1922, Anover, could never have been put to everyday use; presumably were derived from utilitarian prototypes. Some of the gouges found in these graves show no trace of use. Others from Mason’s cemetery at Orland are so long and slender, with such extended grooves, that the cutting ends were too weak ever to have been used (Moorehead 1922:46).

Then, too, let us not forget the opposite side of the coin: how often are everyday utilitarian items included in ceremonial deposits? Again, burials come to mind, where it is not unusual in many cultures to find that some of a dead man’s belongings are placed in the grave with the body. Also, utilitarian items may be placed in ceremonial deposits other than burials.

In short, the Editor has raised some interesting, but not insurmountable points. The function of Gorgets is still open; they are not proven to have been ornaments, nor are they proven to have been wrist guards. My own assessment of the evidence is that, while some may well have been non-utilitarian, these were based on utilitarian prototypes. It is my hope that the arguments, which I have presented, will stimulate others to try to come up with the answers.

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BOOK REVIEW

A Guide to Artifacts of Colonial America, by Ivor Noel Hume. 323 Pages, Alfred A. Knopf. $10.00.

The Director of the Department of Archaeology at Colonial Williamsburg has written a complete handbook, containing forty-three categories of artifacts, to be found not only on the Eastern Seaboard, but in museums and antique shops across the country. To readers interested in ceramics (American, British and European), in clocks, furniture hardware, glass, and many other classes of goods, this handsome book, fully illustrated, will prove an inspiration for further study.