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A CREMATION BURIAL COMPLEX IN CARVER

RODNEY W. ROACH

Archaeologically, the Swan Hold location in Carver, Massachusetts, has produced considerable evidence of aboriginal occupation over an extended period of time, from the Paleo occupation down to the more recent Ceramic Age. Although recovered evidence is far from complete, it seems to reveal the Late Archaic as depositing the heaviest concentration of artifacts.

An area, from which have come many recoveries over the years, faces east over a cranberry bog, and has been called the Swan Hold site — reported in the Society Bulletin, Vol. 13, #2. The cranberry swamp bordering the site is perhaps the remains of a shallow lake of post-glacial days, which today has a stream running through it that empties into the Weeweeantic River. A more or less continuous series of several ridges border this marsh on its west side, and this high land appears to have been favored as the preferred location for aboriginal occupation. This area doubtless was frequented by various kinds of game, as it still is today. Waterfowl are quite plentiful in the marshes, while the stream in those days probably teemed with many kinds of fresh-water fish. As the Late Archaics, those who are presumed to have been the participants in the ceremonial burial complex of this report, were dependent upon food gathering for their survival, this area must have served them well. Their descendants of the Ceramic Age, dependent to some extent upon agricultural produce, probably found this sandy locale less productive and used it more sparingly, to judge from the reduced quantity of artifacts they left behind.

Several years ago when the writer was first introduced to Swan Hold by Society members, Donald Viera and Richard Bent of Plymouth, excavation of the site had been largely confined to an area extending along the first flat ridge just above the bog. Not wishing to intrude on the work of others, and filled with a desire to discover new sites elsewhere in the vicinity, the writer made his own search, and, as this report testifies, was rewarded for his efforts. One of the sites he discovered further up stream was on a small point of land, hereafter referred to as the peninsula, which jutted out into the marsh. This was near a natural stream narrows, which might have provided an ideal game crossing. This peninsula, rising some 10 to 14 feet above the marsh, appears to have been formed by outwash eroded from a high ridge just behind it. Unfortunately, a large part of it had been removed to provide sand cover for the nearby cranberry bog, which may have destroyed many artifacts and other evidences of habitation.

The writer's attention was first drawn to this spot both because of its appearance as an ideal location for a site, and from confirming occupational evidence obtained by careful testing. Quantities of quartz chips, firestones, and stemmed projectile points were uncovered, while the exposed bank was explored. Then, by cutting this away to obtain a soil profile, Robert Lienan and the writer found that artifact evidence reached from grass roots down through the gravel-filled yellow subsoil to the underlying white sand. There an Early Archaic Corner-removed #5 point appeared. The bulldozer, in scraping the land during work on the nearby cranberry bog, had caused such disturbance, as to make stratigraphic recording impossible. However, during this preliminary excavation 2 relatively large stone hearths and quantities of firestones were uncovered in the subsoil. Here the bulk of the occupational evidence — Late Archaic in context appeared, while the upper topsoil produced 2 Large Triangular points, indicating a later-day occupation.

A complete and detailed excavation during this initial start was not carried out due to lack of time, and the site remained closed for nearly two years. Then on May 26, 1969, the author returned to make a periodic check. He found that during the previous winter cranberry bog workers had removed a large portion of the sand from the peninsula. They had stripped the turf and subsoil from off the white sand below for a distance of about 20 feet, up to a bank that was left exposed. Apparently, this was done to facilitate later removal of the pure white sand beneath for cranberry bog filling.

As the writer surveyed the damaged peninsula, he noticed a small clump of reddish sand, similar in appearance to crushed brick, near the center of the exposed bank. Out of curiosity he brushed the spot with his hand. At once a concentration of bright red powdered ocher appeared just below the subsoil in the white sand. Using a small hand trowel a layer of white sand was cautiously removed. As work progressed a relatively large, more or less circular red ocher deposit was exposed, which became Pit A1. Beside quantities of red ocher it contained numerous artifacts, to be described later, but no charcoal. This confirmed it as a secondary burial of a cremation ritual. On the following day, with the help of Donald Scothorne and the late William Thompson, excavation
of the entire exposed area continued. Eventually, 4 more pits were uncovered, all containing crushed charcoal interspersed with small chunks of charcoal. Also, a cache of 6 relatively long spear points that intruded one edge of Pit A1 appeared, to be enumerated in the following section. And finally, Pit B, filled with charcoal like the others, found the previous year partially destroyed at the edge of the embankment, was fully excavated. This pit is thought to be related to the others because of its similar charcoal content and close proximity (Fig. 1).

FEATURES DESCRIBED

Pit A1. This pit, one of six to be described, was excavated first, due to its partial exposure by the bulldozer. Fortunately, it was not damaged by the weight of the machine. The only casualty was the fracture of an elongated triangular spear point, one of a cache of 6 points that slightly intruded the pit. The remaining pits, yet to be described, were not disturbed by the machine, which enabled a fairly accurate recording of the depth, level and size of each.

Continuing a description of Pit A1, it should be noted that of all the pits in this complex it was the only one not to contain charcoal. It measured about 22" in diameter, was roughly bowl-shaped, and reached a depth of about 11", intruding the white sand floor. Red powdered ocher mixed with sand filled the pit and clearly marked its outlines. One 3/8" size fragment of calcined bone — whether human or animal is unknown — was uncovered near the pit’s edge at a depth of 9 3/4". But before it could be examined it disintegrated upon exposure to the air.

Probably the most interesting and unique thing about this pit was its artifact contents, totaling 43 worked specimens. Apparently they had been carefully arranged in layers — not thrown in indiscriminately — starting 4" up from the pit’s base. Here a number of artifacts were placed, and this procedure was repeated at decreasing intervals until the top of the pit had been reached. Here the layered deposit was capped with a thin 3/8" covering of red ocher containing no artifacts.

The assembly of Pit A1 artifacts includes: 6 large gray felsite Cache Blades, one of which lay just outside the pit (Fig. 2); 27 gray felsite Retouched Flakes, of which 16 are illustrated (Fig. 3) — all 33 specimens of these blades and flakes, without exception, are made from the same gray felsite stock, and presence among them of a fractured half of a Cache Blade (Exhibit...
Fig. 2. CACHE BLADES, Carver Burial Site. From burial Pit A1; all are made of the same light gray felsite.
Fig. 3. RETOUCHED FLAKE TOOLS, Carver Burial Site. From burial Pit A1; all made of the same light gray felsite stock as used for the 6 Cache Blades. 1,3,6-16, Flake Knives, probably; 2,4, Flake Scrapers; 5, Broken half of a Cache Blade.

#5) suggests that the flakes are the residue from manufacture of these blades; 5 small Corner-notched, and 1 Small Stem Point made of different kinds of felsite stock, including one of black porphyry (Exhibit
as a result of poor manufacture the tips of 3 are missing, possibly indicating haste in their making; 1 Stem Scraper; and finally, 3 Stemless Knives, one of dark yellow flint, another of deep purplish felsite, the third of light gray felsite (Fig. 4, #7-12,13,15-17). Note that none of these specimens are made of the same felsite as the large Cache Blades and worked flakes. Also, they differ from these artifacts in that they may be recognized as functional implements, although a few of the points are poorly shaped, as if made in a hurry.

Some idea of the amount of red ocher contained in the pit may be gleaned from an estimate that about 30 pounds of it caked with sand filled the pit. Imbedded in it were random small pieces of hemitite from which the ocher was ground. A small sample of the pit's ocher content was saved for future study and comparison.

Cache A2. Before leaving Pit A1, description of a cache of long points that slightly intruded it is important, since several of the point's characteristics associate them, as it would seem, with the smaller points found in the pit. The cache consisted of 6 relatively long points, 5 Corner-notched, and one, an elongated Triangular, probably intended for spears (Fig. 4, #1-6). Two of them were in contact with the ocher of
Pit A1; the cache was located on the westerly edge of this pit. With but one exception — the elongated Triangular — the points were the same type as all but one of the smaller ones from the pit, and were made similarly of various kinds of felsite, including one of black porphyry (Exhibit #4). Surrounding the cache the sand was slightly discolored but without charcoal, and measured about 13" in diameter, 6" in depth. The principal projectile point type of the cache (Corner-notched), the variations of felsite used, and the number of points being limited to 6 are conditions so similar to those involving the smaller points from the pit, as to suggest a close association between the two groups of some kind.

**Pit Cluster C1,2&3.** About 4½ feet southerly from Pit A1 a cluster of 3 pits was uncovered, and extending between them was a trail of scattered charcoal lumps. The cluster contained one large Pit C1 with about a 15" diameter, 12" in depth, and 2 smaller ones, Pits C2 and 3, which slightly intruded the larger one. Each of these measured about 8" in diameter, 4" in depth. Pit C2 yielded a T-base Drill of fine grained hard quartzite. All were bowl-shaped and were filled with pulverized charcoal with a few lumps here and there mixed in, of which several were saved from Pit C1 for future radiocarbon analysis. In this same pit were 4 pieces of broken firestone. Apparently, the two small pits were made after the large one had been dug, since they were 8" shallower in depth. Nevertheless, all of them seem closely related.

**Pit D.** About 5 feet removed from Pit A1, and short of the same distance westerly from the Pit C cluster, another large pit was discovered, and is labeled Pit D. It had a diameter of about 26", was 9" in depth and was bowl-shaped like the others. Nothing but the same crushed charcoal and 3 broken firestones were found in it. From it a charcoal sample was retained for future radiocarbon dating.

**Pit B.** This large pit lay about 6 feet northerly from Pit A1. It had a 20" diameter, with a depth of 24" and intruded the white sand. Its contents consisted of charcoal fill with 5 broken firestones.

All 3 large pits had their level of origin either at the junction of subsoil with loam, or 1 to 2" below, and extended into the white sand. It seems of interest to observe — whether of significance or not — that the positions of the 3 large charcoal-filled pits form the shape of a triangle, one at each of its three apexes, while the secondary burial pit A1 lies between in about the center.

**DISCUSSION**

Examination of the projectile points from Pit A1 and Cache A2 reveals that of the 12 points involved, 10 are of the Corner-notched type, not frequently found among recoveries from this area. However, when this type of point does occur it is usually associated with remains considered transitional between the late Archaic and Ceramic culture periods. For this reason its preponderant presence at this site seems to suggest something more significant than common camp remains. The elongated Triangular type point, also is uncommon, so when Donald Viera found another specimen like it at the site several weeks after excavation of the secondary burial, it caused speculation. This find occurred while examination was being made of a small pile of sand at one edge of the exposed embankment. The point measured 2½" long by 1½" wide at its base, and was coated with red ocher slightly different in color from that found in Pit A1. Also, it showed evidence of having been subjected to heat, but not enough to fracture it. However, the specimens of this report, with but one or two exceptions show no evidence of exposure to extreme heat, although some weathering is apparent. All of them are in an excellent state of preservation, and the long points exhibit superior workmanship. Only the 6 small points from Pit A1 show possible haste in manufacture to impare their style, and so prevent well-defined conformity, in a few cases at least, to the Corner-notched type. Viera's recovery may indicate that more burial deposits might have existed on the peninsula before its major portion was destroyed by sand removal operations.

Concerning source of the Cache Blades and Re-touched Flakes, a discovery was made not far removed from the site, which seems worthy of mention. About a half mile to the south of the peninsula a high bluff facing east provides a commanding view of the entire marsh including the peninsula. Three years ago, while testing there for occupational evidence, a considerable quantity of large gray felsite flakes were discovered, among which were several broken pieces of large blades. They appeared in the yellow sandy subsoil, and now were produced for comparison with recoveries from the peninsula. Amazingly enough, they appeared to be the same kind of felsite as that used in producing the site's Cache Blades and worked flakes, a quality of stone not known to be indigenous in this area. Could it be that the bluff was the workshop where the Cache Blades were made?

With reference to cremation of the dead as related to the peninsula burial complex, the writer made several observations. First, absence of calcined human bone fragments or patches of burned bone ash in the charcoal of the pits would seem to indicate that the cremating was performed elsewhere, unless the process of sand removal has destroyed the crematory. However, whatever may be said, absence in the pits of
quantities of firestones or stone slabs, such as are associated with some crematory remains elsewhere, suggests that the incineration process was performed apart from the site. Furthermore, in support of this belief, it should be noted that no heat discoloration from hot fire burning was detected in the sand surrounding the large charcoal-filled pits, which if present might indicate they were used as cremation pits. Therefore, it appears probable that whatever charcoal and firestone fragments were present on the peninsula were brought there probably from the crematory, and buried along with the red ocher and artifacts as a part of a secondary burial ritual.

Another observation concerns the kind of stone tool offering found in the secondary burial Pit A1. All these goods are chipped implements with no ground or pecked artifacts. This varies somewhat from another cremation complex in the area at Swan Hold I, where a ground Wing atlatl weight was included along with pecked and ground gouges and grooved axes. Perhaps the peninsula grave goods may represent a performance of convenience in using available artifacts only, rather than being one in variance or in disregard of some established ceremonial ritual.

Another somewhat similar burial deposition in some respects of chipped stone implements was uncovered at the Flat River site in Rhode Island and reported in Society Bulletin, Vol 29, #2. Here were found what appeared to have been two separate, and of the same age, burial ceremonies. One used symbolic chipped stone tools made of an inferior kind of felsite expressly for the burial, and burned with the body — probably dried bones — in a cremation pit. The other used functional chipped stone tools, also burned with the dried body in a cremation pit. The peninsula recoveries seem surprisingly similar to the first mentioned cremation ceremony in so far as the 6 large Cache Blades and accompanying Retouched Flakes are concerned, except for one important difference. At the Carver site they appear not to have been burned with the body, but deposited afterward in a secondary burial, and, as will be shown, belonged to a much later period with no connection with the Flat River rites except possibly by tradition.

In so far as the projectile point offering is concerned, even without radiocarbon dating, the Corner-notched point type as reported for all but two of the 12 specimens is suggestive of a period of time toward the end of the Late Archaic, as previously indicated. Radiocarbon dating of the charcoal samples taken from the pits, when obtained, should dispel any doubt as to the age, which is as of now only a postulation.

The writer expresses his grateful thanks to all those who assisted him in the discovery and excavation of this cremation burial complex, and has asked the Editor to add a conclusion to this report based upon a comparison with other cremation burials in the area.

CONCLUSION

Throughout the millenniums of man's existence, death has been a subject that has produced much speculation. The mystery of an unknown after life and the uncertainty surrounding that which could not be seen or touched presented perplexing problems. In time a desire to keep forever that which had proved good on this earth led early man to a belief in a spiritual power that would guarantee him a good life after death, if he conformed to certain shaman-controlled rituals in disposal of the dead. Since such mystical theorizing has been subject to endless variations, it has always seemed important to the student of archaeology to carefully scrutinize burial remains of bygone peoples whenever they appear. For this reason the evidence presented in this paper of a cremation burial in Carver on the peninsula offers a tantalizing opportunity to try to interpret and understand its meaning. For instance, what was the ritual like that accompanied the making of the burial pits and the deposit of artifacts, and what were the reasons for the specialized grave good offerings peculiar to this cremation burial?

In attempting answers to these and other questions that may arise, it is helpful to take into consideration other cremation burials excavated in this central region of New England. Interpretation of such evidence has led to a belief that numerous variations of ceremonial rites surrounding cremated burials existed. This does not mean that such a dissimilarity occurred during a short span of time, such as a generation or two. On the contrary, the result of radiocarbon dating of charcoal samples from two separate recoveries with divergent traits points to the fact that in this study this practice of disposal of the dead, in which various changes crept in, stretched over 1,000 years, from about 4,600 years ago at the Bear Swamp site in Berkeley, Massachusetts, to 3,500 years ago at Flat River in Rhode Island. Further by a typological estimate based on recoveries of artifacts in cremation burials at the Seaver Farm in Bridgewater on the upper reaches of the Taunton River, it appears that cremating the dead was still being practiced as late as about A.D. 500. During such a long period of time — about 3,000 years — much could have happened to alter the burial ritual. Therefore, it should not be surprising to find marked differences existing between some cremation burials. So, one important part of a burial comparison is the dating by radiocarbon or typological analysis of the deposits involved. For it seems likely that anything more than a generation gap would tend to allow
ritualistic changes to take place to confound the analyst. And even with the approximate age of two or more burials being the same, there could be variations in the same area, in which one shamanistic spiritual leader might follow a different ritual from that of another.

This being the case, an attempt at determining the age of any burial should be an initial requirement of primary importance. At the peninsula, lacking a radiocarbon measure of its charcoal, a resort to typology involving its Corner-notched points furnishes an approximate date for that cremation of about A.D. 200 to 300. This was at the close of the Late Archaic, accompanied at numerous sites by stratigraphic recovery of Corner-notched points found at that culture level. This reasoning would place the peninsula complex somewhat earlier than the Seaver Farm burials. Because of this comparatively short span of years between the two, the probability is that the later burials of the latter might be expected to contain some traits common to the former, which had been handed down by tradition.

With this in mind, a startling similarity to be noticed are the 2 large Cache Blades at the Seaver Farm site, which closely resemble the 6 Cache Blades at the peninsula, Goth groups being made of felsite. But this is not all, for at both burials appeared re-touched flakes of the same stone, although a great many more occurred at Carver.

From evidence presented by the author of this paper, it is not too difficult to envisage what may have taken place. The idea of providing useful tools for the departed, anticipated a need for them in the next world. And at Carver this requirement was fulfilled in different ways. Perhaps the most significant supply operation, as previously suggested, originated at a workshop on a bluff a half mile removed from the peninsula. Here a quantity of felsite stock appears to have been fashioned into 6 large Cache Blades for the burial. Perhaps these were intended to serve the departed as semifinished blanks from which to make finished tools. But beyond this, the custom of the day may have dictated utilizing the felsite waste by re-touching the edges of the felsite flakes struck off while making the blades. Hence, many of them became re-worked to serve as knives or scrapers, as the shape of each might dictate. Here then were tools made expressly for the burial out of a single supply of felsite, brought no doubt from some distant stone works. This act, somewhat altered, may have been derived by tradition from Flat River times more than 1,000 years earlier, as formerly suggested.

At the peninsula the dead seem to have been cremated elsewhere, and charcoal, sacred because it was thought to contain the spirit of the dead through its mixture with the cremated bones of the deceased, as may be envisioned, was brought from the crematory. In the meantime, hematite stock had been ground into red powdered ocher to be used in the ceremony. Combining these several activities along with the making ready of the bones for cremation, there seems no doubt that days of preparation would have been spent getting ready for the final burial interment. This, then presents some of the activities that took place on the peninsula, which was doubtless considered a sacred elevation for final disposal of the dead.

The actual placement of grave goods in the prepared burial pit was carefully executed, one layer over another, as powdered red ocher — resembling blood — was thrown in, apparently as a symbolic blood offering to revitalize the dead spirit; to make it live again in the other world. Along with the prepared Cache Blades and worked flakes, functional arrow and spear points of the day were included to supply the departed with the means for survival. Certain rites beyond doubt were followed by the shaman performing the ceremony, which can only be guessed at. However, there is little doubt of their spiritual significance: promise of a happy after life, which must have brought comfort to those who remained.

This should represent a secondary cremation burial on the peninsula toward the close of a period, after which disposal of the dead by cremation gave way to interment of the body, clothed as in real life. Grave goods at the peninsula burial omitted gouges, grooved axes and atlatl weights, as compared with the much earlier burial at Swan Hold I, typologically placed well within the Late Archaic, doubtless because of a change in the ritual over the years that intervened.

The remaining features on the peninsula of the cremation burial complex, including presence of 3 sets of tools in groups of 6 each, and the large and small charcoal-filled pits, undoubtedly were essential to the ritual having important ceremonial meanings, the significance of which may never be known. Likewise, the positions of the 3 large pits, spaced so as to form a triangle may have played an important role in the ceremony. However, such provocative features probably will always remain a mystery, for the curious to ponder over.

Duxbury, Mass.
December 10, 1970
RAGGED MOUNTAIN SHELTER-QUARRY

WILLIAM S. FOWLER

At this time, after publication in the Society Bulletin over the past number of years of evidence from six stone bowl quarries in New England and one in Pennsylvania, it now seems important to review the work done at still another quarry located in Connecticut. Excavated in 1948, it was fully reported in Bulletin of the Archeological Society of Connecticut, No. 25, with a brief account appearing in Bulletin of the Massachusetts Archaeological Society, Vol. 10, No. 2. While these reports adequately revealed the findings at that time, recent discoveries and adoption of revised classifications of stone implements covering the period of stone-bowl making have made it seem desirable to re-examine the evidence in the light of today's knowledge. Also, with the Society's membership burgeoned as it has in recent years, hundreds of new members are doubtless unacquainted with the important recoveries made at the Ragged Mountain quarry in Connecticut nearly a quarter of a century ago.

But why place such emphasis on stone bowl quarrying as to require an investigation of more than one or two quarries? And why spend so much time talking about this culture that in the opinion of Ritchie and certain other analysts lasted for only a short span of about 500 years, labeled by them the Transitional? First of all, the reason seems to the writer to lie in the evident dynamic importance of the stone bowl enterprise to the quarriers and their society. Without doubt, the making of stone vessels of various kinds was the most outstanding industrial accomplishment of those days, which could not have failed to place its mark upon the life of the people. For they were engaged in making domestic utensils for the welfare of the family, not because they were obliged to for survival, but because of a desire to create something useful. It seems that no other product, which might have been made for family consumption, could have matched the domestic worth of stone bowls, for they provided the means for the first time by which liquid foods could be depended upon for daily use. And this must have created many new customs to stimulate inter-social relations. But beyond this, the extensive study of quarry remains is important, because it serves to impress one with the immense amount of persistent labor that caused this industrial enterprise to develop and prosper. Furthermore, the probable time consumed in creating and perfecting the necessary stone tools for pecking out and shaping the bowl products is impressive. It must have extended over a long period — certainly several hundred years — not to mention the time required through trial and error to perfect acquired skills essential to the success of the undertaking. After taking into account all such conditions including the extensive spread of the industry throughout the land, wherever steatite outcrops occurred, it seems illogical, to say the least, to attempt to squeeze these happenings into the incredible short space of only 500 years. A radiocarbon measure of charcoal at the Horne Hill quarry has now produced reliable evidence to dispute this short Transitional span and replace it with one of a much longer duration — see the Horne Hill report that follows.

Knowledge acquired through excavations of the quarries indicates that this stone bowl undertaking was more than an independent development of stone crafts. For there appears to have been a universal application of similar tools at New England quarries with like results. This seems to have produced a more or less uniform industrial pattern that eventually spread throughout the eastern seaboard of the Appalachians. How much of the Late Archaic period was socially activated by it at present is open to argument. But it appears probable that perhaps all but the first 1,000 years of the age was engaged in this dynamic enterprise.

Beside the reasons just mentioned for an extended study of stone bowl quarrying, a brief examination of the most important evidence from the several quarry excavations so far reported in the Society Bulletin, excluding for the moment that from Ragged Mountain, should serve a useful purpose. For in each case, research uncovered certain significant aspects of the industry. When these are considered together, they add up to a more complete knowledge of what may have taken place during a very long period of stone bowl-making activity.

Dolly Bond Quarry. This was one of the first sites to be examined by members of the Massachusetts Archaeological Society, and was reported by Ripley P. Bullen in Volume 2, #1, 1940. It was located on a knoll about a mile west of Millbury, Massachusetts, and excavation consisted of several trenches run through the quarry workings. An important discovery made at this site was a certain small tool, which has now become known as an Abrading-scraper. This specialized implement, as shown by partly worked fragments of fractured bowls at the site, is believed to have been used with a sawing-scraping motion in the hollowing of such vessels. Subsequently, the writer recovered at this quarry a Pipe-bowl reamer similar to those from other quarries, thought to indicate the making of stone pipes.
Hill Quarry. Excavation of this site, located in the Bramanville section of Millbury, was reported by the writer in Volume 27, #2, 1966. Here was a quarry located in the side of a precipitous elevation, which yielded certain valuable additional evidence. Domestic traits appeared in the form of a Small Stem and an Eared #3 projectile point; also a fractured Full Grooved ax. However, of the greatest value was a radiocarbon date of 2,730 ± 120 years ago, obtained from a charcoal sample (Y-1399) taken from a stone hearth in situ, buried 7 feet deep in the tailings. By extrapolation this produced an estimated duration of about 2,000 years for quarry operations.

Oaklawn Quarry. This is a Rhode Island site in Oaklawn, which the writer reported in Volume 29, #1, 1967. Here the most conspicuous evidence beside that of bowl-making were extensive signs of stone pipe-making. Hundreds of pipe-forms of steatite and chlorite — many fractured to some extent in the course of manufacture — lay all about. And associated with them were projectile points, including, Side-notched #3, 5, and 6; and Small Triangular #5. Also, several kinds of small industrial tools recovered from various sections of the quarry are believed to have played an important part in this pipe industry. They consist of Pipe-bowl reamer; Graver; small End pick, sharply pointed and made of hard stone materials; Flake scraper and Abradingstone, also made of long-wearing stones such as quartz crystal. Evidently, this quarry remained open for pipe-making after the making of bowls had been discontinued, to judge from a comparatively late radiocarbon date of approximately A.D. 731 of Stage 1 ceramic times, obtained from a charcoal sample believed to have been associated with certain pipe-making remains at the site.

Westfield Quarry. A comprehensive account by the writer of this Little River site in Westfield, Massachusetts, appeared in Volume 30, #1, 1968. Unquestionably, the greatest aid to a better understanding of quarry activities was the appearance here of an extensive white quartz tool quarry-workshop that yielded over 600 small quartz tools, a large part of which were perfect specimens. More than 100 of them had been cached away in 3 small storage bins formed by deep crevices at the base of the quarry boulder. Here was an authentic display of 8 types of specialized small tools, each with a separate function in the making of stone bowls. Also, appearance of an additional small tool type, the Pipe-bowl reamer, of which there were several specimens, indicates the presence of pipe-making activity. Had it not been for these spectacular recoveries, our knowledge of the existence of such small finishing tools would have been greatly curtailed.

Bakerville Quarry. In the foothills of the Berkshires, some 8 miles distant from Winsted, Connecticut, and about the same distance from the Ragged Mountain site, appeared a quarry in the vicinity of Bakerville. Results of its excavation were reported by John Nesuko, Jr. in Volume 31, #1 & 2, 1969. This was a most unusual dig, in which research could be carefully recorded as a result of the quarry’s undisturbed condition. Due to this favorable factor, evidence was systematically analyzed with what appear to be outstanding results. Full Grooved axes in evidence at one spot were found to have been the probable first tools used in removing steatite blocks for bowl-making. From here on, a definite evolutionary development of quarry tools could be traced, with small finishing tools, as at other New England quarries, coming toward the end of operations. As to domestic remains, recoveries included projectile points of the Eared #3, Corner-re- moved #3, and Side-notched #1 types, as well as Side-notched and T-based drills.

Christiana Quarry. About 50 miles west of Philadelphia in Amish country lies this quarry, evidence from which was reported by the writer in Volume 17, #4, 1956. Most recoveries had been made over the years from plowed land, which covered much of the quarry workings. A search in piles of material taken from the site in previous years produced only 2 well-defined small tool types: Abrading-scaper, and Hand gouge. And this restricted evidence seems important to note. Quantities of larger tools from the quarry as seen in a local collection seem to have been preferred over smaller tools. This may mean that small tools were late comers in this area.

Ragged Mountain Shelter-Quarry: Locale and Excavation

A climb of some 200 feet up the south side of
Ragged Mountain in the Peoples State Forest of Connecticut, along the upper reaches of the Farmington River, brings one to an abrupt impressive mass of granitic ledges. At their base is a rock shelter 75 feet long with an overhang of about 11 feet at the deepest point. But what makes this shelter unique is the fact that once it contained workable veins of steatite that have since been quarried away, leaving nothing but small outcrops, here and there, of poor grade steatite schist. This combination of a stone bowl quarry and shelter seemed too good to be true, when first seen by the writer. He realized at once that because of it, here might be found industrial and domestic remains lying side by side. In other words, at this site for the first time appeared an incredible opportunity to discover the various types of domestic implements that belonged to the quarriers. For, in those days, little was known about which projectile point types and other kinds of implements were attributable to the age of stone bowl-making, now known to occupy most of the Late Archaic.

Discovery of the shelter occurred in 1901, when Walter E. Manchester, prospecting for minerals, happened upon it. He set up a screen, and, sifting the surface accumulation, found signs of human occupation in the form of deer bone remains, together with stone projectile points, a Hatchet club, the bit end of a Pestle, and many potsherds of which some were decorated. Subsequent excavation of the site, as related herein, showed that Manchester shoveled off the surface to a depth of about a foot — more in some places and less in others — but failed to go deep enough to more than scratch the floor of the first shelter occupants. Fortunately he deposited most of his finds with the Peabody Museum of Yale University, so that in 1948, when the site was test proven and fully excavated, they became available for comparative study.

The writer was invited by Dr. Irving Rouse of the Peabody Museum to be associated with him as working director of the proposed dig. A camp was established in the surrounding dense woods, where only a few rays of sunlight managed to struggle through the thick foliage. This became the writer’s abode for the duration of the excavation. The shelter, situated on top of a steep bank at the base of an almost perpendicular ledge of granitic outcrops, presented an imposing sight. Its more or less level floor, extending
about 20 feet out from the shelter's recess, was laid out in 6 foot grids, terminating at the edge of a steep bank that fell away to the forest floor below. These details together with important features of the dig are outlined in the accompanying drawing (Fig. 5).

As the work progressed, two stratigraphic zones were recognized as being present. From the top down for a distance of about 12", more or less, occurred the upper zone. This consisted of a brown colored deposit of disturbed overburden, the result of Manchester's spade work. When excavated by the Yale group, this gave up some artifacts overlooked by the 1901 digging. Directly below appeared an undisturbed black habitation deposit: the lower zone, which developed into a thick layer within the central living area. It was noted that at certain places Manchester had cut into this lower zone, including the top of some stone bowl dumps. In so doing he had recovered a few of its artifacts including occasional pieces of worked steatite, which in this way became mixed with artifacts from the top humus. Therefore, evidence from the disturbed upper zone lacks significance except for animal bone remains and the ceramic potsherds it yielded. Consequently, all stone artifacts referred to in this report, as being noteworthy for study, will be confined to those taken from the lower zone. They alone appear as valid evidence of the first shelter occupants. And since steatite bowl fragmented waste was confined to the lower zone and tailing dumps — except for the few pieces brought to the surface by Manchester — these early people must have been the stone bowl quarriers. Furthermore, no animal bone refuse appeared in the lower zone except occasional bits of calcined bone, representing a more ancient occupation from which unburned bones had completely disintegrated and disappeared.

**OCCUPATIONAL FEATURES**

Excavation was commenced at the westerly end of the shelter, working in from the steep bank. Continuing in a northeasterly direction soon a thin black lense was encountered that occurred just below Manchester's disturbed overburden. Then projectile points began to appear in it, at first consisting of Small Stem and Small Triangular types, while this black layer, or lower zone, increased in thickness as work progressed. Within the next 12 feet the first feature appeared in the form of a cluster of stone hearths in situ. When all 8 were finally uncovered — and after removal of a 200 lb. slab of rock fallen from the ledge above, which had covered hearths #7 and 8 — 5 were seen to belong to the lower zone (#2,3,6,7,8), and 3 to the upper zone (#1,4,5), by virtue of their respective levels. However, the fact that all of them occupied a common area that was filled with a mass of crushed charcoal aroused our suspicion of something more to come. And in due time, as a further advance was made, the reason for the hearths became apparent. After excavation and removal of the black occupational accumulation, which by then had increased to 20" in thickness, a commodious room about 10 x 15 feet in size was exposed just beyond the hearths. Evidently this was the living area. On its front side was uncovered a low-lying flat rock about 8 feet long, an interesting feature that doubtless served as a table or seat as desired. In the rear appeared what turned out to be an important part of the abode, after the humus fill had been excavated and removed. Here was a relatively uniform recess under the ledge, with ample depth and length of 12 feet or more, to have provided

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*Fig. 6. RAGGED MOUNTAIN SHELTER QUARRY, showing hearths in foreground with living room just beyond.*
with the help of moss and leaves suitable sleeping quarters for a quarrier's family. For a family status seems probable because of existence of the hearths, the probable responsibility of women. If more than one family happened to arrive at the same time, extended living quarters could have been found toward the further end of the shelter. Here the living area opened up again beyond a group of rocks. And it is likely that the entire length was enclosed with wattle reaching up to the overhang, while the hearths at the west end were left outside (Fig. 6).

Exposure of these features furnishes a setting that gives more meaning, it would seem, to the artifacts uncovered in the living area. Here in the lower zone appeared 37 projectile points of several types, now known to belong to the Late Archaic: Small Triangular; Small Stem; Eared; Side-notched; Corner-removed; and Tapered Stem. Also present were other domestic implements: Grooved gouge; Wing atlatl weight; Stem and Stemless knives; and Stem scrapers (Fig. 7). Beside indigenous stones, Coxsackie greenish-gray flint was present — is in black.
Beside these domestic implements lay 17 small industrial finishing tools consisting of the following types: small End pick; Corner pick; Hand gouge; Abrading-scraper; and Shaver (Fig. 8). A total of 62 industrial tools, small and large, were recovered from the lower zone.

Presence of small tools in the living room suggests that the work of finishing quarry products probably took place within the wattled abode, where 2 unfinished cup-forms appeared. However, worked steatite fragments of broken bowls, platters, and cups were not found here, but were present for the most part in two or three tailing dumps located outside the living area at the brink of the steep bank, where they had been thrown as waste. While no unbroken vessel was located within the shelter, one large semifinished Kettle with lugs, 11½ x 20 x 5" in size, was discovered a short distance away on the forest floor where it had been dropped (Fig. 9).

An unusual feature was encountered during excavation of the living room in front of the flat stone table. It consisted of a granitic slab about 8 x 12" in size with worked edges. Apparently, it had been shaped into a convenient Plate with pointed ends,
which evidently served as handles. It was discovered lying in a horizontal position. And, as if just shored up by someone preparing a meal — no doubt a woman — a Pitted stone had been tucked under one end for support (Fig. 10). Three more Pitted stones lay beside it, while all four of them had the pit worked on one face only. They are believed to have served as anvils on which nuts were cracked open. Hickory trees bound in the area and presumably were present during the age of quarrying, providing quantities of nuts. Their meats may have been pounded and made into a nut preparation, for its Algonkian derivation sounds suspiciously familiar: *pawcohiccoro* (a crushed walnut kernel mush). This might then suggest the presence of female labor, and support the belief of family occupancy of the shelter. Additional woman’s work of
tailing removal at the quarry was accomplished with Spiked tailing-breakers and Hand spades. These tools were made of granitic stone and were shaped similar to those at other quarries; the Triangular tailing-breaker was not present and is presumed to have been nonexistent here as a tailing-removal tool.

CERAMIC EVIDENCE

Presence of ceramic potsherds at this quarry is unique, as they have occurred at no other stone bowl quarry, so far reported. Therefore, it seems important to present the evidence somewhat in detail, so that a better idea may be had as to their significance. Of the 83 sherds recovered, many were decorated. Manchester's finds amounted to 74, while the remaining 9 were found by the Yale excavators. However, the important thing to note about the latter is that all 9 appeared in the upper zone, evidently overlooked by Manchester. Of these, 2 pink sherds were discovered in hearth #4, one of the 3 hearths on the upper level, which is suggestive of a ceramic provenience for all three. Interestingly, the 2 pink sherds were found to fit contiguously onto one of Manchester's recoveries (Fig. 11, #2). No sherds were present in the black lower zone nor in the quarry dumps. Significantly, one sherd appeared in a small lense of yellow soil directly below the Manchester overburden outside the living area. From this it seems probable that at some time yellow soil was eroded by spring freshets and spread over much of the shelter floor, after which occupants with small ceramic pots lived here. Manchester's digging evidently cut through this yellow soil layer in most places, mixing it with the top humus to form the brown overburden, and, in so doing, recovered its pottery contents. Apparently, the yellow soil layer, of which small untouched lenses occurred here and there, once separated earlier quarry stone bowl relics from later ceramic remains.

For the purpose of comparison, representative potsherds from 5 different small pots, broken at the shelter, are illustrated (Fig. 11). Also, sufficient sherds existed from a 6th pot to permit its restoration all except the rim, which was missing (Exhibit #5). This

Fig. 11. UPPER ZONE POTSHerd RECOVERIES, Ragged Mountain. 1-5, Stage 2; 7, Stage 3 Pottery; 6, Full Globular Base; 5, Restoration of one of the Stage 2 pots, minus rim.
pot had light gray paste; an 8" diam. opening at its top; straight neck; conoidal base; thick ware with coiling indicated; and was cord-marked outside, smooth inside. A single band of a small herringbone design encircled the neck.

Examining this pottery assembly more closely, two of the four periods of ceramic development seem to be represented. Including the restored pot, 5 of the pots belong to Stage 2 ware with sample dentate, trailing, and simple herringbone designs, and probably with conoidal bases like that of the restored specimen. The remaining pot belongs to the next development, or Stage 3, with an incised design of a double-lined V motif (Exhibit #7). This later pot should probably have had a semi-globular base. However, the recovered full globular base (Exhibit #6) may have belonged to it, but, if so, would represent a variation of the standard Stage 3 semi-globular type.

While positive evidence is always better than negative, the latter has an important place at any dig. Here at Ragged Mountain in the study of its ceramic evidence, it should be noted that pottery belonging to the earliest phase, Stage 1, with cord-marked interiors and exteriors and devoid of design embellishment was absent. Also, pottery of the final phase, Stage 4, of Protohistoric times with castellated collars and meticulous incised design work was missing. Presumably, the earliest and latest stages by their absence suggests that the shelter was not occupied during these ceramic periods.

An important recovery by Manchester from the upper zone in association with the potsherds were numerous deer bone fragments, which had not disappeared due to rot. This should indicate not too long confinement for them — perhaps several hundred years — in the acid soil of the shelter. Otherwise, for a more extended period they would have become completely disintegrated, as was evident in the case in the lower zone, where no bone fragments occurred.

**CONCLUSION**

In trying to understand the evidence exposed at Ragged Mountain, one is intrigued by the combination of quarry and living abode in a single unit, the workshop-home of the first occupants. The artifacts they left in the lower zone show them to have been the stone bowl industrialists of the Late Archaic. Here they quarried steatite that outcropped in and about a rock shelter, which showed signs of having been lived in by these workmen and their families. To know what life was like at such a quarry-workshop, we must examine the excavated evidence in search of clues to guide us in unraveling the story. For the people involved were primitive artisans, who left no pictograms or descriptive marks to tell us what they did, or how and why they did it.

As events of those days begin to take shape through a study of the stone relics left behind, we have come to realize that it was a long-lived age, much longer than has been generally believed by some. Inadequately labeled the Transitional of 500 years duration by certain archaeologists, it was much more than this fleeting interlude between the Archaic and Ceramic ages. As revealed by a radiocarbon date at the Horne Hill quarry, stone bowl activity probably consumed something like two millenniums before it was replaced by pottery-making.

But to understand the people who worked the quarries, we must be able to appreciate what their existence was like. And what better opportunity is there than that presented by the evidence at Ragged Mountain? For here they not only carried on the work of stone bowl-making, but lived with their families in a wattled shelter in the quarry works. And now that we have found the room in which they lived, we may people the quarry by our imagination in order to visualize their industrial and social activities. Both men and women, each doubtless with specialized duties, labored in producing the stone vessels of the day — the men to peck out and shape the various stone bowls, and the women, as shown in several earlier stone bowl quarry reports by comparative analysis, to remove the tailing waste to nearby dumps. Preliminary finishing, if not the actual finishing of bowls, evidently took place in the wattled abode where the 17 small finishing tools appeared. However, broken bowl waste must have been repeatedly removed to the dumps from here, since the living room was free of such evidence except for the presence of 2 cup-forms that were ready for processing — fragmented sections of Platters and Bowls were recovered from the outside dumps.

Here at the shelter occurred several domestic features indicating family living, one of which seems to be the stone hearths at the west end. And to support the conception of family life, no better evidence could be wanted than the Plate and Pitted nut anvils in the living room. With this feature we get a glimpse of a nut preparation in process, with the probable Pestle used in mashing the nut meats represented by the broken bit appearing in Manchester's recoveries, one of the earlier artifacts scooped up by him doubtless from the lower zone. Most assuredly here is evidence of female participation, as women were then as always in charge of the hearth, and of the preparation and cooking of food. And the great quantity of crushed charcoal found around and beneath the lower level
hearth's attests to an extended use of the quarry-shelter, while the veins of steatite were gradually worked away.

All this time the quarriers must have obtained food other than nuts for their survival. And there is no surer evidence of this than the numerous projectile points recovered from the living area, both small points for bow-and-arrow and larger ones for spears. In fact, as previously mentioned, 37 were found in the lower zone, most within this relatively restricted area. A number had only the base remaining, proof of their use in the hunt. Their types, as already enumerated, are now held to be diagnostic of the age of stone bowl-making: the Late Archaic. After the game had been brought to the shelter, the butchering may have been performed on a large worked slab of steatite found at the site.

An artifact, controversial as to its use, appeared with the lower zone projectile points in the living room. Formerly known as a Bannerstone, now called a Wing atlatl weight, its site association at Ragged Mountain furnishes new evidence to justify its function as an atlatl weight. The site specimen is of polished sandstone — not steatite — obviously an import. Its presence at this shelter high up on the side of a rocky mountain seems to refute the former theory that it was used as a sort of banner on the end of a staff in ceremonial rites. For it would be most unlikely that the few people involved at this remote mountain abode would have been engaged in processional banner-waving of this kind. Instead, the probability is that it was hafted on an atlatl (throwing stick), which ejected the spear, and so would have served a practical purpose in acquiring food for survival. Illustration (Fig. 7, #31) shows top and bottom notches that occur both sides of the central perforation. These may have served to hold thongs in place that were used to bind the weight onto the atlatl to prevent slippage; a further reason to support its use as an atlatl weight and not a Bannerstone on the end of a staff, where thongs would not have been needed to hold it in place.

In making these deductions, we should bear in mind that whatever implements were left behind in the shelter were used by only three or four people at any one time — a single family group. And it appears unrealistic to consider they were here for reasons other than those of working the quarry, and of survival. Therefore, any stone implement carried to the site must have had a related use, or it would not have been brought there — ceremonial processions would have been practically impossible over the existent rough terrain at such an isolated rocky mountain shelter.

Finally, presence in the lower zone living room of a Grooved gouge seems at first irrelevant, considering that this tool is presumed to have been employed in shaping wooden products such as dugouts. However, when we realize that at other quarries worn-out Full Grooved axes have occurred, some with their bits sharpened to a rough point, apparently for use in quarrying steatite, the reason for the gouge's presence seems clear. Is it not likely that this small gouge, similarly, was brought to the shelter for the express purpose of using it to help cut bowl-forms loose from steatite veins?

But how account for the presence of potsherds at the shelter. At first we might conclude that their appearance within similar surroundings to those of stone bowl-making: the Late Archaic. After the game had been brought to the shelter, the butchering may have been performed on a large worked slab of steatite found at the site.

Analysis of the site's potsherds shows the presence of two stages of ceramic development: Stage 2, with a conoidal base and simple dentate design treatments, and Stage 3, with an incised double V motif and constricted neck. Absence of Stage 1 pottery suggests non-use of the shelter for the duration of this earliest phase, a span of some 600 years or more. Putting these facts together, it seems quite evident that after stone bowl operations came to an end, the shelter remained vacant for centuries. During this time spring freshets, that even today pour water in quantities over the shelter floor, covered it with a layer of yellow soil. At the close of this long period of non-occupancy the shelter once more appears to have served a family group now and then as a place to stay during a hunting expedition. Certain it is that women were present, otherwise there would have been no broken pots, for women were the makers and users of pottery. Also, we may be quite sure that whoever stayed here at that time planned to remain for a short stay only. Proof of this is the presence of small pots, which seem more suitable for travel and short sojourns than large pots would have been.
Finally, with the advent of Stage 4 pottery with its castellated collars — no broken pots of this last stage were present — the shelter evidently was no longer used as a hunting retreat for some inexplicable reason. By then this remote shelter, hidden among mountainous crags apparently was forgotten and its history became a closed book for the next several hundred years. It remained this way until its rediscovery in 1901 by Manchester, who later revealed its location for excavation by the Yale group.

Bronson Museum,
May 6, 1969

A CERAMIC POT RECOVERY AT OAK ISLAND NO. 2

DONALD AND NANCY SCOTTHORNE

While test digging another area on North River nearby the original Oak Island site, formerly reported in Society Bulletin, Vol. 29, 3 and 4, my wife and I made an unusual recovery of a ceramic pot. When first discovered in its underground resting place, it was seen to be in a badly disintegrated condition, but with much of its body being held together by the soil in which it was buried.

The site, where the pot was found, is situated on a small sandy hill about 30 by 100 feet in size, and some 12 feet above a marsh that separates it from the river. It lies near the narrows above the big basin of North River, and is sparsely covered with large white pine and a few oak here and there. The soil distribution at the site consists of an inch of pine needles and humus, underlain by 1 to 3" of sandy loam, below which is 4 to 8" of stony subsoil above a white sand base.

Subsequent to the pot recovery, made on our first visit to the site in July of 1967, we laid out an area in grids, and carried on a controlled excavation, in which 1,100 sq. ft. were dug (Fig. 12). Many stone hearths,
about 60 in number, were removed. They included all of the types found at Oak Island No. 1 and at corresponding levels. However, in spite of such a good showing of features, only 34 recognizable artifacts were recovered. They include projectile points from all culture periods from the earliest down, and will be fully reported in a future account, together with other significant artifacts appearing at the several levels.

But to return to recovery of the pot, the subject of this report, it occurred one Sunday afternoon, when my wife suggested that we go digging. The sand hill at Cunniffs, described above, seemed a likely spot to try our luck, and after staking out a square beside a woodroad, we commenced to excavate. Nancy worked on one side, while I worked toward her from the opposite side. At once, chips were encountered, and soon Nancy came upon 5 white quartz blanks in a shallow pit (Fig. 13). Shortly after, several potsherds appeared, which impressed us with the possibility of more to come. So, with my trowel I cleared a wide area about the spot, and soon we noticed a relatively small circle of charred pottery edges that began to appear. This was a find worth noting, which made me think there might be a pot hidden in the ground below.

Next, we slowly worked the dirt away from around the exposed circle of pottery edges, and as we dug lower, more and more of what looked like the body of a pot appeared. By this time we realized that more room would be needed around the anticipated pot in order to adequately remove it. So, we cleared the subsoil away from about it, but not up to it, and down to the white sand. We could now see enough of the pot's outline to realize it was resting in an up-side-down position, with its base broken away, presumably from previous logging operations along the woodroad (Fig. 13).

Appearing around the pot's rim in the subsoil were numerous white quartz blanks, conveniently small in size. As we began to pick them up, we realized that they must have come from the pot, which in the end was found to be full of them. By now, we had carefully removed the sand from around the pot, a few small sections of which had crumbled away, and

![Fig. 13. Showing position of pot, as it was being uncovered. Oak Island No.2 Site (not to scale).](image-url)
Fig. 14. CONTENTS OF POT - in part, Oak Island No. 2 Site. 1-3, Worked Quartz Blanks; 4-6, Small Stem Points. 4, argillite, 5, 6, white quartz.

at length I decided what our next move should be.

From my truck I brought a plastic pail — fortunately not of metal, as events turned out in the end. Also, I found a towel, and after soaking it in the marsh, carefully wrapped it securely around the pot to hold it together. Next, I slid my shovel underneath the pot and broke the whole mass loose from the hard-packed subsoil. Fearfully, I now slowly lifted the towel-bound mass of sand and pot with its contents of white quartz blanks, and placed it right side up in the pail, which I had already filled half full of dry sand. Then, after packing more sand into the pot's interior to take the place of the blanks that had fallen out, we removed pot and pail to our home. After the pot had been allowed to dry for about a week, I removed some of its contents, consisting of a quantity of quartz blanks, many of which had worked edges. And to my surprise, 3 Small Stem projectile points appeared among the blanks (Fig. 14). Then, after packing more dry sand into the pot to fill the void left by the removed blanks, I carried the pot to the Bronson Museum for restoration if possible.

In thinking about what interpretation to place upon the site and the pot, filled full of quartz blanks, several ideas seem uppermost. Rather than being part of the grave goods of a burial, as I first thought, the pot now appears as a storage container for quartz blanks, from which points, knives, and scrapers were to be fashioned. In fact, numerous caches of stone materials were found in our subsequent excavation of the sandy hill. These, together with the pot, now leads me to believe that here was a workshop camp to which people came, for the express purpose of making various kinds of stone implements during the Ceramic Age.

Hingham, Mass.
November, 1969

APPENDIX

Editor's Notes: The Oak Island pot arrived at the museum, buried in the plastic pail, with only part of its rim showing above the sand. Then the hazardous work of its removal from the pail commenced, in preparation for its final restoration. First, with a spoon the sand was carefully scooped out from around the pot a little at a time, until a limited area had been exposed from the rim down to the lower part of the body. Here, it ended in a broken edge, indicating that the base was missing. Then, as more sand was cautiously removed from below the pot's rim, another part of the neck appeared. This was found to be in a crumbling condition. Many fine cracks ran all through it, which indicated a condition of disintegration that would cause it to come apart, if subjected to the slightest strain. To save the pot, clear plastic spray was used over these weak spots in order to hold them together.

Upon testing the exposed treated walls of the pot and finding them relatively firm, after the plastic had become thoroughly dry, the next problem that developed was how to remove them from the pail intact. To attempt to lift them bodily out of the pail was certain to cause undue strain that surely would wreck the pot. But before another move was made, it now seemed necessary to remove the remaining quartz blanks from within the pot, of which there were possibly 12 or more in number. As they were carefully picked out one by one, it became apparent that by so doing a necessary prop to the pot's walls was being removed. Faced with this situation, loose sand was slowly brushed away from their inside surfaces, and clear plastic spray was again used to stiffen the walls from within. In the end, with this treatment applied within and without in places that needed it most, the pot's walls became quite rigid. They now seemed able to
withstand small jars that might occur in their removal from the pail. Still, as it was deemed unsafe to attempt a direct lift of the pot, a large section of the plastic walls of the pail were cut away with a knife — fortunately the pail was not made of metal. Through this opening the pot’s remains were slowly worked out, until they were entirely free of the pail, although not all in one piece.

Fig. 15. CERAMIC POT, Stage 2 (Restored), Oak Island No. 2 Site.

Final restoration was then accomplished, following procedures as outlined in Bulletin, Vol 30, #3 and 4. As the pot was seen to belong to Stage 2 pottery, it was restored with a conoidal base, typical of this kind of ware. Actually, a projection of the pot’s sloping body walls brought the base to a point, which justified the conoidal form. Finally, after joining the rim together, part of which was missing, and after completing formation of the base, the pot emerged in a restored form (Fig. 15).

The pot embodies Stage 2 pottery traits; has a 7” diameter mouth opening, and stands 8” high with ¼” thick walls. Its rim is irregularly flat, with slight cord-markings for decoration. Its somewhat constricted neck has a single horizontal row of 3/16” diameter punctate hole embellishments, which do not perforate the ware, but press out lobes on the interior. The paste has medium mineral temper with some indication of vegetable temper, which may only be an accidental intrusion. The most important trait that conveys a temporal meaning is the presence of cord-marking, not only on the exterior but also on the interior, where it appears somewhat smoothed over. This suggests the probability that this pot, with its elemental punctate decoration, is transitional between Stage 1 and Stage 2 pottery, since the former’s distinctive cord-marked interior is still present, although in a nearly obliterated condition, due to some smoothing operation. Similar conditions were noted on certain potsherds at the Sweet-Meadow Brook site in Rhode Island, Bulletin, Vol.18,#1, where they appeared at levels suggesting a transitional status.

Another observation should be made about this recovery, which concerns the contents of the pot. As already suggested, the large quantity of quartz blanks that filled the pot seems to indicate a storage supply, with workshop connotations. But that which attracts further notice and comment is the presence among the blanks of 3 Small Stem points, 2 of quartz and 1 of argillite. Their presence links this type of point quite definitely to the Ceramic Age, although these points are also found frequently at the Late Archaic level at excavated sites, which is thought to be their earliest source in the New England area.

In New York State, Ritchie places them in his Early Archaic “Lamoka” category, with stated overlapping into the following Late Archaic period, but to a diminishing extent. However, in New England, with appearance of 3 specimens in an early Stage 2 pot at Oak Island No. 2 site, their existence is seen to extend into the beginning of Stage 2 ceramics, estimated to have occurred about A.D. 1000 in this part of the Northeast.
SOME SOURCES OF NEW ENGLAND FLINTS

WILLIAM S. FOWLER

In archaeological research one problem that keeps recurring is that of locating the sources from which early man got the stone materials for his tools, for the procurement of stone was essential. It was as much a part of human survival in early times as the actual making of implements, and their use in the supplying of food for the family. When a source is found that seems to represent the particular stone in question, often including evidence of aboriginal quarrying, a more intimate approach is made toward understanding primitive activities. Most stone materials used for artifacts found in New England are indigenous to the area, and their sources usually are located without much trouble. This applies to such stones as quartz, quartzite, felsite, argillite, sandstone, etc. However, when it comes to a certain hard stone of a silica formation, resembling chalcedony, but more opaque, less pure, and less lustrous, widely known as flint, its sources have been more difficult to find. For the fact is that this stone in its common shades of gray and brownish-gray has no known large deposits in this area, and is not held to be indigenous. The term flint in this paper is used for the purpose of simplification—in general use for many years—to represent flinty hard stones variously spoken of as, chert, indurated shale, silicified limestone, etc., the main difference being one of hardness and surface appearance.

While deposits of the best-known gray flints are non-existent here, other varieties, recognized by different names, are to be found in some parts of New England. For example, red jasper, a hard flinty stone, is obtainable in at least one known location in the state of Maine. There, about the shores of Eagle Lake in the Allagash region this dark red stone is to be found in the form of variously shaped medium sized pebbles; and artifacts made from it frequently appear on Maine camp sites.

Another variety of a dull reddish flint-like stone is to be found in the Chicopee River Valley near the river’s outlet into the Connecticut about 6 miles above Springfield. Here, outcrops occur of this dull red hard stone, which apparently is indurated shale. Evidently, this stone was highly prized by the Valley natives, as well as those living elsewhere, as numerous projectile points and knives made of it have been recovered. It has a moderate conchoidal fracture, and is sufficiently indurated to resist splintering when flaked. At times, it has been referred to, incorrectly, as Chicopee shale, at other times, more properly, as red argillite. It seems to be a stone with some flint-like traits, although it cannot be said to be flint. Also, it may outcrop at other spots along upper reaches and tributaries of the Chicopee, since projectile points made of it frequently appear on sites within easy travel distance of the Ware River-Brookfield area.

Still one more minor flint source should probably be mentioned, although it is limited to a considerable extent. Along the sea coast near Plymouth and beyond, occasionally, may be found here and there medium sized flint pebbles left behind by the glacier. Also, such stones may appear once in a while on inland shores of the Connecticut or other rivers. Outwardly, such nodules are ill-defined, but when broken open sometimes reveal a dull black flint, while at other times various colors may be present, even including rare translucent chalcedony. These glacial flints may be the stones from which a few recovered projectile points and knives were made.

With these three exceptions, flint sources are probably non-existent in the New England area. However, numerous recoveries of chips and artifacts of high grade variously colored dark gray flints persistently appear on sites in this northeastern isolated region, that is confined between the Berkshire-Green Mountain ranges to the west and the Atlantic to the east. Examination of artifact collections in general from the sea coast to the hills in the central area shows a relatively small amount of flint appearing in coastal regions, with one known exception at the Wapanucket site on Assawompsett Lake, to be described further along, while its amount increases to sizeable proportions in the Connecticut River Valley. This might suggest that its source was being approached as a move is made toward the Connecticut, and should be looked for somewhere beyond the mountain barriers of western New England.

Research over the years has located flint deposits, known to have been worked by aborigines, in the Hudson-Mohawk river area, and elsewhere in New York State. The flint from them has different characteristics by which each may be identified. Now, for the purpose of learning if flint from any of them was used by New England natives in making their implements, a brief examination of the different deposits seems desirable. Charles F. Wray states in his report entitled, Varieties and Sources of Flint found in New York State, published in the Pennsylvania Archaeologist, Volume 18, Nos. 1-2, that there are nine known flint deposits, of which Flint Mine Hill near Coxsackie on the Hudson is the largest, and they are described by him in part as follows:
Deepkill Shale Flint (Coxsackie) — an important exposure is at the Coxsackie Flint mine Hill, about 8 miles north of Catskill on the Hudson, where it occurs in folding and faulting veins \( \frac{1}{2} \) to 4" in thickness. It is relatively fine-grained with a well developed conchoidal fracture, but usually with no luster. It may be distinguished by its characteristic apple green-gray color that occasionally becomes bluish-green. Other shades sometimes occur such as brownish-gray, blue-gray, and less frequently various reds. Slight mottling and streaking of colors sometimes is present. Small masses of hematite dust having the appearance of rust are scattered along vein faults in some cases, and a tendency to gather patina is negligible.

Normanskill Shale Flint (indurated shale) — fine exposures are at Rice Mountain near Grant Hollow at the foot of Church Hill near Catskill on the Hudson, where it occurs in veins, which often stand out in the shale beds as distinct ridges. It produces only a medium conchoidal fracture, while much of it appears as indurated shale, which splinters when flaked. Its color is generally gray or black in the central Hudson Valley, but frequently is banded with light green-gray or red streaks in Washington County to the north. It weathers with an overall light gray or whitish patina.

Helderberg Limestone Flint (nodules frequent) — one of the best deposits is in the vicinity of Catskill on the Hudson, where it appears in small nodules and localized lenses. It may be distinguished by its dull shiny black color that sometimes runs from blue-black to gray-blue. It exhibits a poor to medium conchoidal fracture development with fracture planes being common along which the flint separates upon concussion. Nodules often have a thick encasing layer of tripoli, and large fossil intrusions are numerous.

Glenerie Limestone Flint (silicified limestone, Helderberg series) — the best exposures are in the vicinity of Cobleskill and Catskill on the Hudson, where it occurs as limestone deposits. It consists of a silicified limestone of incipient flint with a drab brownish-gray color, sometimes caused by weathering, which occasionally has rusty stains. The color sometimes appears in deeper shades of gray-blue and black, but drab brownish-gray is more frequent. The stone fractures with a medium conchoidal surface and often has small fossil fragments imbedded in it. Its surface is apt to be rough or grainy and never has luster.

Whitehall Dolomite Flint (curdled structure) — from relatively small patches in the northeastern section of the Champlain Valley, it appears as rather impure flint. In its dark blue to blue-black and gray-black colors, it resembles Little Falls flint, except that it has a more fibrous texture with a curdled structure of an irregular formation. It weathers with a whitish patina that has no lustre.

Little Falls Dolomite Flint (includes Knauderack Flint) — has outcrops in the Mohawk Valley, where it occurs in layers and nodules. Deep deposits have a pearly light blue color with a tendency toward surface translucency, but with some brownish weathering. At the Knauderack quarry site it occurs in an upper deposit and has a whitish color, stained by brownish weathering at times, and occasionally is interspersed with pink streaks. The white variety is commonly known as Knauderack flint. All kinds of Little Falls flint have a well-formed conchoidal fracture, a relatively fine grain, but with little or no luster.

Onondaga Limestone Flint — deposits are more in evidence in western New York and across the Ontario, Canadian border, where it occurs in 4 to 5" nodules and discontinuous veins. Its color varies somewhat depending upon its geographic location, but in general it is drab brownish-gray; in eastern New York its color is lighter with bluish hues, and at Buffalo it becomes black, while in western regions it is a mottled bluish-brown or tan shade, sometimes with reddish stains. The stone breaks with an excellent conchoidal fracture, and has a dull vitreous luster.

Lockport Dolomite Flint — the best outcrops are in the Province of Ontario, Canada, and at the international boundary in Niagara County, New York, where it occurs in nodules, sometimes rounded, and occasionally in flattened lenses. It is hard with a medium conchoidal fracture that tends to splinter. Its color is gray-blue with variations toward a whitish color with brown stains; often has a mottled appearance with fossil content.

Oriskany Sandstone Flint (silicified sandstone) — outcrops occur in central New York State, where nodules up to 8" in diameter appear at the top of the formation. This nodule flint is distinguishable by its black sandy appearance with glassy spots here and there.

Hudson Valley flints have been examined spectroscopically and have been found to contain infinitesimal marine organisms imbedded in the stone, only discernible under the glass. These, together with occasional shell fossil intrusions of marine provenience cause these stones to be classified as marine flints, as compared to other flints containing no evidence of former marine life.

In the Connecticut River Valley of Massachusetts there seems to be substantial camp waste of different flints, comparable to probable New York State proto-
types, to judge from the flakes and artifacts found on Valley sites. Evidence of flint concentration in some places points to a ready supply of this stone from some convenient locality. For instance, the writer found a heavy accumulation of dark gray flint flakes spread over one site in Hadley to the almost total absence of flakes from other commonly used stones, such as quartz, quartzite, etc. Also, the Town of Hadley artifact collection of local recoveries consists very largely of implements made of dark grayish flint. This, as it would seem, is what might be expected with Hudson Valley flints only a short canoe trip removed. After reviewing the evidence and making comparisons, several Connecticut Valley flint recoveries, known to the writer, appear to be so similar to certain Hudson Valley flint deposits as to suggest them as their sources.

Fig. 16. HELDERBERG FLINT. 1. Nodule (core), Connecticut River Site, Mass.; 2,3. Spalls, from Helderberg Flint deposit near Catskill, Hudson Valley. Note fracture planes resulting from concussion, showing in all three exhibits.

Most numerous of all Valley flints, and those from many parts of central New England as well, beside the Housatonic Valley of the Berkshires and the upper reaches of the Farmington River in Connecticut at the Ragged Mountain-Shelter quarry, have an apple green-gray color. They display an excellent conchoidal fracture, and probably are Coxsackie Deepkill flint. Other flint pieces, by their dense luminous black color, medium conchoidal features with fracture planes appearing where flint separates from percussion strokes, should doubtless be Helderberg Limestone flint (Fig. 16); note the 2 spalls from the Helderberg deposit on the Hudson (Exhibits #2,3); and note the black flint nodule from the State Line Agawam site near Springfield in the Connecticut Valley (Exhibit #1). This nodule has been split open by removal of flakes producing a core, which reveals the typical plane-formed fracturing of Helderberg flint.

Still another flint, often appearing on sites in the Valley and probably elsewhere, has a drab coarse grained brownish-gray color, and a moderate conchoidal fracture. Sometimes it has small fossil shell intrusions and undoubtedly is Glenerie Limestone flint. Less frequently, flint artifacts have been found on Valley sites, whitish in color, sometimes with faint pinkish streaks, which appear to be Knauderack Dolomite flint from the Mohawk Valley.

Unusual ceremonial pit recoveries have been made at Wapanucket 8, excavated by the Society’s Cohannet Chapter at this site on Assawompsett Lake in Middleboro, a coastal area connecting with Buzzards Bay. Appearing in 5 secondary burials of the Late Archaic were 33 large flint knives, relatively long, and all side-notched in varying degrees, a few with well-defined ears. After careful analysis they were found to be made of marine flints similar to deposits in the Hudson Valley. Their colors ranged from dull black to brownish-grays, some with an apple green-gray shade resembling the Deepkill flint at Coxsackie. From this it appears likely that they derive from Hudson Valley deposits. One observation about their recovery might be injected here, and that is that the inevitable immense accumulation of flakes of all sizes, which must have resulted from their manufacture was not present, although extensive areas were excavated for hundreds of feet about the pits. However, many small flakes, mostly of a brownish-gray flint were recovered, but are thought by the writer to have belonged to the much earlier Paleo culture. A few of its Fluted points, flake knives and scrapers were found in association with the chips. From this, it seems probable that the large ceremonial knives were brought in from areas outside, doubtless the Hudson Valley, where they may have been made. This big knife deposit seems to be an exception to the rule of small amounts of flint appearing occasionally on coastal sites.

On certain sites in the state of Maine more than the usual number of points and other artifacts of flint have occurred. It seems more than likely that their source, also, may be traced to Hudson Valley deposits. There may have been a convenient overland route that was used, which connected with various New York State quarries, rather than the alternate circuitous water route. This whole subject of methods of transportation of flint artifacts and stock from the Hudson Valley leaves much to be discovered. Reliable evidence is needed to expose more facts concerning the importation of flints into the Northeast, for at present too little is known about it.
THE GREAT FLINT MINES AT COXSACKIE

As a fitting climax to this paper, a close-up observation of the Deepkill flint quarry at Coxsackie on the Hudson seems appropriate. Its position as being the largest flint works in New York State, and the apparent wide-spread use of its distinctive apple green-gray flinty stone by New England aborigines seem reasons enough for its pre-eminent recognition.

Struck by the evident importance of this flint source, the writer made use of an opportunity that offered and visited the workings in 1958, to see for himself this great flint quarry about which he had heard so much. The invitation came from the late Mr. Taylor, a member of the Narragansett Archaeological Society of Rhode Island, who owned a farm near Coxsackie, where he had grown up as a boy. Not having visited the flint works since his early days, a guide was obtained in the village, who took us to the site. Before describing the results of our investigation, a review seems desirable of previous work at the quarry undertaken in 1924 by the late Dr. Arthur C. Parker, State Archaeologist for New York.

He established a camp at the site, where he made a thorough examination of whatever evidence could be uncovered. It was Parker, who labeled it the “Great Flint Mines,” and proceeded to describe the methods probably used in procuring the flint. Appearing in nodules and in veins that weave in and out, according to Parker, it was quarried on an immense scale by means of large percussion stone hammers and disks. His investigation convinced him that a well-defined stone industry was carried on at the place, in which, as he reasoned, Coxsackie material was quarried both for manufacture into projectile points, knives, etc., as well as for exportation in semifinished spalls or blanks. In other words, he concluded that the site was used both as a flint quarry as well as a recognized stone works for the expert chipping of implements.

With such statements in mind, the writer, on his subsequent visit to the site, was prepared for something fairly extensive in the form of a stone quarry, but never in his wildest imagination had he envisioned anything as tremendous as that which met his eye. About 2 miles to the west of the Hudson and the village of Coxsackie, and some 8 miles north of the town of Catskill rises a long tree-covered ridge. It has an elevation of about 100 feet above a flat meadow that reaches between this ridge and another lower elevation toward the river. The mountain ridge in question runs in a north-south direction and extends for a quarter of a mile or more to the south before its outline is broken. As an approach was made to the ridge, our attention was attracted to its even formation that extended unchanged into the distance with its base meeting the field below in an abrupt uniform line. But we looked in vain for a glimpse of the quarry, and could not believe it when told that this ridge was the quarry: the flint mine we had come to see.

Following a foot path that wound up the hill through a thick growth of hard wood, nothing appeared on the surface to suggest the presence of quarry activity. But when a stop was made to dig a hole here and there, we began to realize the truth of the situation. Under the leaf mold appeared an almost solid deposit of flint flakes and larger broken flint waste. It extended down through our test holes nearly a foot, without the bottom being reached. Our guide told us that this deep deposit of flint tailings covered the ground over the entire length of the ridge. He said that there was an opening on the further side of the hill exposed to view with flint veins showing, where quarrying had stopped, which had been explored by Parker. The immensity of these flint works was difficult to grasp, and now at last we could appreciate why Parker had labeled them, ‘great.’ To have mined veins of flint over the entire mountain ridge, and to have left behind such a deep cover of flint debris must have required perhaps millenniums, depending upon how many men worked at the site. At any rate, this doubtless is the most extensive flint quarry in the Northeast, and has every right to be looked upon as probably the most prolific supplier of flint for the New England area.

Results of the writer’s test digging included quantities of random flakes of all sizes, found in the tailings that reached down to the field below. But what attracted closer attention were several flakes, which had retouched edges. Apparently, they had been worked for use as knives or scrapers, and one, a semifinished projectile point, as may be surmised from Exhibits #1-3,5, (Fig. 17). Beside these recoveries, 2 large tools were found, which seem to confirm the quarry...
status of the site. One of these, with a part of its working bit apparently broken off (Exhibit #6), was made of the predominant apple green-gray flint of the mine, like the flakes, and appeared to be what Parker referred to as a Disk. That is, it has a thinned circular bit, which may have been useful in separating the flint veins from the shale incasement; and in this case seems to be a hand tool.

The other implement (Exhibit #7) also may have been a hand tool with its base broken off. It appears to be a regular End pick with a sharply pointed bit, quite similar to those found in stone bowl quarries of New England. It is made of a dense fine grained black flint with excellent conchoidal features; most probably is Deepkill flint from the quarry. Its recovery seems proof of the presence of a black variety of flint.
beside the other colors reported as appearing at this Coxsackie flint mine. Also, its presence serves to add this type of tool to those already mentioned by Parker.

Finally, a Hammerstone (Exhibit #4) was found at the foot of the ridge among a great mass of flint tailings, and appears to have been used for percussion flaking of relatively small implements.

In conclusion, a statement by our guide seems enlightening, and leads to speculations worth considering. He said that over the years many extensive collections of artifacts had been made of recoveries from the plowed field at the foot of the ridge. With this information to build on, it is possible to picture workmen of the mine living on the plain below the quarry, and dealing with flint procurement groups, who had come to barter, perhaps, for flint stock or finished implements made at the site. But when did all this happen, and how was such trade carried on?

In considering these questions, attention should be directed to the earliest known dates when Deepkill Coxsackie flint may be identified among recoveries on New England sites. Generally speaking, this flint is most noticeable during Late Archaic times; is absent from Early Archaic remains. More specifically, if it is the flint from which some of the large ceremonial knives at Wapanucket 8 are made, then the mines were in operation and furnishing finished artifacts from its flint as early as about 4,400 years ago, the radiocarbon determinant at that site. Supporting this hypothesis are the Deepkill flint recoveries found in the Late Archaic zone at other excavated sites, such as at the Ragged Mountain stone bowl quarry in the upper Farmington River Valley. This site was only a short overland trip removed from Coxsackie, which doubtless explains the presence there of this kind of flint, revealing its use during this industrial age of the Late Archaic. Beyond this, Coxsackie flint appears in the later Ceramic zone at many sites, which confirms our previous estimate that the mine must have been in operation for millennia.

The possibility also exists that its life span extended back into the earliest occupation, the Paleo of about 9,000 years ago. A few of the Fluted projectile points of that age have the apple green-gray color of Coxsackie Deepkill flint, while others are of flints apparently derived from other sources. Whether or not the mine was in operation as early as this may be questioned, but, as has been shown, it was very active in furnishing its distinctive flint stock after arrival of the Late Archaic, probably about 5,000 years ago.

Whatever the events surrounding the opening date, there is reason to believe that the mine probably was available to all alike, at least down to the start of the Ceramic Age (Woodland). For, it is likely that during the Late Archaic span a peaceful existence without warfare was enjoyed, and this was the time when the mine appears to have been the most active, to judge from the recurring presence of its flint among Late Archaic recoveries. Looked at from this point of view, instead of the controlled traffic of flint and fabricated flint implements, as previously suggested, the mine may have been freely available to any group. All that may have been required was a sojourn at the quarry long enough to dig out such flint as was wanted without the question of supervisory control or ownership entering into the transaction.

Bronson Museum,
February, 1970
SABATIA PLAIN SITE NO. 1

GEORGE H. BARTON

In a somewhat easterly direction from Taunton, Massachusetts, lies Sabatia Lake, some five or six miles removed from the center of town. An extensive plain covers a large area west of the lake, along one edge of which runs a brook. This flows slowly in a gully several feet below the plain at the edge of a swamp, and finally empties into the lake. This plain was under cultivation with various forms of farming in the past, but today is used very little. Over the years many artifacts have been recovered from the fields, which stretch over a wide area. For instance, a most outstanding recovery was made here years ago. While surface hunting one day at this site, one or two argillite stem points appeared in the sand under one of a number of raised chicken houses that stood at the edge of the field. Ordinarily, two points found in this way would have aroused no suspicion of more to be had for the digging, but on this occasion the reverse was the case. With curiosity aroused, a hand tool of some kind was produced. With it the sand about the spot where the points had lain was excavated, and suddenly a few more points were uncovered. From then on a thorough excavation of the spot took place, with the final recovery of 501 points. This tremendous cache probably is the largest one ever to be unearthed east of the Mississippi. However, it contains only 2 points more than the large Connecticut Smith Brook cache of 499 flint points, Society Bulletin, Vol. 29, #3 and 4. The Sabatia cache points consist mostly of the Corner-removed #3 type, with some shorter Small Stem points mixed in; most of them are made of argillite. They are today on display in the Bronson Museum.

Such recoveries as this led me to suspect that more artifacts were to be had somewhere in the Sabatia Plain, and I spent some time test digging and looking over the area. At one place a bulldozer had scooped up a limited amount of loam, and had left it there in piles. This gave me the feeling that here might be the place to explore, and soon our excavation was under way. The first day we uncovered 6 Small Stem points of argillite and 6 more of quartz, as well as a long Diamond drill of argillite, which seemed proof enough that we were not to be disappointed. This happened on May 13, 1962, and from then on through November of 1963 I returned to continue the digging of the site whenever opportunity presented, aided by members of my family.

While some parts of approximately 400 sq. feet had most of the loam removed by the bulldozer, a few places were untouched. However, since most of the topsoil was absent, we took stratigraphic measurements of each artifact, as it was uncovered, up to the top of the subsoil, where it meets the loam, known as Junction. Excavation was carefully done by scraping with trowels or short-handled hoes. A final count shows 70 recognizable artifacts were recovered and recorded, each as to its stratigraphic position, as well as to its class type, and with information as to whether found, in a pit or without.

All told, 8 pits were identified and recorded, although their presence was difficult to recognize for lack of discoloration near their tops. Probable evidence of them, for the most part, was confined to appearance of bits of calcined animal bones. However, not until the bottom accumulation of charcoal-blackened fill was reached was positive identification possible. Measurements of these charcoal-crushed deposits reveal dimensions of between 12 to 22" diameters, with depths of these accumulations amounting to 5 to 10". This discolored fill at the base of the pits occurred at various depths in the subsoil, the deepest resting on the white sand, about 24" below Junction. In the pits were found 9 well-defined artifacts, to be described further along. All pits, except one, by virtue of their artifact contents, appeared typologically to belong to the Late Archaic culture. The one exception may have been a pit of the preceding Early Archaic, since its contents consisted of a large Ulu, described in the section on artifact recoveries. However, its level of origin was not defined, any more than was that of the others, so that stratigraphic comparison dealing with the age of deposition is impossible.

Stone hearths were limited to two, and both were in the subsoil, undisturbed. The smaller of the two measured about 8 x 12" in size, and appeared at about 5" below Junction. It consisted of small burned stones indiscriminately spread around with some charcoal remains in evidence. The larger hearth was about 13 x 14" in size; was almost circular in shape. It first appeared at about 2" below Junction, and had a depth to the bottom of the stones of about 8" from Junction. Its firestones were in an irregular mass, and resting on top of them was a large flat fire-burned stone. Apparently, it was a functional part of the hearth, and may have served a useful purpose in the cooking of some sort of food. Perhaps the most interesting finds connected with this feature was appearance of two large artifacts at a depth of about 3" below Junction lying beside the hearth. On one side was a small
Fig. 18. LATE ARCHAIC RECOVERIES, Sabatia Plain: Site No. 1. 1, Eared Point; 2, 3, Stem Scraper; 4, Side-notched #5 Point; 5, 6, Corner-removed #7 Point; 7, Diamond Drill; 8, Diamond Point; 9-16, Small Triangular #4; 17-35, Small Stem Point; 36, 40, Corner-removed #3 Point; 37, Side-notched Reamer; 38, Small Stem Point; 39, Small Triangular #4 Point; 41, 43, Side-notched #5 Point; 42, Eared Point - from bottom of pits.
deeply-honed Groover gouge made of a black fine grained stone, as illustrated, while on the opposite side appeared a large Chipped ax, with a blade 5¾" wide and a well-developed shank for hafting, not illustrated.

RECOVERED ARTIFACTS

Enumeration of the various types of artifacts recovered and their frequency should serve to show by typology their culture relations. Add to this their respective stratigraphic positions, and the evidence seems clearly to support the presence of two culture occupations: Early Archaic and Late Archaic. In depths occurring from close to Junction reaching down to 10" below in the subsoil, 7 types of projectile points appeared, all affiliated with the Late Archaic: 32 Small Stem; 12 Small Triangular #4,6; 4 Corner-removed #3; 2 Corner-removed #7; 1 Side-notched #5; 3 Eared; and 1 Diamond. Found with these were: 1 Stem reamer; 1 Grooved Gouge, 1 Chipped Ax; 2 Stem Scraper; 2 Oval Scraper; 1 Anvil-Hammerstone; 1 Stem knife; and 1 Diamond drill — representative specimens of most are illustrated (Fig. 18). All of these recoveries occurred outside of pits, except 7 projectile points and the reamer, which were found lying just above or directly on the charcoal-blackened deposits at bottom of the pits, and are encircled in the illustration by a dotted line. The entire assemblage is known to belong to the Late Archaic Age, and forms the major part of recoveries at the site.

However, a few more artifacts appeared in such a way as to leave little doubt that a preceding occupation of the Early Archaic took place, with its concentration perhaps not too far removed from our excavation. This evidence consists of 5 Corner-removed #8 projectile points, and 1 ground slate Ulu (Fig. 19). Three of the points were uncovered below all Late Archaic artifacts at depths of from 11 to 18" below Junction, with Exhibit #1 being the deepest, appearing about 3 to 4" above the white sand, which underlay the yellow subsoil. The remaining 2 were apparently out of context in the upper Late Archaic horizon. The 7" wide ulu with a fractured back was recovered from the bottom of a pit, with outlines so

![Fig. 19. EARLY ARCHAIC RECOVERIES, Sabatia Plain Site. 1-5, Corner-removed #8 Point - from outside pits, lowest level; 6, Ground Slate Ulu from bottom of pit nearby Exhibit #1.](image-url)
ill-defined that its level of origin could not be determined. Nevertheless, its Early Archaic position appeared to be supported by recovery of a Corner-removed #8 point of that period, Exhibit #1, which was found lying only 4" from the pit near its base, just above the white sand.

**CONCLUSION**

While this is only a small site, our excavation uncovered some evidence, which is worth noting, as it seems to have relevance to the study of archaeology of the Northeast. Considering the great amount of evidence of occupation that over the years has appeared on this extensive plain near Sabatia Lake, it seems that our dig amply justifies a belief that much more might be uncovered by a further excavation of the area.

One of the features that taxes the imagination most is the considerable deposit of charcoal-blackened fill at the bottom of each pit. Would this represent merely refuse pit accumulation, although the usual bone refuse was nonexistent, except for a few bits of scattered calcined animal bone? Or would it be connected with some ceremonial use of the pits, in view of presence of the 7 projectile points and reamer, beside the inclusion of several broken points as well? Also, was the pit that held the Ulu a refuse pit, or did it have some other more important significance? These are questions, which appear to have no answers at present.

However, it seems that this site’s recoveries do tend to support a separation between the Early Archaic and the Late Archaic period that followed. At the site we found a majority of Corner-removed #8 points underlying all other artifacts of the Late Archaic. These projectiles with a more or less pointed base, formed by sloping sides, which converge from well-defined shoulders, have been identified at nine other sites with Early Archaic diagnostics at low levels; described in *A Case for an Early Archaic in New England*, Society Bulletin, Vol. 29, #3 and 4. So now, with the added evidence from the Sabatia Plain of the same kind of points appearing below other artifacts, their stratigraphic significance as indicating presences of the Early Archaic seems clearly indicated. But that which tends to strengthen this point of view is the large Ulu found in a pit nearby one of these points. This nearly perfect specimen is a rare find in itself, since ground Ulus of this size almost never appear except in fragments. However, perhaps its greatest significance lies in the fact that Ulus at four sites of the previously referred to nine have appeared at low levels associated with Corner-removed #8 points, and are held to be important diagnostics of the Early Archaic.

I am indebted to the Editor for the pen-and-ink illustrations of the Sabatia Plain recoveries, which clearly reveal all important traits. While the artifacts taken from pits, shown as a separate group in the illustrated assemblage, seem to me to have a selective appearance to justify their pit association as intentional deposits of a more than refuse nature, their presence may be only of an accidental sort that put them into just ordinary refuse pits.

Attleboro, Mass.
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