

# The Bulletin

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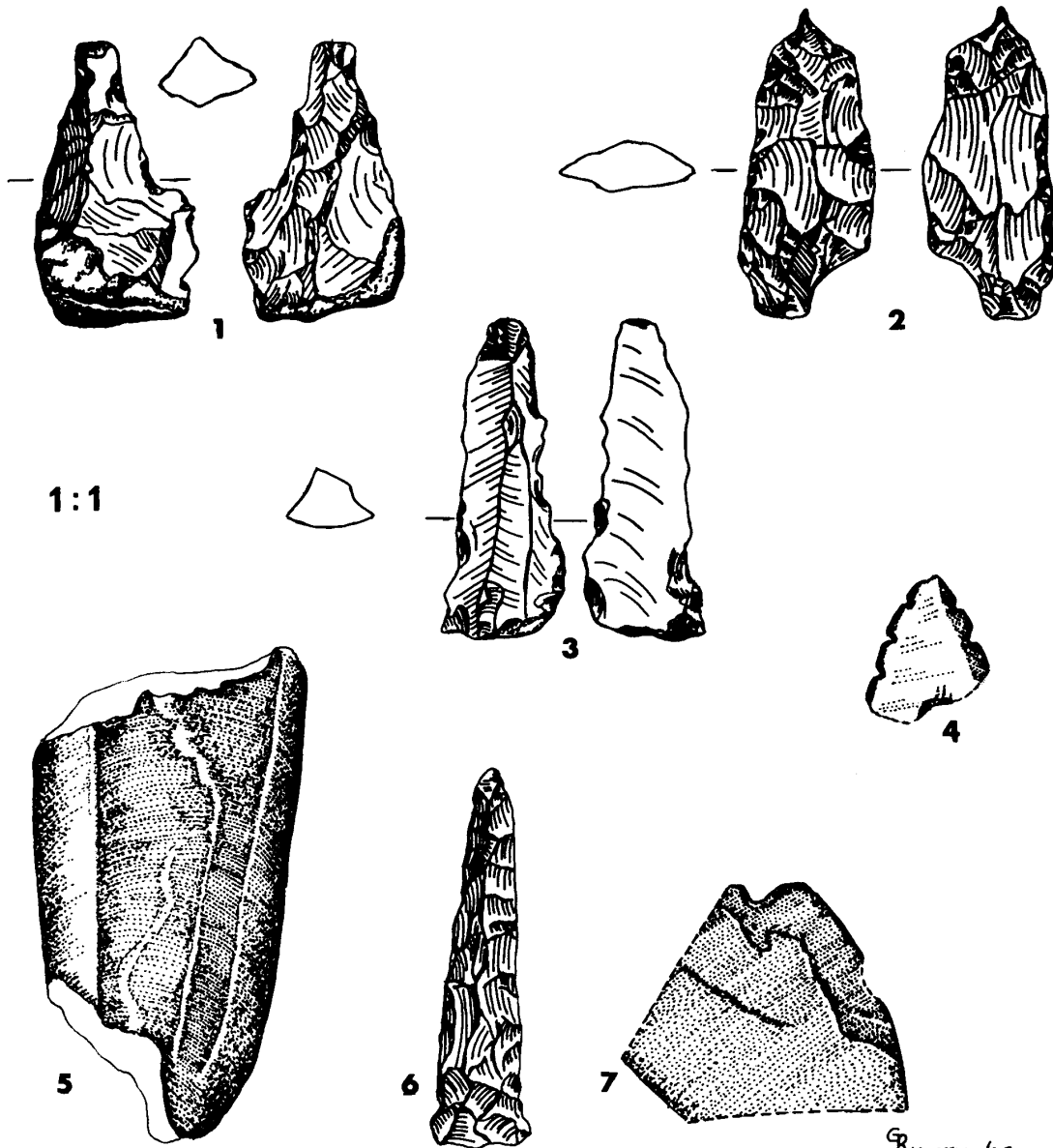


# THE BULLETIN

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COLE GRAVEL PIT - ARCHAIC STAGE

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A PROGRESS REPORT ON AN ARCHAIC SITE ON THE FARRELL FARM:  
THE COLE GRAVEL PIT 1966 – 1968

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Morgan Chapter  
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In March of 1966, July of 1967 and July of 1968 the Anthropology Division of the Rochester Museum and Science Center conducted salvage operations on the Farrell farm (Hne 17-1), Caledonia Township, Livingston County, N.Y. The component described in this brief report lay in what is now the Cole Gravel Pit. When first tested (Hayes 1966), there was no indication that an extensive occupation was present. Consequently, only five features, all pits, were salvaged. Time, weather conditions and the unavailability of excavation personnel did not allow many other spots to be checked, but they were mapped. In the summer of 1967 and 1968, however, favorable circumstances enabled the Museum to spend several concentrated weeks salvaging material as the construction machinery stripped additional areas.

During 1966 - 1968 thirty-eight days were spent at the Cole gravel pit. This time represents a total of 156 man-days of excavation. With a crew of four or five people it was possible to excavate four to six pits in one day, depending upon the depths encountered.

As the excavations progressed, the importance of this site to the interpretation of the Archaic Stage of western New York prehistory became evident. It is the purpose of this account to sum up the results to date, point out the initial observations and introduce some problems and proposals relative to the site's significance. Some of the data, it is believed, should be disseminated so that regional investigators can perhaps contribute to the eventual final report in terms of the site's relationships to other facets of the Archaic.

Geographically the site lies almost on the dividing line between the Great Lakes lowlands and the Appalachian uplands about twenty miles south of Rochester, N.Y. To the north the Genesee River flows through Rochester to Lake Ontario, after having passed through Avon to the south. The Genesee River at this point exhibits large meander patterns and not too far away on the flood plain are several oxbows around which are found several sites and other scattered evidence of aboriginal occupation. To east and west the lowlands continue occasionally interspersed with such glacial features as drumlins, kames and moraines.

The Farrell farm upon which the Cole Gravel Pit is located lies on a terrace about one mile west of a bend in the Genesee River at an elevation of 50 ft, about its floodplain. The area is composed of assorted gravels and sand of glacial origin. The few remaining large hardwood trees indicate what the terrain looked like before being cleared by the early settlers. According to Ritchie (1965:32) such a hardwood forest was also probably in existence back as far as the Archaic. These hardwood stands were undoubtedly interspersed with occasional open spaces. One of the interesting observations at Cole was that tree stump or root evidence was generally lacking in and about the refuse pits and graves, whereas on the periphery of the pit concentrations such features occurred. It must be realized that with 1.5 - 2 ft. of topsoil and gravel removed by machinery, many small roots or stumps could have been eliminated from the excavators' purview. Further, there was no evidence of root disturbance in any of the pits beyond small rootlets from grass in top levels. Even these did not show up in the majority of pits once the 1 - 2 ft. of gravel had been removed.

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Miscellaneous Artifacts From The Cole Gravel Pit

1. Flint chisel; 2. Flint knife with graver tip; 3. Flint chisel and side scraper; 4. Ground and notched shale fragment;
5. Bevelled adze fragment; 6. Drill; 7. Ground shale fragment.



Plate 1. Cole Gravel Pit: excavated pits 71, 72, 75.  
Photo, Rochester Museum of Arts and Sciences.

It is possible then that the location of the original occupation was in some sort of open area perhaps chosen because of this characteristic. In looking at the pit distribution it was noticed that there was some semblance of an arc extending from the south by the farm road out to the northwest and thence to the northeast. Additional stripping may determine whether or not there is a circular pattern. This work will probably not be done in the near future.

In terms of human history the strategic location both in relation to the Genesee River and to Dugan Creek running eastward at the southern end of the site cannot be overlooked. This spot was not only used by the Archaic people but also by later cultures as well. A prehistoric Iroquois site lies directly east of the Archaic component (Wray 1964). To the north an ossuary, perhaps related to the prehistoric Iroquois site was also located (Wray 1965). In the case of the Archaic component, however, it is not believed that any other components had intruded upon it despite their relative proximity. Of course some surface material in local collections demonstrated mixed assemblages, but subsoil features seemed to belong to the Archaic alone. There are, undoubtedly, still more pits to the east under the present pasture.

#### PITS

In the spring of 1966 the pits initially showed up as dark spots in the lighter gravel. The March excavations were quite difficult because of the moisture remaining in the dark fill. During the next two seasons it was found that the best time to excavate was in late June or July, at the same time as the stripping or a few days afterwards. If a pit had been left open

for a month or more in the summer months the top 6 inches became almost a solid clay "cap". Beneath this clay, however, the moisture remained throughout the summer. Often the machinery covered up pits as well as uncovered them. The pan would drag sterile gravel over the top of one just opened. Consequently a search had to be made by manually scraping off some areas. This was difficult but rewarding. Sometimes so-called "pit remnants" had to be classified as having been deposited by the large tires of the pan after having been removed 10 to 15 ft. away. This material was not attributed to any pits but placed in the "no provenience" category.

The number of pits recorded over a six acre area at the site certainly indicates a sizeable occupation, if the ir contemporaneity can be established. Approximately 200 features, including both refuse and burial pits, have been mapped to date. On the whole the refuse pits were un usually large. Diameters ranged from 12 - 56 in. and depths from 6 - 54 in. These figures do not represent the dimensions of any original pit because of the 1 - 2 ft. of topsoil and gravel removal. Therefore all pits were somewhat larger than recorded. In cross section the pits ranged from V to U shaped with several variations of both types. Their overall structures, however were much the same.

The construction of the refuse pits presents some interesting problems, as does their intended use. They were dug deeply into a solid gravel subsoil broken only occasionally by small sand lenses. During excavation it was found, sometimes with frustrating results, that the pit walls would fall in as soon as the contents were removed. This makes one wonder how the original digging was accomplished without similar cave-ins and whether or not a pit could stay open very long for a variety of uses. Excavation did not reveal cave-ins. One explanation might lie in the observation made about several pits in each of which was noted a dark organic central zone containing refuse surrounded by a lighter reddish clay with little, if any, cultural debris. It is possible that, after the initial digging, the edges of the pits were lined with this reddish clay in which occasional fresh water clam shell, flint debris, refuse bone and even complete artifacts were found imbedded.

Whenever possible a pit was divided in half along an N-S or E-W axis. Each half of the pit was then removed by arbitrary 6 in. levels, thus providing a cross-section. At this stage of the analysis it is not believed that the arbitrary levels have as much value as the final cross section which indicated, though faint in many instances, the natural stratification. The latter phenomena may eventually point toward activity at the site over a season or seasons. At the moment, however, stratification indicating the existence of more than one component is lacking. The slicing of the pits, none of which intruded upon another, below the plowed topsoil left unique units for investigation.

The use of the pits is still conjectural. Although they were filled with refuse, it does not seem probable that this was their sole intended use. Other uses have been suggested and include cooking ovens for shellfish and food storage. Perhaps one pit could have served many purposes over one or more visitations by a group or groups of people.

In a number of refuse-filled pits stones arranged in apparent order were observed. These features, possibly hearths, were not, however, surrounded by large amounts of charcoal as one might expect. The stones utilized were usually slightly larger examples of the round glacial cobblestones found in the area. In some cases flat fragments of sedimentary rock, probably locally derived but not common in the gravel pit, were used. It seems as if the hearths were placed in the pits at various levels only occasionally. There is no record by the many local collectors, however, of extensive darkened areas on the surface, nor were any observed during the stripping operations. Fire-cracked rock was noted in the majority of pits, but not in the quantities that one would expect if the pits were used solely for cooking.

### ARTIFACTS

Cultural remains from the Cole Gravel Pit consist of both artifactual and refuse material in fairly large quantities. At this stage of analysis patterns of distribution for each type of artifact cannot be established, but several general observations can be made.

Nearly all the material excavated was from refuse pits. Only one burial contained grave goods and there is no evidence for other non-refuse deposition such as caches or storage pits. Shell is unevenly distributed over the site; pits in the southern area of excavation show a much higher incidence and frequency of shell. A number of pits had noticeably large amounts of lithic debris. One pit, excavated in 1964, had a concentration of bone awls. A number of pits contained more than one milling stone.

Refuse material includes bone, shell, carbonized vegetal matter and lithic debris. Fish, bird, and mammal bones, ranging from small rodents to larger species such as deer and bear, account for most of the refuse bone. Turtle shell is not uncommon. A few examples show butchering marks and only a small number show exposure to fire. This observation is true for all classes of refuse and artifacts.

The shell from the site is a fresh water clam. All specimens are half shells or fragments. A small number have rough-edged holes near the center of the shell. Since these holes may have been caused by natural agents and not man, such specimens have been segregated for further analysis.

Charred vegetal material occurs in very small fragments. Among these are several carbonized seeds and nuts. Aside from radiocarbon analysis, this material has not yet been analyzed.

Lithic debris comprises a considerable portion of the refuse material. There is no evidence for raw material per se, though a few exhausted small cores are found among the artifacts.

All debris and related artifacts are of varieties of Onondaga flint. Nodules of an inferior, weathered blue-gray flint occur naturally in the glacial gravels but no artifacts of this material have been recovered.

The lithic debris is primarily in the form of flakes. These are irregular or ovate and fall within the general size and shape of thinning flakes derived from most of the tool types present. Retouch flakes are rare, perhaps because they are minute and hard to recover during excavation. A few pits show concentrations of such flakes.

The functional significance of lithic distribution may be hard to determine, but it is evident that the final stages of tool manufacture did occur on the site and are associated with certain proveniences. In contrast, the initial stages, such as preparation of raw material, are very poorly represented.

Artifact types appear to be scattered throughout the refuse and include chipped and ground stone tools, bone tools, worked shell and decorative objects of several types.

Both flint and other materials were used for chipped stone tools. In the non-flint category are two large, roughly executed, ovate sandstone choppers with a constriction near one end. These were probably for hafting; one example shows extensive wear in this area. A large, slightly altered, quartzite flake represents the only sample of a chopper of this raw material.

Several medium-sized tools resembling large crescent-shaped scrapers complete the non-flint category. These are made of quartzite sandstone and a metamorphic rock such as gabbro, and are roughly chipped.

Chipped flint tools include projectile points, knives, drills, scrapers, blanks, cores, gravers, and chisels, spokeshaves and miscellaneous worked flint. A small percentage of these are fire spalled.

Projectile points from the Cole Gravel Pit exhibit characteristics of both Lamoka and Normanskill types. The closest affinity is to the Lamoka type, for the blades are trianguloid, with excurvate edges, not the straight edges of the Normanskill. Cross sections are moderately, not extremely biconvex. Side notches are only slightly or moderately developed and though some of the bases are straight, none are concave. Points with unfinished bases, a characteristic of Lamoka, are in the minority.

Slightly over 100 projectile points have been classified. Of these, the slight majority are of the side notched variant. A second major category is of stemmed projectile points,

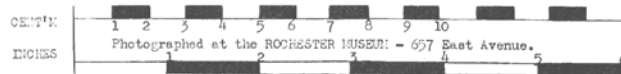
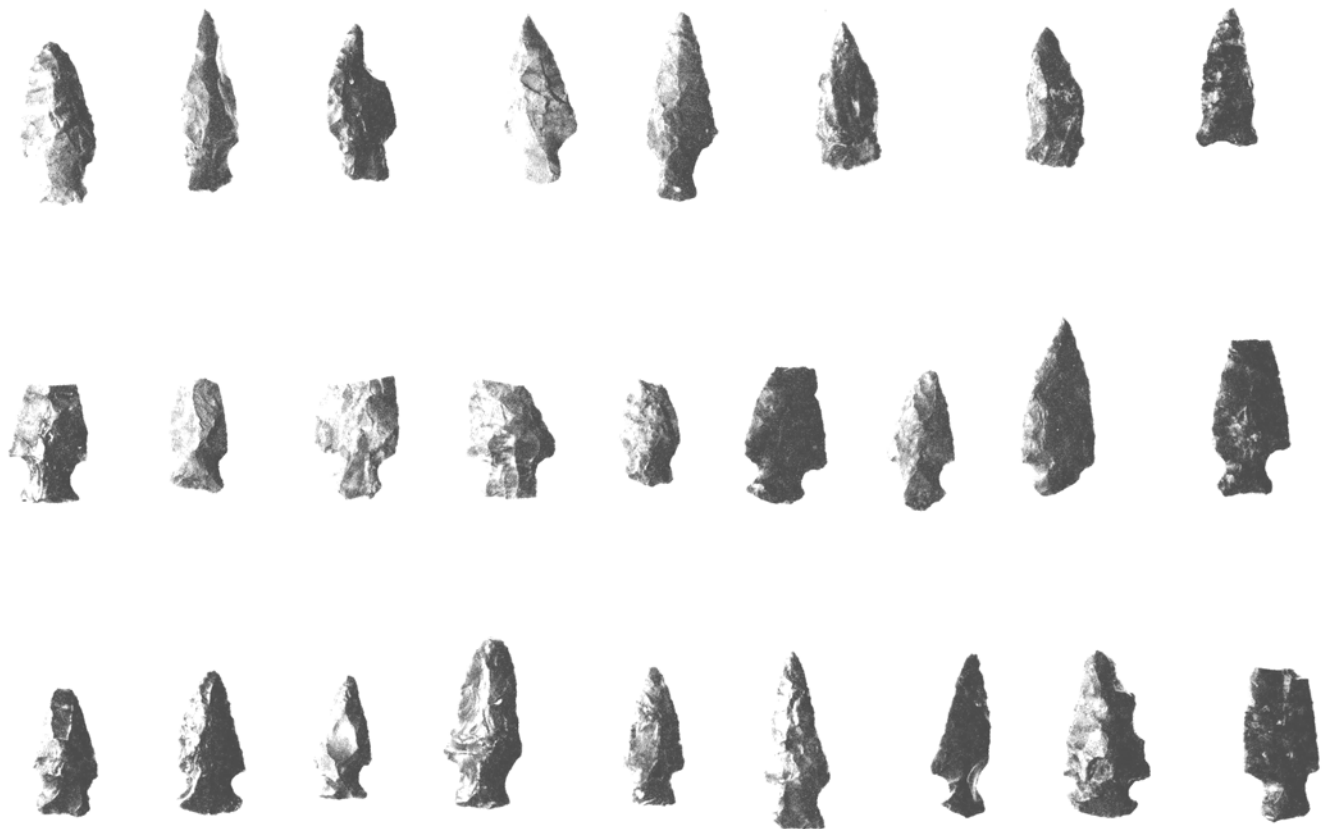


Plate 2. Sample of projectile points from the Cole Gravel Pit. All of Onondaga flint.

Many fragments were unclassified due to a lack of diagnostic features. Four large, trianguloid, side-notched spearheads, some from a burial, fall into another category.

Knives, occurring in several forms, are characterized by at least one sharp cutting edge, usually bifacially worked. Many examples show slight to moderate use. Fifty-four whole examples and 32 fragments have been recovered.

One type of knife is an irregularly worked ovate. It is the least definite category with 13 examples represented to date. A second type, with 10 examples, is the backed knife. These rectangular, triangular or crescentic knives have the long edge opposite the knife edge blunted, either by intentional trimming or by use of an existing flat surface.

A third category is comprised of six small thin trianguloid or ovate knives, some with chipping only on the edges. These resemble thin unstemmed and unnotched projectile points in size and form.

The majority of the 25 knives, however, can be described as broad, bifacially worked, ovates, quite symmetrical in plan, with straight or convex bases and biconvex cross sections. These resemble ovate blanks but are much thinner and have at least one well-developed cutting edge.

Nine drills have been recovered to date. These have long and slightly tapered blades. Though all are extremely biconvex in cross section, medial ridges are not well defined. Hafting and base elements differ, ranging from slightly expanded round bases to the more common form flared only at the corners of a straight or slightly convex base. One example has a large bulbous basal element.

Scrapers are distinguished by rather steep unifacially or bifacially worked edges and others show use in one direction. Of 68 scrapers a number of types have been segregated by placement of retouch.

End scrapers, rectangular or triangular, are wedge-shaped. The thinner edge of the wedge is worked, usually from one side. End scrapers appear to be made from thick flakes or nodules and occasionally from core fragments. Most of the worked edges are straight; a few are convex.

Side scrapers, as common as end scrapers, are triangular, crescentic, or more commonly rectangular. Most are made from tabular pieces of flint and often are worked only on a straight lateral edge; the rest of the tool remains unmodified.

The single largest category is that of combination scrapers. These tools have more than one working edge. In this class are combinations of end and side scrapers and ovate forms resembling thick blanks. One odd example is an ovate with a flat, unifacially worked, projection like an end scraper. The ovate body is unifacially worked from the reverse side and has two shallow concavities on one edge. These probably served as spokeshaves.

Blanks are a category of crudely worked tool forms. It is inferred that these represent an initial stage in tool formation and are unfinished. Of 75 examples, most are characterized by the bifacial removal of medium sized shaping or thinning flakes. There is little or no evidence of retouching, though a few examples appear to have been used.

Large, rectangular, very irregularly worked blanks may represent a very preliminary step in workmanship. Broad, pointed, ovate blanks are by far the most common. These are thick and sometimes hump-backed and have rounded bases. They could conceivably be blanks for some of the larger flint tools such as knives or scrapers. A great many fragments belong in this category.

A small number of pointed ovate blanks are extremely elongated and narrow, and may be drill blanks. A last category is of small flat ovates with rounded ends. These resemble small ovate scrapers in form.

Cores and worked nodules of raw material are classified according to the placement of worked surfaces. Nodules, showing some flake removal, lack distinct striking platforms. Many are quite weathered.

Cores or core fragments show one or more distinct striking platforms, with evidence of multiple flake removal. Most appear to be exhausted cores, for none are larger than 6 cm, in greatest dimension, and the flake scars are small. This indicates a lack of raw material and cores to account for the number and size of artifacts found at the site.

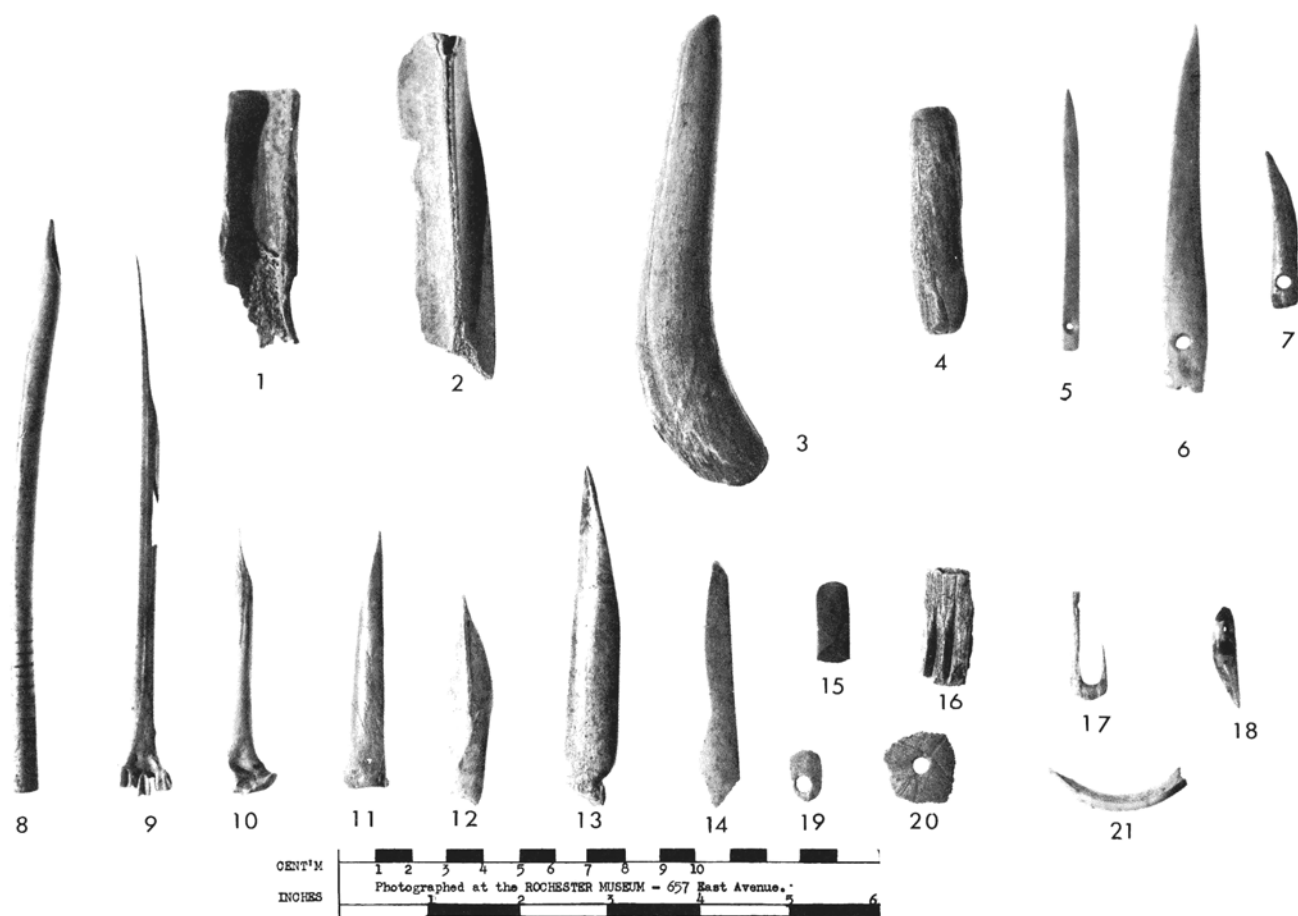


Plate 3. Bone Artifacts from the Cole Gravel Pit: 1. gouge; 2. scapula scraper; 3. antler flaker; 4. antler punch; 5,6,7. needles; 8,9,10. tubular awls; 11,12. splinter awls; 13. notched awl-like tool; 14. harpoon-like tool; 15,16. spatulate and grooved bone; 17. fishhook; 18. drilled canine pendant; 19,20. drilled turtle shell; 21. worked beaver incisor.

Tabular cores are sections of flat, slab-like flint, probably from bedded deposits. All exhibit two weathered parallel fracture planes and flakes are removed from one or both of these surfaces.

Irregular cores include tabular cores with only one fracture plane remaining and irregularly shaped fragments with at least one striking platform. One very small example resembles a blade core.

A category of worked flint has been established to encompass worked flint forms which do not clearly fit standard tool types. There is little uniformity in shape and workmanship, though most are made from core fragments or nodules. Fifty-seven have been recovered. The category has been divided into unifacially and bifacially worked examples. Many pieces are only slightly worked but are heavily used. It may be inferred that these are debris or fragments picked up and used as temporary tools, either in their original form or with slight modification.

Three compound tools may have been used as gravers or chisels. Two have spur-like projections with occasional retouch and some use marks. Both are found on ovate bifacially worked knives. The chisel is a long narrow tapered flake, triangular in cross section. It has unifacially-worked, lateral scraper edges and a fine unifacially-retouched flat tip.

The three spokeshaves from the site are parts of other tools, usually compound scrapers. One or more unifacially-formed notches are located on an edge and usually show some use.

The majority of ground stone tools are made of sandstone. Milling stones, mullers, pitted stones and hammerstones fall into this category. Metamorphic materials were used for bevelled adzes and a small number of tools are made of shale.

Of the 28 whole or fragmentary milling stones most are slab-like mortars, square, rectangular or triangular in shape. The edges are quite irregular and most do not show intentional trimming. The majority are only slightly to moderately ground on one face. Depressions or troughs from grinding are rare.

Most examples appear to come from bedded sandstone deposits and are tabular. Some are only 6 cm, in thickness. Somewhat larger and heavier milling stones are made from weathered boulders. The largest is 20 cm, in thickness and weighs 98 lbs.

Mullers or hand stones are of sandstone, with the exception of two shale and one gabbro example. Generally round to ovate in plan and quite convex in cross section, most show only slight use. Two examples are quite flattened.

Of 15 examples 8 are simply mullers. The remainder are compound tools. These combine the muller with such tools as pitted stones and hammerstones.

Pitted stones are made from naturally rounded cobbles and have at least one pit on a face. Many are compound tools. One resembles an elongated pestle with pits on either face and evidence of heavy use on both ends. Another, made on a split cobble, has a pit on the convex face and a series of parallel shallow grooves worn into the flat surface.

Bevelled adzes are made of metamorphic material such as gabbro and quartzite, though several are of sedimentary rock. All of the nine adzes recovered show extreme modification' by fracture or use. The poll or butt end often shows battering and pecking, as if the adze was also used as a hammerstone.

There is little uniformity in form or workmanship. One example is quite symmetrical and celt-like, showing very little beveling. Grinding varies from the very minimal to a marked polish.

Only two fragmentary artifacts of dark gray shale have been recovered. This material, resembling slate, was ground. One example has regularly placed notches on both lateral edges. The second is a larger object with one straight and one excurvate, notched edge. Both are thin and tabular and have been extensively ground on both faces and the rounded edges.

A large variety of bone artifacts are evident on the site, most made from mammal and bird bone. Bone awls are the most common, with 53 recorded, and appear in two forms.

The first type is made from the entire shaft of a longbone and one end is diagonally ground to a sharp but broad tip. Many retain the natural articular bone surface as the handle end. One awl of this type is decorated with transverse incised grooves. It represents the only decorated tool from the site.

The majority of awls are made from longitudinal splinters of bone. Almost all examples show modification on all surfaces. The points are tapered to thin and sharp tips. In addition, a small number of very fine polished splinters have been classed as splinter awls, though their fragile nature casts doubt on their use as regular awls.

Only two bone tubes have been excavated. One of these is fragmentary. Made from animal longbones, these show extensive polish on all surfaces and on the blunted ends.

Eleven needles, all made from split bones, show a resemblance to splinter awls. Each has a conically or biconically drilled hole at the proximal end. All tend to be of thick mammal bone and the tips are more blunted than those found on awls.

Bone gouges are represented by 5 worked and used examples and 4 unpolished ones, which may be blanks. Only one gouge shows extensive use and all of the proximal ends are fractured and unmodified.

The five scapula scrapers from the site are nearly identical. Though varying slightly in size, all are rectangular with rounded edges. All edges and the scapula spine are finely and evenly ground. One fragment of a scraper has a unifacially chipped hole near one end.

Of the eight antler flakers most are made from one or more terminal tines. Proximal ends are broken or unfinished. One specimen consists of a half antler with the terminal tine forming the flaker. The other tines have been broken off. Two antler punches were recovered. Both are small and one is worked on both ends.

Fishhooks are rare. The two recovered show a high polish and quite rounded edges. One is notched at the upper end, presumably for line attachment.

Three harpoon-like fragments of bone are classed separately. Two have blunted tips, one straight lateral edge and a convex, slightly scalloped, opposite edge. The third has a sharper tip and is notched on either side of the fragmented but slightly worn proximal end.

Two short thick sections of antler chipped and pierced with a hole at one or both ends may be chisel handles. Such tools would have been used with beaver incisor bits. Several worked incisors of this type have been found at the site.

Clearly decorative objects are not numerous. Among these are several turtle shell discs, two of them drilled, a drilled canine tooth and two styliform bones, one drilled and one notched for attachment.

Miscellaneous worked pieces of bone include unclassifiable fragments of known tools and objects of unknown function, exhibiting grooves, notches and extensive grinding. Four thin, square-ended tools, made on split bone, resemble small gouges. Four animal teeth show modification. A large fragment of a turtle shell shows heavy scratches on the interior side.

Worked shell constitutes a small percentage of the total shell. One half shell has been conically drilled from the exterior near one edge. Three small chipped or ground discs, two of them drilled, may be partially worked pendants. A number of small irregular pieces of shell with straight cut edges complete the worked shell inventory.

## BURIALS

A total of 13 graves involving 15 individuals has been found to date on the site. Undoubtedly several more were there because there are accounts by both the gravel pit operators and local collectors of skeletal material having been either disturbed by front-end loaders or found scattered by pans removing the topsoil. Very few of the graves were undisturbed by the machinery. The best preserved individuals were those buried deeply in refuse pits with large amounts of fresh water clam shell in the layers above the bones. In addition several isolated fragments of human bone were found in refuse pits which were not utilized as graves. It is still uncertain whether or not they represent accidental inclusions of previously disturbed graves or cannibalism.

Two varieties of interments appear on the site and it is presumed that both types belong to the same Archaic component. The fragmentary evidence may preclude any final answer. The first variety of burial practice was interment in refuse pits. All had been placed without

apparent grave goods. Several had been randomly placed or even thrown in the pit and one was definitely tightly flexed. The second burial method was interment in the flexed position in prepared graves. One certainly contained grave goods and the rest that were partially destroyed by machinery may or may not have had them. One location of interest involved three individuals in one spot. The gravel pit machinery had removed part of the area leaving some doubt as to their contemporaneity. One adult lay on his back with legs spread apart and apparently tied at the feet. The skull had been destroyed by the pan. Under this individual lay another adult in a flexed position. To the side of the latter lay a child.

The presence of burials does, of course, support the belief that the occupation was of a seasonal rather than a few days' duration. The two varieties of interment also bring up the possibility of outside influences competing for the site, or status differentiation within the group. Further analysis of the skeletal material will perhaps be necessary in order to resolve this problem. One important question when dealing with any Archaic site is whether there were areas actually set aside for cemeteries. At the Cole Gravel Pit at least two grave concentrations can be suggested as cemeteries. The remainder of the interments were apparently randomly situated in refuse pits as previously mentioned.

Aside from the refuse pits and graves no other evidence was found to indicate settlement pattern characteristics. It is assumed that small pole and bark structures existed similar to those identified at the Lamoka Lake site (Ritchie 1965:69). The thin mantle of plowed topsoil at Cole coupled with the gravel immediately below may have eliminated the possibility of post mold identification. The spatial arrangement of the pits, however, does leave some open areas for structures.

#### RADIOCARBON DATING

When the excavations were first begun in 1966 only six pits were tested. None of these contained enough organic remains to submit for a C-14 analysis. It was hoped that additional machinery operations might uncover pits which would provide this important dating material. Such was the case in the summer of 1967 when two charcoal samples were obtained from two separate pits, both containing projectile points. Sample Y2345 was dated  $3980 \pm 160$  years B.P., or 2012 B.C. Sample Y2346 was dated  $3890 \pm 120$  years B.P. or 1922 B.C.

#### INTERPRETATIONS

In a preliminary report such as this, it is not, of course, possible to come to any conclusions as to the overall place of the Cole Gravel Pit within the framework of the Archaic stage. Nevertheless a few comments can be made both in the form of observations and questions that have arisen. The 1966 excavations of only a few pits indicated that the assemblage could not be linked diagnostically to any specifically recognized Archaic site in the Genesee region. The apparent affinities were with two Archaic sites, Lamoka Lake about 60 miles to the southeast, and Woodchuck Hill only 1 1/2 miles to the north along the Genesee River (Hayes 1966:174). Subsequent research has strengthened this theory. At this point in the analysis the writers believe that the Cole material exemplified the persistence of a regional variation of the Lamoka phase into the middle or late Archaic. In addition it is thought that several characteristics of the site indicate possible changes in the Archaic way of life as well as some emerging problems of the interpretation of the stage in the Genesee region.

For example the projectile points, though primarily exhibiting characteristics of the Lamoka type, do have some similarities to the Normanskill type found on components of the River phase of the Archaic of eastern New York and the Hudson Valley (Ritchie 1965:124) (Weinman and Weinman 1968) (Weinman, Weinman and Funk 1967). The Bent site (Ritchie 1965:126) of the River phase has been dated  $1350 \pm 200$  years B.C. and  $1930 \pm 100$  years B.C. Other problems involve the nature of the occupation at Cole. Was this the seasonal location of a centrally based camp

as yet undiscovered? Were the subsistence practices changing to a heavy reliance on shellfish as well as small mammals and birds? Why the paucity of netsinkers on a site so near the Genesee River? Perhaps the faunal analysis will provide some of the answers. The volume of traits will have to be correlated pit by pit. If the contemporaneity of the pits can be postulated, what significance does the existence of ground shale fragments and some broad stemmed projectile points have to other phases of the Archaic such as the Laurentian? Finally, what is the significance of the skeletal material definitely associated with artifacts in the refuse pits, in contrast to the burials lacking grave goods and placed in specially prepared pits?

The last of the features from the Cole Gravel Pit have not been recorded. Daily and unpredictable gravel requirements for western New York State construction work will continue to erode the site in the future. The difficulty in testing areas that might be stripped is complicated by the hard packed gravel. These problems caused considerable concern in 1966 when it was thought that salvage archeology could not be satisfactorily conducted within existing company operations. The fortunate coincidence of the 1967 and 1968 topsoil stripping with the archeological field seasons and the cooperation of the Cole Sand and Gravel Corporation has made the original inadequate sample now one of considerable magnitude.

The results from the Cole excavations are indicative of one more facet of the Archaic. Although the overall chronological sequence of cultural events was long ago proposed by William A. Ritchie, the variations still remain to be investigated. For the students of culture change on a regional level such variations are highly valuable. In fact such "micro-evolutionary" studies on both old and newly discovered sites will concern archeologists in western New York for many years.

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#### NOTE

A version of this paper without the 1968 data was presented at the 1968 Annual Meeting of the New York State Archeological Association in Utica, N.Y. by the senior author.

The authors would like to express their appreciation to Charles F. Wray, who initially brought this site and some of his materials to the attention of the Rochester Museum and Science Center; to the many paid and volunteer personnel, too numerous to mention in this short report; to the Cole Sand and Gravel Corporation whose patience and cooperation were continuous and to George and Richard Hamell whose attention to the progress of the machinery and communications and collections offered to the Museum have been invaluable.

Before any final report is issued, it is expected that the list of contributors will be long because of the several specialized studies which will have to be accomplished of a faunal, lithic and geological nature. To date the basic laboratory work has been accomplished through the efforts of Betty Prisch and John McMaster.

### THE HOUND DOG ROCKSHELTER

Paul L. Weinman, NYSAAF  
Thomas P. Weinman, NYSAAF

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Auringer-Seeyle Chapter

Amidst the blasts of shotguns and yelping of hounds, we spent an October day in 1968 excavating a very small but productive site - the Hound Dog Rockshelter. We found the shelter (Cox 30) during a survey of the flint-rich Onondaga limestone between Black and Greens Lakes some four miles northwest of Athens on the Hudson.

Normally, in surveying for rockshelters, we pass up as inadequate for habitation anything in which we can not kneel and in which the overhand is less than 10 ft, long and 4 ft, deep. The Hound Dog Rockshelter, judged by these criteria, was far from encouraging. Nevertheless, we were able to squeeze four 5-ft. squares from the site, finding a fair number of artifacts and a rough cultural stratigraphy.

The shelter, on the property of Roland Lindemann, was eroded from the base of a 15 ft, high block remnant of Onondaga limestone. Facing west, the overhand was 4 ft, above the surface on its southern corner, slanting to ground level 23 feet to the north. Its maximum depth was 6 feet at the southern corner, again narrowing evenly toward the north until it met the vertical face of



Plate 1. Hound Dog Rockshelter

the outcrop. The square which contained nearly half of the artifacts was beneath a 3 ft, high and 3 ft, deep ceiling - hardly inviting. However, the floor was level, extending 10-11 ft, from the rear wall along the occupied area and fronted by a very slight talus slope.

Stratum I was a brown, loosely packed soil, 10 to 12 in. thick, composed of humus and disintegrated and fragmented limestone. In the upper 3 in. we found 2 projectile points which are similar in style and manufacture to many of the poorly-defined point styles of the transition period from Early to Middle Woodland times. The first, found at a depth of 1 in., was a well-flaked, medium-sized point with incipient corner notching on a short stem which was nearly as broad as the blade base (fig. 1). The second, unearthened at 3 in. was a medium-sized, finely chipped side-notched point similar to some Meadowood forms (fig. 2). Other artifacts found within this zone were: a point tip; a side scraper; a hammerstone; a knife base; a utilized flake and a worked flint piece. No pottery was associated.

Within the upper zone, at 2 in., we found a Lamoka-like point (fig. 3), but consider it intrusive upward from the lower level of Stratum I where similar points of the Sylvan Lake Complex were excavated. These included 3 Lamoka-like points (figs. 9, 11, 12) which Funk (n.d.) has grouped with Bare Island and other Hudson Valley types in the category of "Sylvan Stemmed." In addition, we found 2 stemmed point blanks and 2 Normanskill points (figs. 5, 6). Normanskill points are usually associated with the temporally later River Phase, but as we suggested in the Fred Young report (1968), when mixed with Sylvan Lake material, they may indicate a transitional development.

Other artifacts uncovered from this zone were: 2 point blanks; a point tip; 6 lanceolate knives; 3 flake knives (fig. 15); 1 ovate knife; 2 knife fragments (figs. 13, 16); 3 utilized flakes; a combination drill on a flake knife (fig. 8); 6 hammerstones; a combination chopper and knife (fig. 14); 5 quarry blanks (fig. 7); a side scraper; and 7 variously worked flint scraps. An irregular piece of a thin, very broad corner-notched point with possible slight bifurcation of a broad, expanding stem (fig. 4) was uncovered at the junction of Strata I and II. Too fragmentary to identify positively, it does suggest the untyped bifurcate form which as yet has not been isolated in time for New York.

Except for 5 artifacts of Normanskill flint and 2 of Kalkberg flint (both varieties obtainable within a few miles) and the quartzite hammerstones, all artifacts were of Eastern Onondaga flint. Most of the numerous flint chips seemed to have been tossed in the corner of the site against the back wall where the overhand was narrowest.

The bone refuse was fairly heavy, showing evidence of deer, squirrel, turkey and fox (or dog). Surprisingly, we found portions of fresh water clam shells which were probably collected at either Black or Greens Lakes which lie nearly a half mile away.

Stratum II was a 3 in. tan soil of leached humus and limestone flour, which graded into Stratum III, a sterile deposit of unknown depth. Although we unearthened numerous flint chips, we found only a single artifact. Fortunately this was the base of an Otter Creek point (fig. 10) of Eastern Onondaga flint, diagnostic of the Vergennes phase (Ritchie, 1965, pp. 84-87). As evidence for the growing understanding of the temporal relation of this manifestation to the Sylvan Lake Complex, this discovery is minor, but confirms the data found elsewhere that Vergennes is older (Funk, 1965).

Even more so than the nearby Moonshine Rockshelter (Weinman and Weinman, 1969), the Hound Dog Rockshelter afforded limited protection from an overhand. However, because hunting and nut gathering were probably fairly rewarding in the region and, because usable flint was interbedded with limestone overhead, seemingly poor camping sites would be used as workshop-hunting stations for short periods of time by individuals or small nuclear families.

The occurrence of fresh water clam shells in the Sylvan Lake Complex zone of Stratum I gives the only solid indication of the time of year the shelter was occupied. It points to warm weather visits, since in winter the lake water would be frozen, preventing access to the shellfish.

We hope to continue locating and excavating similar "uninhabitable" rockshelters in order to define the lower time range of dwelling sites by New York's early inhabitants.

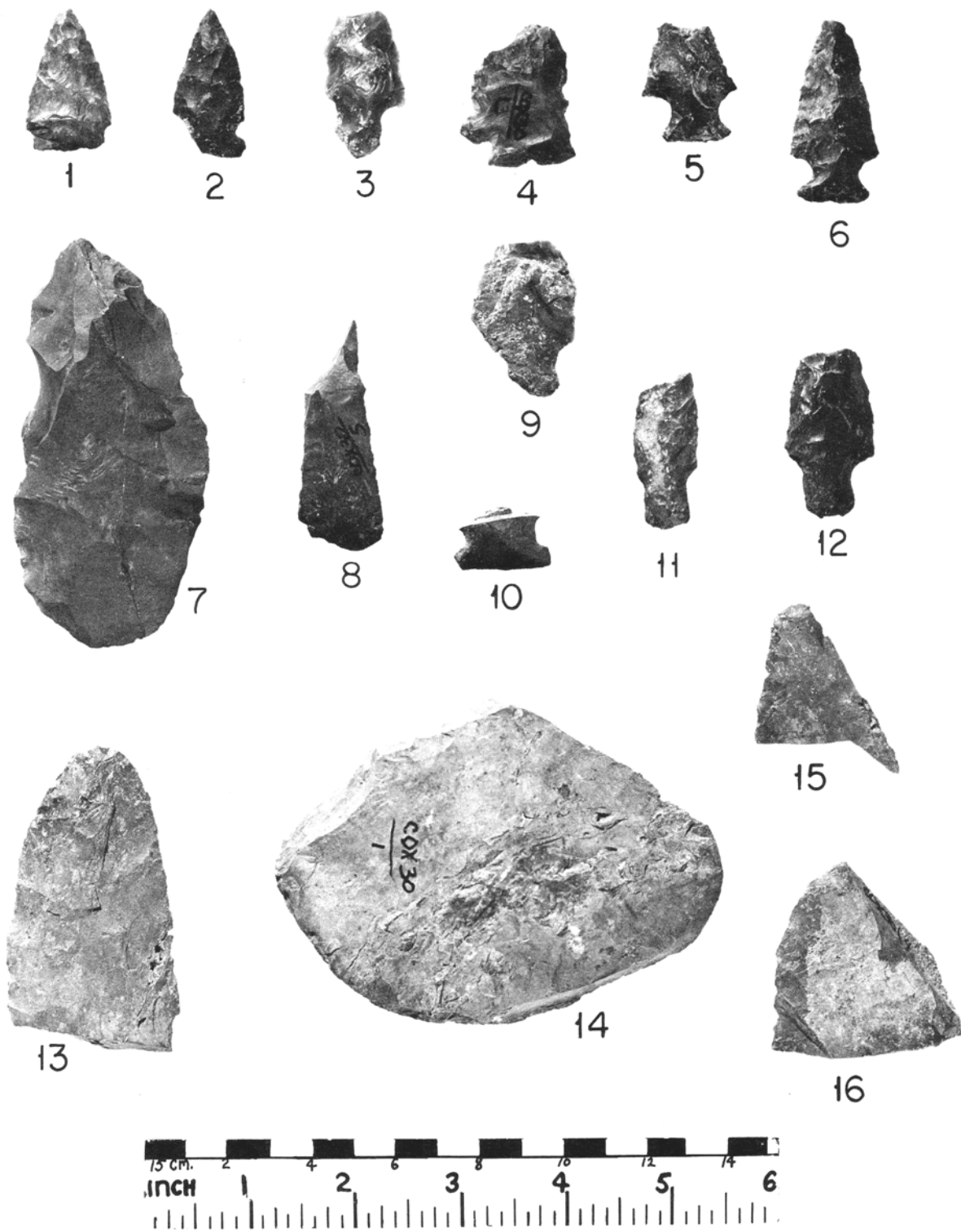


Plate 2. Figs. 1, 2 untyped Woodland points; 3, 9, 11, 12 stemmed points; 5, 6 Normanskill points; 4 untyped corner notched point; 7 quarry blank; 8 drill on flake knife; 13, 16 knife fragments; 14 knife-chopper; 10 Otter Creek point base.

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## THE CERAMIC STUDY

Edward J. Kaeser, NYSAAF

Metropolitan Chapter

Of the various types of material recovered in archeological excavation ceramics are usually the most sensitive in interpreting cultural change. The following is a suggested method for ceramic analysis which might aid in the determination of cultural identification of potters inhabiting sites scattered over large areas and, in the case of sites exhibiting long occupation, periods of occupation by the cultural group or groups present.

## Methodology

(1)

After the sherds are washed and dried, they must be marked individually with a field or catalogue number. If sherds are too small or friable to mark, they can be placed in polystyrene bags marked with a number on gummed tape. This marking must be done to avoid mixing with artifacts from other squares, or collections from other sites under analysis.

(2)

Spread out the cleaned and dry sherds on a large table. A quick scan of the spread out sherds will enable you to distinguish gross differences of the sherds. These differences will appear as: (a) surface finish; (b) paste; (c) temper; (d) firing; (e) vessel shape.

Make a chart listing these same differences as titles, widely spaced for additional differences or traits such as: protuberances which may appear as nodes; and appliquéés, such as faces, corn, etc. These differences can be added to vessel shape traits.

(3)

There being no understanding at the moment whether these differences will later turn out to have cultural or temporal meaning the sherds should be separated into piles based on the easiest recognizable categories: surface finish; paste; etc. and counted. This tabulation should appear next to the descriptive title on the chart.

(4)

We begin with the first gross trait on the list, surface finish. Surface finish must be observed in some detail to determine the range of surface treatment techniques. Once these techniques are determined, if the surface of the sherds are not too eroded and the impressions were made on the clay when it was not too wet or too dry, details will be observed for further subdivision; for instance, in the recognition of fabric impressed design, the various weaves used by the potter such as: plain plaited; twilled twining; plain twining; etc.

(Suggested Ceramic Tabulation Chart Form)

<u>Gross Traits</u>	
Surface Finish	
Cord Marked	
Fabric Marked	
Net Marked	
Brushed	
Incised	
Punctated	
Cord-Wrapped Stick Stamped	
Dentate Stamped	
Scallop Shell Stamped	
Plain	
(Continue with next gross trait)	
Paste	
etc.	

The local Indian used Dogbane or Indian hemp (a common milk weed) to make cordage for fish nets and fabrics. The individual fibers were twisted together to form these cords. The specific twist appearing impressed on sherd surfaces can be recognized by comparison with our modern cordage as s-twist, right-hand twist, left-hand twist.

Vessel bottom sherds may exhibit woven mat or fabric impressions, as the result of being forcibly pressed downward on a cloth or mat during manufacture.

Proceeding to the next trait on the list, paste, we may subdivide it into compact or poorly consolidated or laminated paste. In texture paste may be described as fine, granular, clayey, gritty, flaky, hard, soft, or any other adjective which will describe the visual character of the clay. Method of manufacture, whether coil constructed if coil separation is evident on sherd edges or possibly the paddle and anvil method used.

Under the *temper* the subdivisions will be:

- Grit or granular mineral; list the kind, size, water worn or crushed and the amount.
- Shell; state whether marine or fresh water shell, and the amount. Shell tempered sherds often exhibit holes left by leached out particles leaving negative impressions of the type and size of the particles.
- Vegetal; a rare occurrence in coastal New York. Appears as hollow molds of disintegrated vegetal matter, not always intentional inclusions and sometimes the result of uncleaned clay used in the vessel production.
- Firing; to determine the method of firing, the surface and core colors of the sherds must be examined to determine the degree:
  - Oxidizing fire, which is the most complete and well controlled firing method, is signified by constant color throughout the sherd thickness, with fire clouds rare.
  - Reducing fire, recognized by black core and lighter colored surfaces due to low temperature fire or lack of oxygen or draft. Fire clouding on surfaces of vessels is common.

Analysis of paste, temper and firing is important, since these are sometimes the only usable diagnostic traits for recognition of pottery series or type when sherd surfaces are obliterated, as often happens when pottery is found in association with burials or other significant features, or when only crumbs of sherds are recovered.

*Vessel shape* may be subdivided into a possible five (5) categories.

- Body: wall thickness; neck constriction; shoulders.
- Bottom: conical; rounded; flat.
  - Is bottom thickness constant with vessel walls?
  - Is bottom formed from pan-cake like piece of clay with coil pinched on to periphery of clay disk to build up vessel wall?
- Collars: incipient or channeled; true applied collar.
- Rim: flaring (in, out); straight; castellated.
- Lip: flat; rounded; tapering; crenellated; interior surface decorated.

Ceramic traits taken singly may have little value except from a purely descriptive standpoint; as such they are often utilized in preliminary site reporting where a conclusive analysis is not possible. It is the combination of these traits, paste, temper and shape, in both exterior and interior surface treatment, that becomes important in the comparative study and as an aid to understanding the cultural development, popularity and change of ceramic wares within an area throughout time. Ceramics having in common surface finish technique, paste characteristics and composition, and vessel shape represent the longer period of use and the wider geographic range of a ceramic series, wares or styles. Further refinement within the series will allow the separation of vessels, by their repeated distinctive differences in decorative technique and motif and associated characteristics forming the types within the series, into types of chronological significance.

This data having been tabulated, to show the trends of pottery types in the ground and their possible chronological implications, the stratigraphic evidence is analyzed, through the use of field notes, published site reports, profiles of squares, etc., and comparing the data with that established by analysis with other sites.

We recognize two (2) major cultural divisions, the Windsor Aspect and the East River Aspect in the New York - Lower Hudson area. The Windsor Aspect is assigned to the period of entry of ceramics into coastal New York, the Early Woodland Period. The East River Aspect replaces the Windsor Aspect during the Late Woodland Period and terminates in the Early Historic Period.

#### Windsor Ceramic Tradition

- (a) North Beach Focus (Developmental Stage)
  - Vinette 1
  - North Beach Brushed
  - North Beach Net Marked
  
- (b) Clearview Focus (Developmental Stage)
  - Clearview Stamped

Clearview Stamped terminates the Windsor series in metropolitan New York. The Windsor ceramic tradition continues in the types *Windsor Brushed* on eastern Long Island and southern New England; *Windsor Fabric Marked* on eastern Long Island and Connecticut.

#### East River Ceramic Tradition

- (a) Bowmans Brook Focus (Developmental Stage)
  - Bowmans Brook Stamped
  - Bowmans Brook Incised
  - East River Cord Marked
  
- (b) Clasons Point Focus (Developmental Stage)
  - Van Cortlandt Stamped
  - Clasons Point Stamped
  - Eastern Incised
  - East River Cord Marked

## BOOK REVIEW

## THE ACCOKEEK CREEK SITE: A MIDDLE ATLANTIC SEABOARD CULTURE SEQUENCE

Robert L. Stephenson and Alice L. L. Ferguson, with sections by Henry G. Ferguson. XXVIII plates, 30 figs., 215 pp. \$3 Anthropological Papers, No. 20, Museum of Anthropology, University of Michigan, Ann Arbor. 1963.

The statistics on the Accokeek Creek site, on the Potomac River directly opposite Mt. Vernon, are, to those of us who work in the Northeast, most impressive: between 150,000 and 200,000 specimens, 17,244 post molds, 19 stockade lines, 157 hearths and a similar profusion of other features. It is, of course, not a single site but a locus of several contiguous sites and a palimpsest of occupations with a time depth, probably, to the early Archaic. Excavation revealed that it was the location of the Moyaone Village mentioned by Capt. John Smith, and of an historically documented Susquehannock Fort, but these two manifestations provided only a small fraction of the material recovered. Since there was no reliable stratigraphy, any information to be elicited from this rich and important site had to come from typological analysis. This analysis was done by Stephenson, the senior author of the report, at that time a graduate student at the University of Michigan.

The actual excavation had been done by Mrs. Ferguson, owner of the farm where the site lies, with crews of farm hands and high school boys, between 1935 and 1940. Since the Ferguson farm is within easy driving distance of Washington, Mrs. Ferguson seems to have had frequent advice, assistance and general supervision from experts from the Smithsonian Institution and transient professionals attracted by the hospitality. Under these auspices Mrs. Ferguson undertook the writing of the site report herself and completed one draft before her death in 1951. Responsibility for the materials, data and records was then assigned to Dr. James B. Griffin of the University of Michigan, whose student Stephenson was.

"The Accokeek Creek Site" consists of a preface by Henry L. Ferguson, a chapter "The Historical Setting" by Mrs. Ferguson and Mr. Ferguson, a chapter "Present and Past Topography" by Mr. Ferguson, who was with the U. S. Geological Survey, a chapter "Excavation and Field Work" by Mrs. Ferguson, and several chapters, amounting to some 120 pages, of description and classification of artifacts, principally pottery and projectile points, by Stephenson.

He had considerable of both to work with, 58,298 pot sherds and over 2800 projectile points, in reconstructing the Accokeek Creek cultural succession. But he was not the excavator, he had apparently done no extensive excavation in the East, and he had no reference to assist him in his interpretations, published later than 1961. While ceramic studies prior to 1961 had developed a dependable schema for the Woodland pottery of the Virginia area, none of the important work on projectile points of the Southeast, such as Joffre Coe's "The Formative Cultures of the Carolina Piedmont" (1964) had appeared. Thus, while the chronological ordering of the Accokeek Creek pottery seems sound enough, and arguable within only narrow limits, the available references led Stephenson astray on projectile points and therefore on the entire Archaic of the site, for which projectile points ~ were the only clue.

The instance that makes this point as quickly as possible is his placement of the fraternal lanceolate and stemmed points called Steubenvilles as the earliest in his sequence, as well back in the Archaic. He had no other choice at the time. Mayer-Oakes had already -described the types in the Upper Ohio Valley, assigned them to the early Archaic and speculated that they might be transitional from late Paleo-Indian Plano forms. It is hardly necessary to remind readers of the NYSAA Bulletin that Robert Funk in upper New York, and Edward Kaeser in coastal New York and New Jersey have pinned these two types down as Middle Woodland. Kaeser's identification is particularly applicable, since it is most

unlikely that these fraternal types would date 400 A.D. on Long Island, in the Lower Hudson and in New Jersey and their like would date to 4000 B.C. some 300 miles south, by the terms of Stephenson's own construct of a culture province that embraced the territory from Long Island to the Rappahannock River in Southern Virginia.

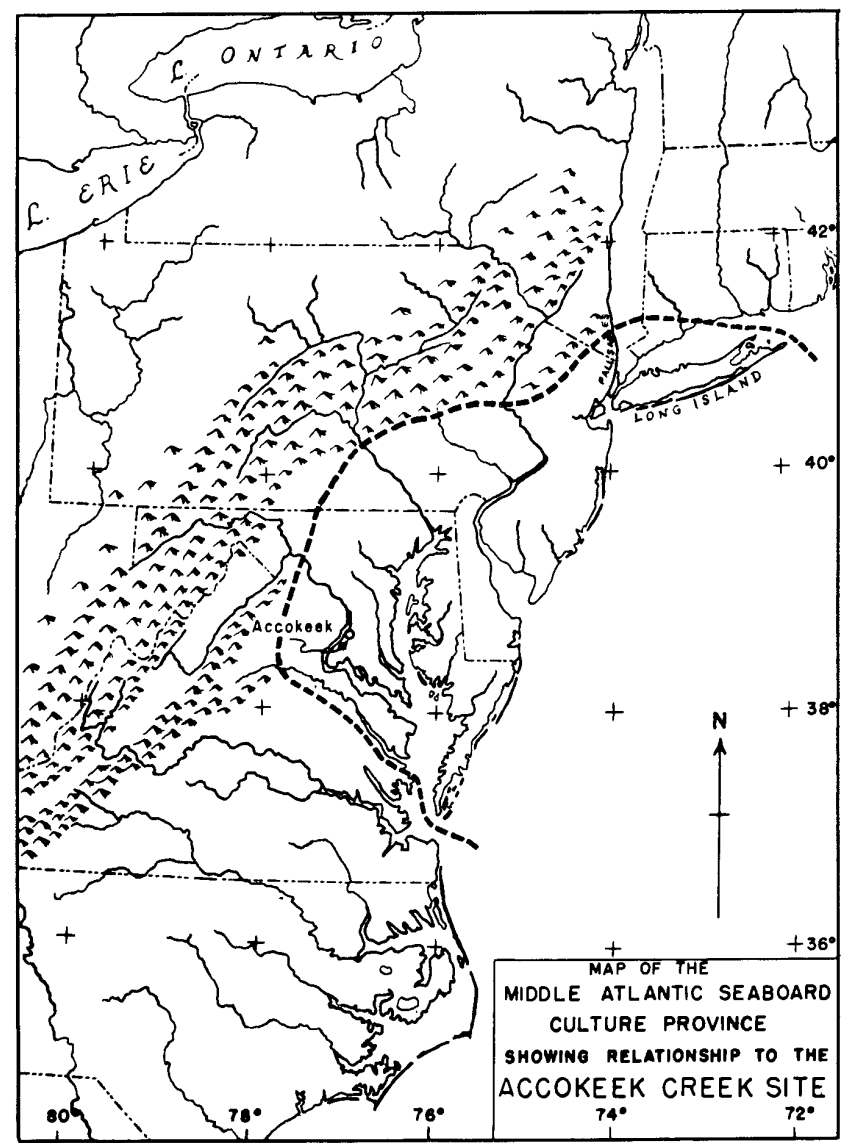
There is nothing in the bulk of the book that would lead the reader to expect that Stephenson was arraying evidence for the comprehensive conclusion of his summary chapter, the concept of what he calls "the Middle Atlantic Seaboard Culture Province," a territory defined by the name he gave it within which a culture sequence developed uniformly. The Province is outlined thus: "On the south the province is bounded by the Rappahannock River Valley. The western boundary is formed by the foothills of the Blue Ridge Mountains. To the north the boundary is along a line extending through the foothills from Harrisburg, Pennsylvania, to the Palisades of the Hudson River. The province thus includes the northern coast of tidewater Virginia, all of Maryland south and east of Frederick, all of Delaware,- the southeastern corner of Pennsylvania, all of New Jersey except the northwestern corner of the state, and the coastal portions of New York including Long Island. Fuller justification for setting these boundaries so specifically may be suggested by the definitions of several foci within the area, based upon the Accokeek Creek site components."

The boundaries of this Province are indeed specific, and the description is accompanied by a map that delineates them, It shows the northern extremity at Mid-Westchester hence includes the Lower Hudson, where I have worked for the past 20 years and where I have been the only worker. On what evidence Stephenson included the Lower Hudson in the Province I do not know. I had published nothing of consequence on the area by 1961 and it was not until 1963 that we obtained the C-14 date of  $5863 \pm 200$  years on a Croton Point shell midden that became a datum point in the sequence.

Nevertheless Stephenson's intuition, it has begun to appear by reason of our work in the past five years, was accurate within a few miles; the actual boundary seems to lie either at the mouth of the Croton River or at the Tappan Zee Bridge at Tarrytown. It dates, however, not merely from ceramic times, as Stephenson suggests but, I believe, from the Archaic, when there entered the Lower Hudson, from farther out on the coast, the Taconic Tradition of stemmed point makers. Though Stephenson calls one of his categories c of stemmed points Bare Islands and others Clagetts and Calverts, there is obviously present at Accokeek Creek the full range of Taconic points we found at the Twombly landing site, opposite Yonkers, from which I first defined the Taconic Tradition.

My first suspicion that there was a culture boundary in the Lower Hudson between up river and downriver cultural traditions came from a date of  $4750 \pm 120$  years on a hearth at the Twombly Lansing site opposite Yonkers in Palisades Park near which lay a Taconic stemmed point. It is exactly coeval with the  $4730 \pm 60$  years obtained by Funk at the 50 mile upriver (Dutchess County) site, the Sylvan Lake Rockshelter for Vosburg points. Though we have collected a scattering of Vosburg points on the east bank of the Hudson beginning at Ossining, just south of the mouth of the Croton, there were no Vosburg points among the more than 600 points found at Twombly Landing about 4 mi. south of the Tappan Zee Bridge. Since Taconic Tradition points of all phases are found plentifully in the Ossining area and northward, the presence but paucity of Vosburg points from the Croton River mouth northward suggests a penetration of or occasional excursions into the territory south of Bear Mt. Bridge by Vosburg people, rather than continuing residence. In short, at 4750 years ago the Lower Hudson was held by the Taconic Tradition, the Mid-Hudson by the Vosburg Tradition.

There is good reason to believe that the Twombly Landing midden dates the approximate first entrance of the Taconic tradition into what is now the Lower Hudson, from what had been the Lower Hudson, when sea level was lower by 25 to 30 ft. The Twombly Landing midden, at 100 ft. above present sea level, and probably 130 ft. above sea level at the time of main deposit, contains Taconic Tradition stemmed points from top to bottom of the main deposit, a 50 ft. long ridge of shell accumulation. Because the dated hearth was not from the initial occupation of the site, but from some time later



Reproduced from "The Accokeek Creek Site"

I have concluded that the entrance of the Taconic Tradition into the Lower Hudson could have been at about 5000 years ago. This, then is the time boundary at which the Croton River became a culture boundary between the Laurentian Vosburg tradition and the Taconic Tradition.

What preceded the Taconic Tradition in the Lower Hudson we have yet to discover, but it was not, apparently, anything resembling the Taconic Tradition. At Montrose Point, some three miles north of the Croton, we have this sequence: a midden horizon of large oyster shells, that we have called the GO horizon, a 3 ft. depth of relatively unaltered shell, and dated at  $5650 \pm 200$  years. This is the same horizon that was dated at Croton Point at  $5863 \pm 200$  years and it was topped off by the same humus stratum, indicating a period of non-use of the site, as Croton Point. We have excavated some 25 five-foot squares of GO horizon without finding any cultural materials and have come to the conclusion that the living pattern was basically different from that of the other shell midden depositors encountered along the Hudson. Though it may be a delusion caused by the fact

that GO midden shell is essentially in whole condition and that of later times is badly weathered, the heaps of this horizon appear to be about twice the size of individual heaps of later periods. The GO people seem not to have lived on and around the shell they deposited, also a departure from later practices. Altogether the GO midden people, who lived in the Lower Hudson during what seems to have been a highly productive period for shell fish, are a mysterious folk.

In the humus zone that tops off the GO horizon both Taconic stemmed points and Beekman triangles, assigned by Funk to the Sylvan Lake Rockshelter Vosburg level were found within 2 ft, of each other and in the same sedimentation layer, attesting to their contemporaneity and to the dating of first use of this soil surface at about 5000 years ago. I have assumed that the surface of the GO midden would not have been used for a long period, because it would have been rough and sharp to walk on, until the top shell had been crumpled by weathering and infiltrated by humus, creating easier footing. It is within reason, then, that perhaps 500 years had elapsed between the deposit of the GO midden and the resumption of camping on its surface. At the moment this 500 years also seems to indicate a lapse of time during which there were no oysters in the Hudson, and hence no midden accumulation.

In addition to the Taconics and Beekmans in the humus stratum at Montrose Point we discovered last summer a broad side-notched point of a type unfamiliar to us and unclassified in the area. Our interpretation of this miscellany of point types in the humus stratum is that for a while after oysters returned to the Lower Hudson and while the Taconic people were filling in the area, the oyster gathering was shared by at least two other peoples. I feel safe in saying this because the technology of the three types could hardly be more distinctly different.

One further manifestation from Montrose Point must be mentioned. On the last digging day of the past fall, after which we could not get to the site because of ice and snow, we discovered, in a small shell heap not directly related to that in which the GO horizon occurs, a classic Otter Creek point. Its associations were three net sinkers, the first we have ever found in the Lower Hudson, a most unclassic gouge made of sandstone (the grooves on both sides having been made by chipping) what may be the wing of a rubbed slate bannerstone, and a T-base drill. The discoveries came close together late in the afternoon and we had no chance to investigate the heap thoroughly. The locus unfortunately cannot be correlated with the work we have been doing on the GO midden but the artifacts did occur within shell, and the shell should be datable. But until it is dated we will not know whether this Otter Creek association dates from before the GO midden period, as is suggested by the age of 6560 years obtained by Funk for a stratum at Sylvan Lake Rockshelter with an Otter Creek-like point, or immediately after it, in the half millenium of 5500 to 5000 B,P, while the humus stratum was forming on top of it, as is suggested by the position of the shell heap containing it at the site.

The Lower Hudson and the Accokeek Creek sites begin to be alike, then, only when the stemmed point makers appear. Before the Taconic stemmed point people came into the Lower Hudson we had the unidentified GO people and, probably, the Otter Creek people. But at Accokeek Creek the projectile points indicate that the site occupants or visitors were the makers of the LeCroys, Morrow Mountains and Savannah Rivers of Coe's Carolina piedmont sequence, a not unexpected occurrence, since the Roanoke River, one of those included in the Carolina study, is the next major river but one (the James) south of the Rappahannock.

Several lines of evidence, including climatologic and geologic converge on a 5000 years ago date for a resumption in the post-glacial rise of sea level, after a relative still-stand for the previous 500 years. This 5000 years-ago rise brought oysters into the Lower Hudson and all tidal rivers within the limits of the Middle Atlantic Seaboard Culture Province, and the Taconic people followed this dietary element into the new territory, drowned out of former habitat areas by the rising water. They were culturally dominant within the province for the next 1200 years (for 2000, if I am right--though it is a moot matter--about

fishtail points being in the stemmed point tradition) and they expanded upstream along all major rivers, up the Hudson to Lake George, and up the Delaware and Susquehanna into upper New York.

The initial phase Taconic points were narrow-bladed with knobby stems; in the second phase the stems tend to be square, the typical Bare Island variety; in the third phase the stem expands into a variety that has been called Normanskill in the Upper Hudson and that Stephenson calls the Clagett. All three phases are present at the Accokeek Creek site. But in the Lower Hudson there is a broad bladed variety of stemmed point fraternal with the narrow blade, as the Steubenville stemmed and lanceolates are fraternal. These are present at Accokeek Creek but in greater numbers than we find them in the Lower Hudson. Altogether there appears to be 269 points of phases one and two, 236 of phase three, and 538 of the wide points, a total of 1043 points out of a site total of 2849 recorded -\_ as typed. The profusion of stemmed points and the developmental phases in the Lower Hudson and at Accokeek Creek are in correspondence.

For the periods subsequent to the circa 3800 of phase three I note one significant coincidence. While Susquehanna and Perkiomen points occur in the Lower Hudson, we have found neither with soapstone. The point type that has been found here, at Montrose Point, with soapstone sherds is a small side-notched variety which we call Twombly side notched similar to Funk's Sylvan side-notched, except that Funk dates this with stemmed points at about 4100 years ago. At Accokeek Creek soapstone was plentiful, 41 rim sherds, 240 body sherds, 29 basal sherds and 6 vessel sections, but there were no points of the Pennsylvania Transitional. There were, however, 423 points of the Vernon type, which resembles the small side-notched type we find with soapstone.

One other arresting resemblance should be noted, in a discussion already grown too long, the occurrence of a point type I have been trying to pin down for years. It is a thin point of pentagonaloid shape verging on the triangular. A few of the type occur on most sites that produce points in any number, and our Crawbuckie site has produced about 25. Stephenson calls this Group G and describes it thus "They have a straight, thinned base but the blade edges tend to be almost parallel for about one third of the distance and -then converge to a sharp tip. The general appearance, though, is more triangular than pentagonal."

There has long been the impression, I believe, that the region Stephenson is calling the Middle Atlantic Seaboard Culture Province was a sort of basin into which there poured cultural streams from north and south which eventually petered out into a non-descript and heterogenous acculturation. His revival of the concept (it is apparently not original with him) of a culture province of distinctive character grown from indigenous roots is hardly more than that in "The Accokeek Creek Site," a reminder that the possibility ought to be looked into. But something else is provided; the raw materials with which to make comparisons and, in view of the work now being done within the Province, that raw material can be very useful. The report, therefore, ought to be in the hands of everybody working in or on the periphery of the region. In its present state the Province almost totally lacks description in its important Archaic period. Perhaps it did not really exist but is only a rational construct, the usefulness of which is as a frame of reference within which to make comparisons and contrasts.

But it is my present impression that the Province did exist, beginning about 5000 years c ago, when the Taconic Tradition moved inland from the coast, to take over thinly and weakly held river valleys and to dominate the region (though not to occupy it exclusively) until the Early Woodland. Thereafter ceramic traditions tell the story of cultural cohesiveness and projectile points become a secondary diagnostic, though by no means one to be ignored. This is certainly a working hypothesis.

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