

The Bulletin

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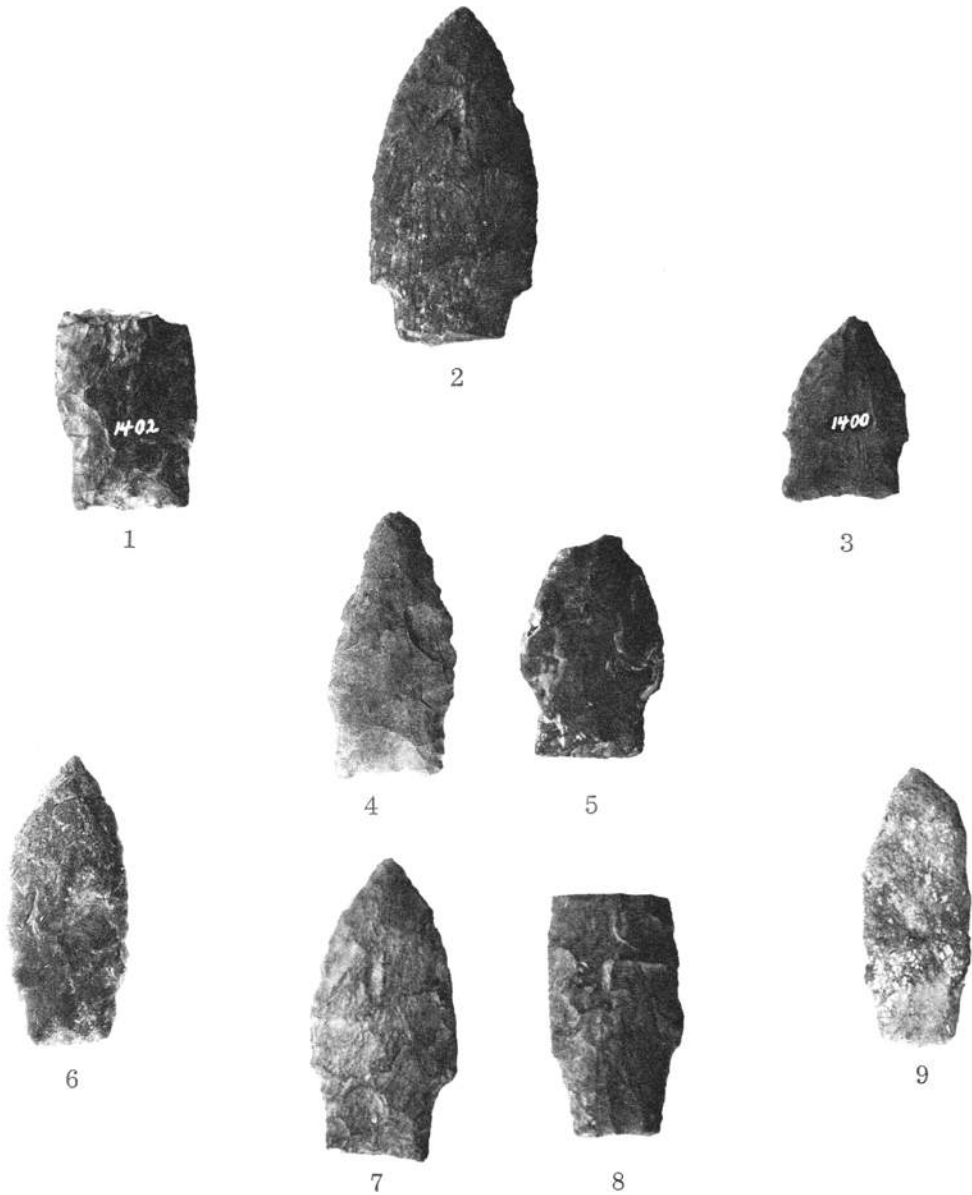


THE BULLETIN

NUMBER 44

NOVEMBER 1968

STEUBENVILLE - FOX CREEK - CONY



Fox Creek Points from the Fredenburg Site,
Otsego Co., N.Y.

A NEW MIDDLE WOODLAND COMPLEX IN EASTERN NEW YORK*

Robert E. Funk, NYSAAF

Van Epps-Hartley Chapter

In his comprehensive archeological survey of the Upper Ohio Valley William J. Mayer-Oakes (1955) described a series of nonceramic assemblages which he assigned to a "Panhandle Archaic." An important element of these assemblages were broad-bladed projectile points referred to as "Steubenville Stemmed" and "Steubenville Lanceolate." Largely because these points bore some resemblance to Scottsbluff points and other late Paleo-Indian forms, Mayer-Oakes placed the Panhandle Archaic in Early Archaic times. However, in a further discussion of this complex Don W. Dragoo (1959) attributed a Late Archaic age to it, based largely on typological and comparative grounds. A C-14 date of about 2200 B.C. for the type site at East Steubenville, West Virginia, would seem to corroborate this belief.

In New York State points very similar to the Steubenville forms were recognized more than 24 years ago by William A. Ritchie (1944, p. 313), who called them "weathered argillite points." A considerable antiquity for such points had been suggested by investigators working in New Jersey near the end of the 19th century.

More recently, following Mayer-Oakes' researches, Ritchie recorded numerous points in collections from the Susquehanna River Valley which he typed as Steubenvilles, an identification verified by Mayer-Oakes. These points were formally described in Ritchie's typological study of New York projectile points (1961). He noted that recent discoveries in the tidewater area-by Julius Lopez at the Pelham Boulder site in the Bronx and by James Shafer, R. A. Johnson, and E. B. Christman at the Ford site in Columbia County - indicated possible ceramic associations for the points.

In following years, points of the so-called "Steubenville" types were recovered from stratified contexts at such Hudson Valley sites as Barren Island and Dennis, both near Albany, and Weinman on Lake George, in each case associated with pottery of Point Peninsula affiliation. However, the point samples were small, and were mixed with such well established Middle Woodland types as Levanna, Jack's Reef Pentagonal and Jack's Reef Corner-notched. The writer (Funk, Weinman and Weinman 1965; 1966) has suggested a moderately early Middle Woodland provenience for the "Steubenville" styles. Some support for this notion was provided by Ritchie's discovery in 1965 of "Steubenville" points and other styles in association with Middle Woodland pottery in the basal horizon at the Cunningham site, Martha's Vineyard (Ritchie, 1969). This assemblage is radiocarbon dated at A.D. 400.

The situation was further complicated by the differing opinions expressed by Don W. Dragoo and William J. Mayer-Oakes (pers. comm., 1964-65), each of whom separately examined a sample of ten points from the Ford site. Dragoo saw Paleo-Indian attributes in the points, but did not believe them to be Steubenvilles; Mayer-Oakes classified five of the group as Steubenvilles but considered all of them to be of late Paleo-Indian or Early Archaic origin.

Dragoo very kindly loaned the writer a group of 12 Steubenville points from the type site. Formally, these points seemed to me to be very similar to New York examples, but tended to be rather smaller.

Thus we were confronted with several possibilities: (1) some New York projectile points were erroneously identified as Steubenvilles, but were of Paleo-Indian age, while others were true Steubenvilles, also of considerable antiquity (i.e., occurring in Archaic contexts); this implied that the apparent evidence for their ceramic period associations had been misread, and would be contradicted by later discoveries; (2) a third broad-bladed form of Middle Woodland origin was being lumped with the older points; (3) none of the New York specimens conformed precisely to either Steubenville points or Paleo-Indian styles, and pertained to Middle Woodland assemblages.

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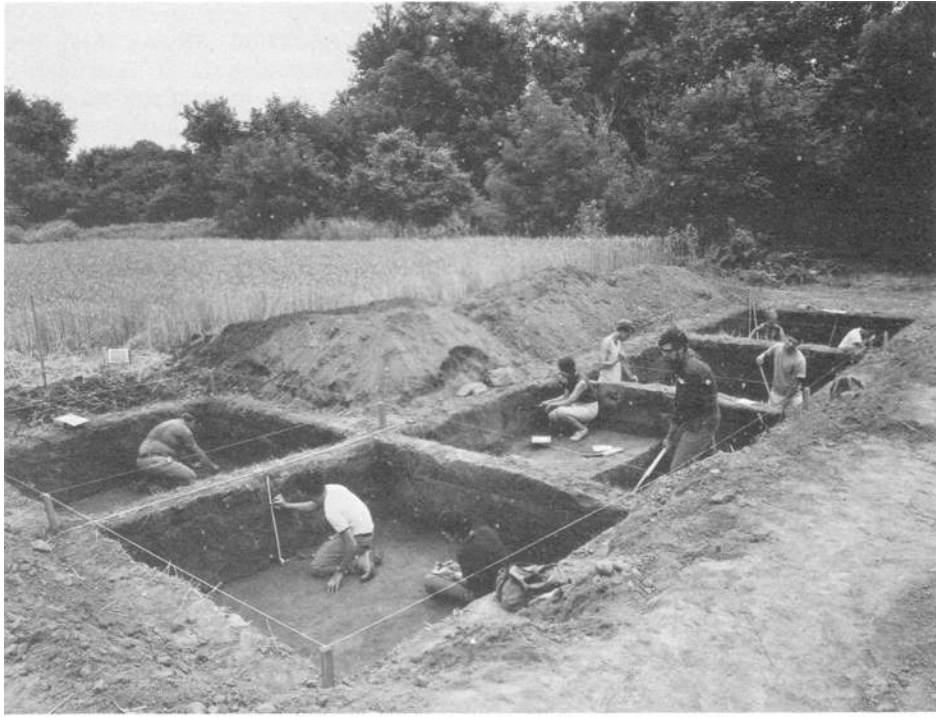


Plate 1. Westheimer site, Schoharie County, N.Y. Excavations in progress.

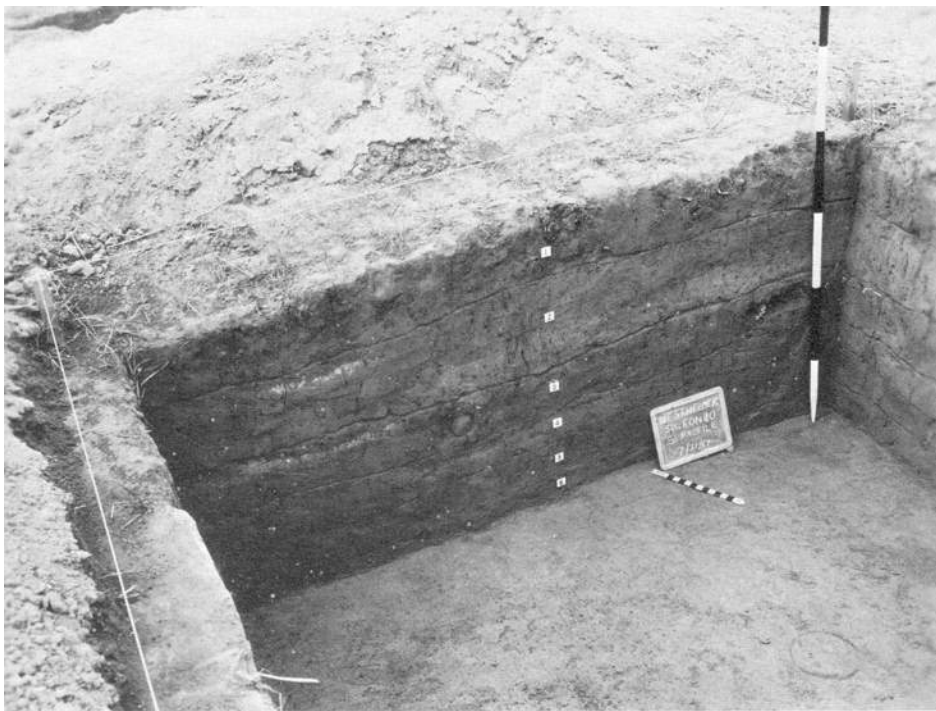


Plate 2. Westheimer site, Schoharie County, N.Y. South profile of section EON80, showing physical stratification. Note directly superimposed hearths (evinced as light-colored lenses of burned soil) in top of stratum 2 and stratum 3. The upper hearth is in the Early Owasco level; the lower one is in the Fox Creek horizon.

The first two possibilities have seemed increasingly remote, in the light of accumulating data on Archaic and Paleo-Indian manifestations in New York. The New York "Steubenvilles" have never been found in early contexts, and my personal examination of large numbers of such points in collections has convinced me that they very rarely display basal grinding, and are never parallel-flaked; both traits are characteristic of late Paleo-Indian styles. On the other hand, Plano points bearing these traits are on record as surface or excavated finds in the state (Ritchie, 1940, p. 71; Funk and Schambach, 1964).

These problems have been largely clarified by investigations in 1966 and 1967 in the Susquehanna and Schoharie Valleys of eastern New York. In the Upper Susquehanna Valley near Otego, the single-component Fredenburg site, yielding Vinette 2 ceramics and points of the style we are accustomed to calling "Steubenvilles," was discovered and excavated by Franklin J. Hesse.

In the summer of 1967 a New York State Museum field party under my direction, aided by a group of Albany State University students led by H. David Tuggle, plus several amateur volunteers, carried out major excavations on the stratified Westheimer site near Schoharie. This station is situated on the flood plain at the confluence of Schoharie and Fox Creeks. It is bordered on east and north by a gravel terrace of late glacial origin. The site was discovered by John Forstenzer and Richard Gramly on a survey in 1966. Permission to excavate was very kindly granted by the landowner, Mr. Paul Westheimer. Our excavations (plate 1) covered a total area of over 4000 square feet.

Briefly, the stratigraphy is as follows. The plow zone (stratum 1A) averages 10 in. thick; in some areas it has intruded into a thin silt zone (stratum 113) which contains Early Owasco hearths and artifacts. Stratum 2, never cut through by cultivation, is a layer of tan sterile silt averaging 7 in. thick. Below this zone is stratum 3, 2 to 8 in. thick, which yielded much cultural debris, including the so-called "Steubenville" points and sherds of Middle Woodland pottery. Stratum 4 is another sterile silt zone, resting on stratum 5, which produced a small but mysterious assemblage comprising stemmed and triangular points, fabric marked sherds, and thumbnail scrapers. Test pits carried below stratum 5 revealed sterile silt extending as deep as 9 ft. The stratification is visible on the profile shown in plate 2.

To summarize the recovered artifacts from stratum 3, 49 points conform to the "Steubenville Stemmed" type (plate 4; fig. 1-21, 26) as defined by Ritchie (1961). Two points are typed as "Steubenville Lanceolate." Six narrow lanceolate specimens (fig. 22-25) are Greene points, a newly defined type first recognized on late Middle Woodland sites in the Hudson Valley. In addition, there are a small number of untyped broad stemmed and side-notched points (fig. 27-29, 31-34) which are evidently variations on the basic theme of a broad-bladed, stemmed or expanded-stemmed point. Also found was a large triangular point (fig. 30).

The ceramics evince relatively late connections with the Middle Woodland series of central and eastern New York, but represent a developmental stage preceding the Kipp Island styles. There is a considerable variety in decorative modes, including rocker stamping (plate 5, fig. 2, 8) dentate stamping (fig. 1, 9, 10), cord-marking (fig. 11), fabric-marking (fig. 4, 5, 7) and zoned incising. Some rim sherds are plain (fig. 3); one is trailed (fig. 6). Vessels were conoidal-based with slightly constricted necks and flared rims. The lips are predominantly rounded; a minority are flat or pointed.

Numerous biface knives, some of a distinctive large straight-based form; stemmed, triangular-based, and flake-based drills; crude flake side scrapers and knives; several whetstones; many hammerstones, anvilstones, and pitted stones; and two broken polished celts complete the stone inventory. Probably due to poor preservation of bone in the acid soil, only two worked bone fragments, one a polished awl section, were found.

The artifacts clustered around two widely separated groups of hearth features. Most hearths were simply patches of burned soil, but a few were shallow basins. Several post molds were encountered and mapped, but no house patterns could be discerned.



Plate 3. Westheimer site, Schoharie County, N.Y. Burials in Late Woodland pit on gravel terrace. Note platform pipe, reworked to pendant, with bones of infant.

Large quantities of refuse occurred in and around the hearth concentrations, consisting of chippage, artifacts in process, poorly preserved animal bones (mainly of the white-tailed deer), charcoal, and charred acorns and butternuts.

Two excellent samples of hearth charcoal were submitted to the Yale Radiocarbon Laboratory. The resulting dates were exactly as anticipated on typological and other grounds: A.D. 410 ± 80 years (Y-2350) and A.D. 450 ± 80 years (Y-2349). A feature at the Fredenburg site has been dated A.D. 360 ± 100 years (I-3442).

We had hoped to find burials relating to the stratum 3 occupation, but none were encountered in the flood plain excavations. Thorough test-pitting and trenching on the gravel terrace also failed in this regard, although a group of pits pertaining to Archaic and Late Woodland occupations were found and excavated. Two Early Owasco pits contained burials. One pit contained the remains of a child and an infant; with the infant was a platform pipe of serpentine, reworked to a pendant (plate 3).

Pending completed analysis of data from the site, and publication of the final report, the following tentative interpretations are offered.

The evidence from the Fredenburg and Westheimer sites seems adequate to justify the designation of a new late Middle Woodland manifestation, the Fox Creek Complex. The projectile points from the Westheimer site, stratum 3, were personally examined by Don W. Dragoo in the fall of 1967, and declared by him to differ in certain ways from the Steubenville points of the Ohio Valley. Therefore, in order to avoid further confusion, I suggest

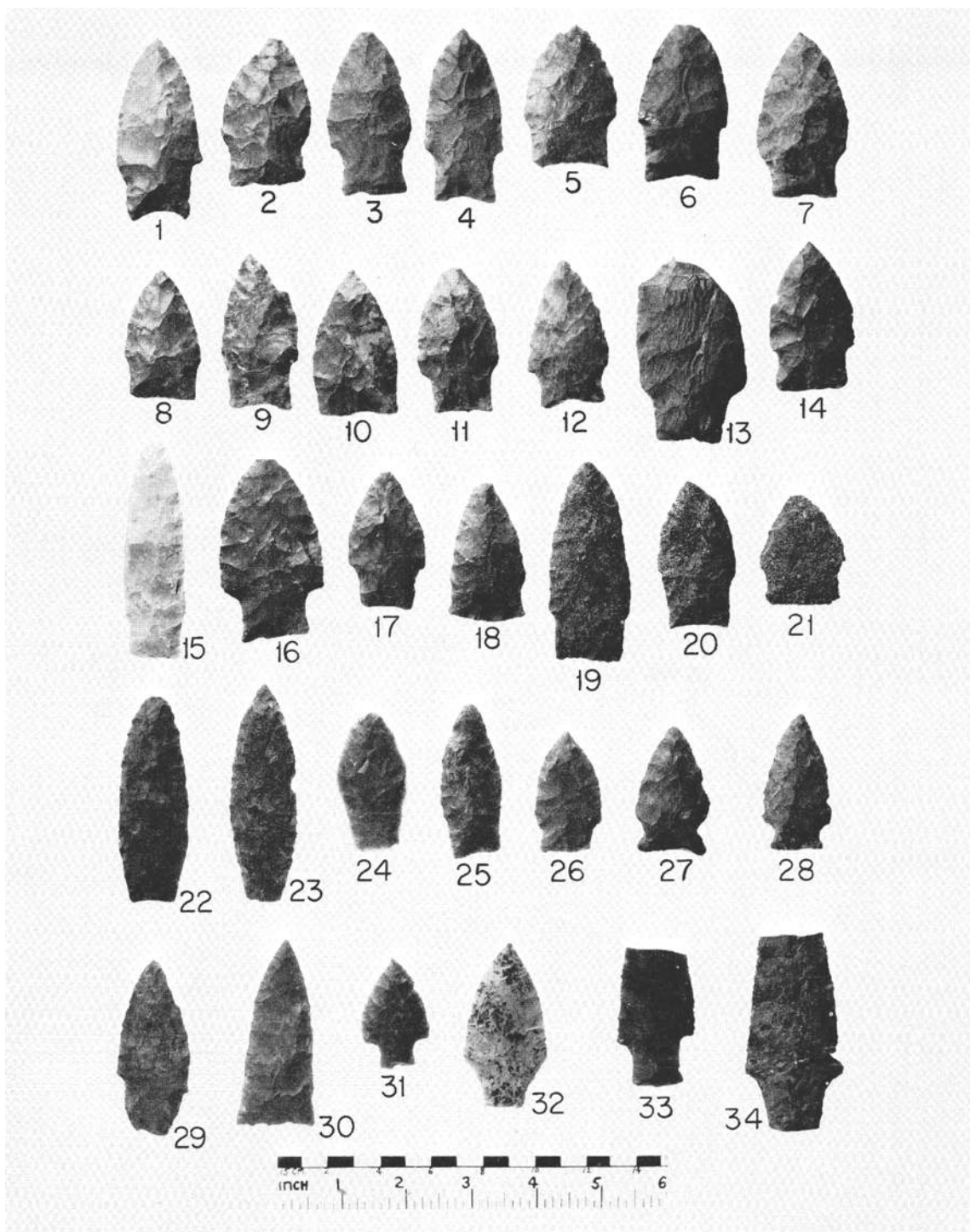


Plate 4. Westheimer site, Schoharie County, N.Y. Projectile points from stratum 3. Fig. 121, 26, Fox Creek stemmed (formerly called Steubenville Stemmed) points; 22-25, Greene points; 27-29, 31-34, untyped stemmed and side-notched points; 30, large triangular point.

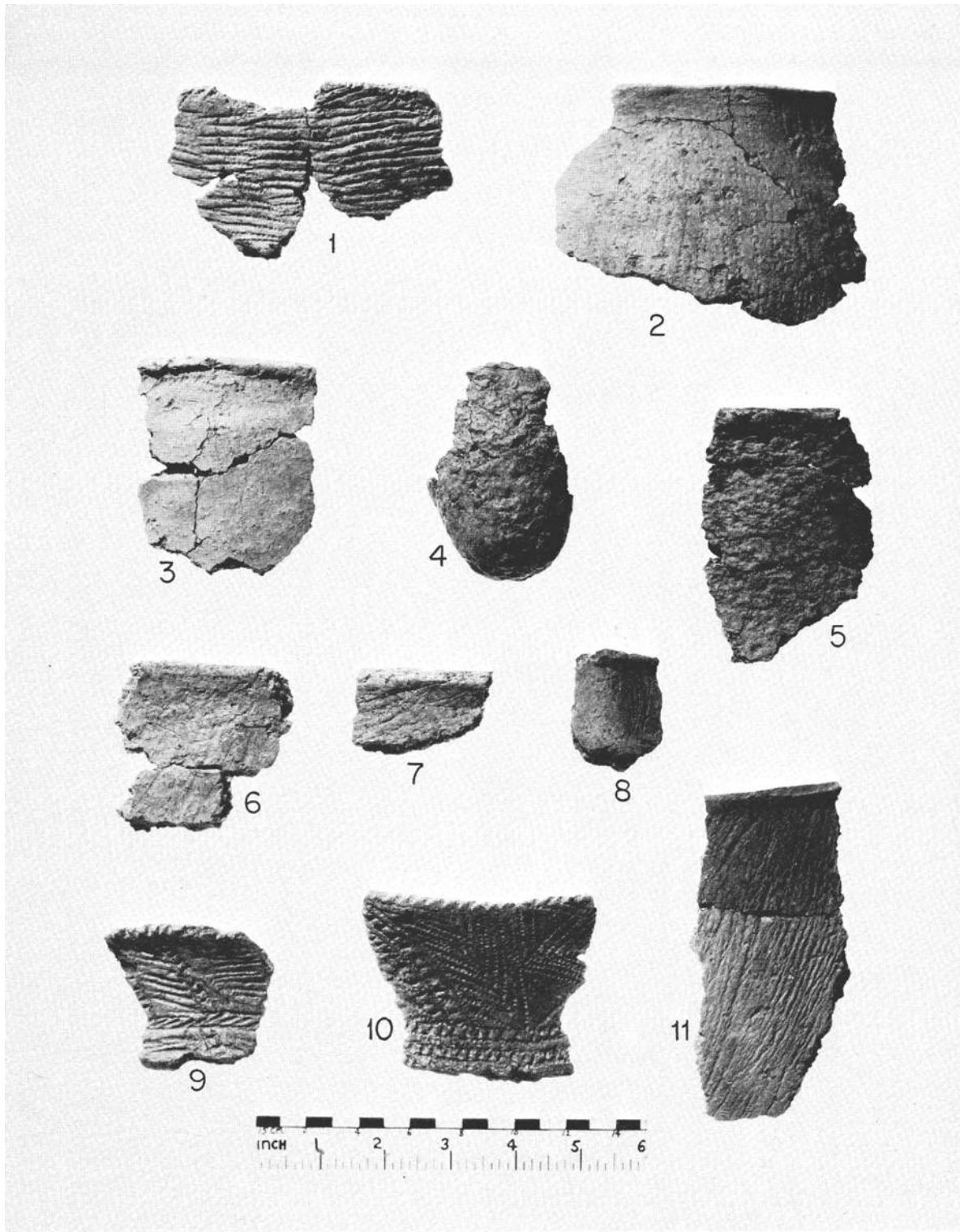


Plate 5. Westheimer site, Schoharie County, N.Y. Pottery from stratum 3 Fig. 1, 9, 10, dentate-stamped; fig. 2, 8, rocker-stamped; fig. 11, Jack's Reef Corded; fig. 4, 5, 7, fabric-marked; fig. 3, plain; fig. 6, trailed.

that the terms "Fox Creek Stemmed" and "Fox Creek Lanceolate" be adopted for those New York points which have formerly been called "Steubenvilles."

In addition to Fox Creek and related points, the Fox Creek Complex possesses ceramics with Point Peninsula affinities, in dentate, rocker-stamped, cord-marked, fabric-marked, net-marked (Fredenburg site), incised and plain varieties; biface knives, both ovate and in the large straight-based form I have elsewhere (Funk, ms.) named Petalas blades; drills in various forms; crude flake side scrapers and knives; sundry rough stone tools; and polished celts. Fires for warmth or cooking were built either on top of the ground, or in shallow basin-shaped pits. House forms and burial practices of the culture must for the time being remain conjectural. The refuse, both animal and vegetal, from Westheimer's will be submitted to experts for analysis. It is clear, however, that deer and nuts were important food resources.

A negative trait at both Fredenburg and Westheimer's is the trianguloid or thumbnail uniface end scraper, which is so common in other Middle Woodland assemblages. At both sites, some of the points had been reworked to serve as end scrapers. Present at the Fredenburg site, but lacking at Westheimer's were: a flat grooved shaft rubber; a group of enigmatic flat stones with notches rubbed into their edges; and several discoidal stone objects, with bifacially chipped and battered edges. Otherwise, the lithic industries are very much the same.

The relationships of the Fox Creek complex to other Middle Woodland phases of the Northeast are still rather obscure. On present evidence, the complex seems centered in eastern New York, with possible extensions into New England and the Mid-Atlantic province. It occupied a time period in the fourth and fifth centuries A.D. and preceded assemblages with Kipp Island level ceramics, such as that at the Tufano site near Catskill, dated A.D. 700. There are indications of the persistence of certain Fox Creek elements into later phases. The origins of the culture are presently even further from solution than its ultimate fate.

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THE MIDDLE WOODLAND PLACEMENT OF STEUBENVILLE - LIKE
PROJECTILE POINTS IN COASTAL NEW YORK'S ABBOTT COMPLEX

Edward J. Kaeser, NYSAAF

Metropolitan Chapter

INTRODUCTION

At the 1966 annual meeting of the Eastern States Archaeological Federation a report was presented by the Research Committee which had endeavored to reconcile the various names and classifications given projectile points in current use by Federation affiliates. After considerable effort the committee decided to abandon this project due to the confusion of descriptive terms, contradictory illustrations, wide latitude and overlap of forms. Three reasons for abandoning the project were given:

- (1) All classification systems presently in use have good and bad points.
- (2) They are all so well entrenched in the literature and have become so familiar in the areas in which they are in common use that it would be of little use to attempt to find a common denominator.
- (3) That any new system or combination of old systems would be confusing and would meet with such resistance that nothing would be gained.

Maurice Robbins, Chairman of the Research Committee, closed this report with the suggestion:

More attention might be paid typing in context in terms of artifact associations and genetic relationships (Robbins 1967: 13, 14).

Classification by statistical sorting of recurring sets of attributes and determination of function and technique of manufacture do fulfill a definite need, as a time-saving analytical device. Researchers working in all geographical areas, however, tend to slant their typological analysis so as to provide a basis for seriating their sites in chronological order. In the absence of visible physical stratigraphy, to determine the succession of occupations, vitally necessary both to separate and to relate archeological associations, circumstantial evidence can be manipulated by the analyst to document as a universally applicable culture trait list what amounts only to a few archeological observations. With binomial nomenclature as an adjunct, projectile point types are established which, though conceivably valid at the site for which defined, transmit erroneous cultural and temporal implications when uncritically applied to areas far removed.

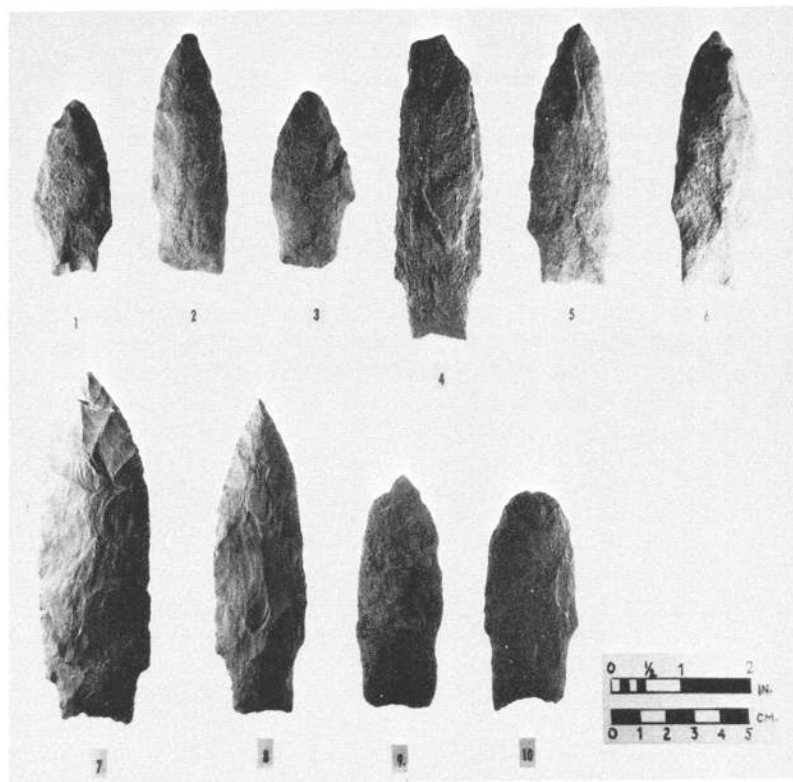
Reason No. 2, above, and a growing concern over imprecise definition of projectile point types and their indiscriminate use in deducing questionable age and cultural affiliations are the motives for again bringing up in this paper the already belabored subject of projectile point typology.

The decision to examine this problem was influenced by several considerations, the foremost being a long standing reluctance to ascribe a Proto to Late Archaic age to certain Coastal New York points based on outline similarity to Plano points, presently accepted as index artifacts of the late Paleo-Indian.

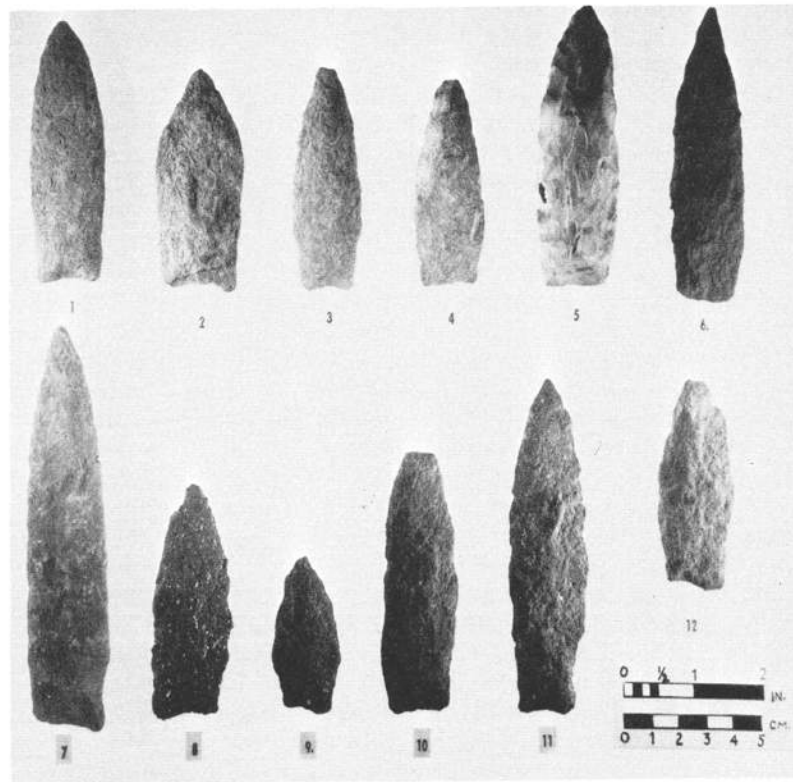
Museum of The American Indian collection. Upper group, Figs. 1-10, Steubenville-like stemmed projectile points. Fig 19, blunted point altered to stemmed end-scraper. Materials: Figs 1-6, 9, 10, purple argillite; 7, mottled yellow jasper; 8, gray chert. Lower group, Figs. 1-12, Steubenville-like lanceolate projectile points. Materials: Figs. 1, 4, 6, 7, 9, 11, purple argillite; 2, 3, gray argillite; 5, mottled gray chert; 8, 10, 12, black argillite.

PLATE
1

Upper
group



Lower
group



The published research data from areas outside of Coastal New York provided no clues, even within broad limits, as to when and by whom the first Steubenville-like points were made or introduced into this area, or whether the stemmed and the lanceolate blade forms represented separate traditions. In short, I could not accept as valid for Coastal New York the opinion that wherever and in whatever context the Steubenville-like point was found, a very early period of occupation was implied.

Specifically, the purpose of this study is to pin point the temporal-spatial position of Coastal New York projectile points which do, in fact duplicate, in the writer's opinion, the types called Steubenville Stemmed and Steubenville lanceolate by Ritchie (Ritchie 1961: 10, 50-52).

The following is not an attempt to contest the provenience of the Panhandle Archaic projectile point types Steubenville Stemmed and Steubenville Lanceolate (Mayer-Oakes 1955: 130-142), (Dragoo 1959: 202-213). The data on those types was obtained from sites in the upper Ohio Valley and no doubt is intended to be cast on them as authentically Archaic. Their relationship to the morphologically similar forms of Coastal New York has yet to be established.

THE PROBLEM

At the 1966 ESAF meeting, the author presented an exhibit of the basic ceramic sequence of Coastal New York. Accompanying the pottery type series were projectile point types which the author has found consistently in association with this series. Displayed in conjunction with the Middle Woodland pottery group were several specimens of stemmed and lanceolate points which were labeled as "Steubenvilles." This nomenclature was applied because the photographs of Steubenvilles found in the Ohio and Delaware Valleys showed no perceptible differences, despite the distance separating them, and the morphological descriptions did nothing to segregate the type Steubenvilles from their Coastal New York look-alikes. The adoption of the Steubenville nomenclature (Ritchie 1961) for New York, while acknowledging the probability of cultural difference, left no alternative at the time but to continue the Steubenville identification.

At this meeting, Dragoo rejected the Steubenville typology after a cursory examination of the points so labeled in my exhibit. Also rejected as Steubenvilles by Dragoo and Mayer-Oakes were specimens from the mid-Hudson Valley submitted to them by Funk (Funk, Weinman and Weinman 1966: 13). On what criteria this opinion was based I do not know. Possibly obvious morphological differences show up when the Eastern and the Ohio Valley series are compared or possibly there are subtle variations apparent only to the eye of intuition. For whatever reason the nomenclature was disallowed the author accepts the verdict as authoritative. The rejection removes any obligation to interpret New York Steubenville-like points in terms applicable to Ohio Valley Steubenvilles.

Before proceeding with data on stratigraphic context and cultural associations of Steubenville-like points as found in Coast New York, I am impelled to present instances of superficial evaluation distorting archaeological analysis in cases of record where Plano or Paleo points have been found. It should be pointed out here that some see the "Steubenville" lanceolotype as an "unfluted-fluted" point, while Mayer-Oakes, who defined the two types, called attention to the resemblance of the Stemmed Steubenville to the Plano phase Scottsbluff point. The lanceolate form has also been thought to resemble the Plano phase Plainview type.

Parenthetically, the author would disapprove of a rigid typological system lacking in speculative imagination, but he fails to divine what an unfluted-fluted point would be and how it is valid to include such a point in a typological survey of fluted points.

In a published survey of fluted points collected from the Susquehanna drainage basin, the following description appears (Dilks and Reynolds 1962: 56-58, Plate 1:4):

Found south of the Pennsylvania, Maryland border in Cecil Co. Particular attention is given to one doubtful fluted point of a well known variety. This specimen of slightly

weathered rhyolite is probably of Woodland age, but is typologically related to the Clovis points. . . on each face is a hinge fracture which appears to be the result of an unsuccessful attempt at fluting. There is also edge grinding. . . It is suggested that typologically this point might represent a transitional type between Paleo-Indian fluted lanceolate and the more recent modified lanceolate. However, the light weathering of the material indicates that this specimen might more suitably be assigned to the Woodland time period.

The above could be used to describe numerous Steubenville-like lanceolate points from Coastal New York. This instance, however, is an informative one, showing the speciousness of temporal evidence derived merely from weathering or the lack of it. Surface recoveries of argillite points particularly from the exposed sandy areas of Coastal New York commonly display an advanced stage of weathering which obliterates all signs of chipping and, at times, almost duplicates the chalk-like surface of badly weathered brick. Points of similar type and material, when recovered archeologically in the same areas, will show fresh flake scars and little, if any, surface weathering or patination due to their protection from sunlight, sandblasting, dehydration and above-ground chemical reaction.

Another fluted point survey in the Susquehanna Basin illustrates, describes and includes six additional unfluted-fluted points (Kinsey 1958: 106, Fig. 2:16, 108, Number 16) using morphological similarity as the single major determinant for inclusion in a fluted point typology:

Found . . . in Lancaster County. This point made of only slightly weathered black rhyolite is an aberrant form for this region. It is not clearly fluted but has a prepared and ground base with possible evidence of a fluting attempt made on side 1. . . . Perhaps the piece represents Paleo-Indian-Archaic relations with edge grinding present.

Found in Dauphin County (106, Figure 2:13, 107, Number 13)... weathered blue grey Onondaga chert. . . At is typologically similar to Number 12, although somewhat thicker in form and likewise lacks fluting.

Found. . . in Cumberland County (110, Figure 3:26, 111, Number 26). Made of local bluish purple rhyolite, this point has weathered to a chalky grey and white on certain surfaces. Typologically it bears a close resemblance to numbers 16 and 30. None of these points are clearly fluted forms, but they seem to be closely related and may be a local late Paleo-Indian derivative.

Found . . . in Cumberland County (110, Figure 3:30, 126, Number 30). This large point of a somewhat weathered dark grey rhyolite . . . Side 1 shows definite thinning or possibly fluting attempts.

The points described above nearly duplicate lithically and morphologically, within a close range of variation, the Coastal New York lanceolate type. It is assumed that the foregoing surveys were not intended to establish temporal provenience but were typological and distributional descriptions based on morphological affinities only. In none of the examples cited above did the results of the survey analysis provide any support for the antiquity suggested in their interpretation.

To formulate the cultural affiliations of the McKees Rocks Mound of Allegheny County, Pennsylvania, a re-analysis was done (McMichael 1956: 128-152) using data compiled from two reports made sometime during or after the excavations conducted in 1896-1898. The analysis showed the mound to be of three-phase construction, with a primary mound composed of relatively sterile sand, and secondary layer constructed by a Woodland people indicating cultural relationships with New York and northwestern Pennsylvania Hopewell.

Included in the inventory of projectile points from the mound are 15 broad-based Steubenville stemmed and 18 lanceolate-shaped points (142, Plate 1:A). In the absence of adequate contextual data, the Steubenville point provenience was assessed thus:

Probably... can be completely eliminated from having any relationship with the builders of the mound.... These points are eliminated because they were apparently going out of style even in some of the Archaic shell heaps.

Also included in the analysis of recoveries was a collection of pottery sherds. The sherds were typed and seriated:

- (5) Vinette 1. . .Late Early Woodland and Early Middle Woodland (140).
- (1) "Zoned Vinette 1". . . an Ohio Hopewell-influenced motif with a New York simulated vessel... in theory at least, this sherd would necessarily be Middle Woodland (140).
- (79) Half Moon Ware . . . correlated with Early Woodland (140).
- (5) Mahoning Ware . . . most likely Middle Woodland Hopewellian (140).
- (74) Watson Ware... in western Pennsylvania represents the Middle Woodland period (139).
- (5) Monyock Ware... these sherds represent the Late Prehistoric period and can be correlated with the triangular points found in the mound. Moreover, it can be said that they are not contemporaneous with the construction of the mound (139).

The ceramic inventory, showing a preponderance of Middle Woodland wares, casts doubt on the validity of the cultural interpretation, particularly since no reference is made to the possible existence of Steubenvilles in an Archaic context at the nearby Archaic habitation site. In the light of the difficulties involved in the interpretation of out-of-context collections such as that cited above, the inferences drawn from the analysis could easily derive from selective sampling or the manipulation of data.

In a paper dealing with the Paleo-hunter and Archaic occupations of the Upper Delaware Valley, Leslie (1964: 75) says:

. . .because of the morphological similarity between the extremely weathered red siltstone lanceolate. . .and the Clovis fluted (Leslie) was inclined to consider the postulation of a Protoarchaic exhibiting these lanceolate points as a possible diagnostic marker. This would, of course, have been an excursion into pure speculation and has been abandoned, largely as the result of the finding of these points in what are said to be Late Archaic or even Woodland contexts (Christman and Johnson, 1960). My own present thinking, subject to later change, of course, is that along the upper Susquehanna and the upper Delaware both the lanceolate and the Steubenville stemmed points of the same red siltstone may belong well within the time span of the Archaic.

There is some theoretical justification for this approach for, morphologically, Steubenville lanceolates are much as one might expect in a proto-Archaic context. In silhouette, certain specimens hint affinity with Clovis, Angostura, Milnesand, and Browns Valley points (Wormington 1957: 262, 264, 268) all of which, beside their attributed antiquity, are generally thought to have been used as dart points or as points for hand-held stabbing spears. New York Steubenville-like points, just as most Clovis fluted points found within the Atlantic coastal plain, are made of exotic stone materials. Contrary to the advanced transverse chipping technology displayed on the classic Clovis, New York Steubenvilles are generally crudely percussion flaked with secondary marginal retouch; pressure flaking is a rare occurrence. The examination of a wide range of intergrading Steubenville specimens might strongly suggest a divergence from a common lanceolate ancestor or, if the temptation is great enough, the deduction might even lead to a contemporaneity with Paleo or Early Archaic types.

As added food for thought Byers (1959: 247) says:

We have come to accept people of Fluted Point tradition as the earliest inhabitants of the Northeast, but until we can find some means of dating them, we must also admit that they could easily have been barbarians seeking a refuge area.

This author must stress again that this study is not concerned with the morphological genesis of the Steubenville types, and he does not aim to attack any time-space definitions given them beyond Coastal New York. The author's conception of technological evolution though not always amenable to verification by archeological techniques, is that the process

of change is from simple or crude to complex or refined. Aside from the matter of technical instinct, the necessary development of mechanical skill must be achieved by the craftsman through familiarity with the tools of manufacture and the intrinsic properties of the raw material relative to the product. This evolutionary scheme, which might be a fair consensus of current opinion, could have been applied when the intriguing question of the Steubenville lanceolate provenience first arose; in which case the point would have been considered a possible forerunner of the Clovis. Surely its morphological similarity, crudity of manufacture and often weathered appearance would strongly suggest antiquity to most analysts. These themes for reflection, and not for persuasion, become more provocative when the possibility of a pre-projectile point, pebble-tool industry is considered.

Having considered only the general aspects of the problem we shall now turn to a more detailed examination of the evidence.

"STEUBENVILLE" POINT PROVENIENCE IN EASTERN NEW YORK STATE"

Closer to Coastal New York, published data are replete with evidence of the use of Steubenville-like points contemporary with ceramic vessels, and with the attempts to correlate them chronologically. The numerical scarcity of the point specimens and the vagaries of stratigraphic context have thus far hindered a complete solution to this problem.

At the Dennis site, Albany County, N.Y. (Funk and Johnson 1964: 19) found:

Stratum II. . principally Middle Woodland artifacts. . predominantly Vinette Dentate and Point Peninsula Rocker-stamped: third in frequency... Point Peninsula Plain, followed by untyped fabric-marked rim sherds, corded rim sherds were rare. A few net marked, trailed and punctated body sherds...

... Associated projectile points include Steubenville (3), Levanna (3), Greene (2), Jacks Reef Pentagonal (1), and a small untyped stemmed form. There is no clear variation in vertical distribution of types.

...The ceramic assemblage suggests a placement in the early part of the known Middle Woodland span.

The Weinman site, on Assembly Point, south end of Lake George, New York (Funk, Weinman and Weinman 1965: 70) yielded;

Zone A. A Middle Woodland occupation confined to Stratum 1... The inclusion of Steubenville Stemmed points with the Vinette II pottery of Zone A adds to the growing body of evidence that this type is of Middle Woodland provenience, at least in eastern New York.

Steubenvilles are reported from other sites, some of which are stratified (Funk, Weinman and Weinman 1966: 12), as follows:

. . .with Vinette II pottery, including Barren Island near Ravena (Funk and Johnson: n.d.a.), Ford near Hudson (Funk and Johnson: n.d.b.) . . .These sites contained a predominance of Middle Woodland pottery, but later types were also evident at Fords and Barren Island.

As the archeologically derived data cited above grew in volume, and there was little reason to doubt a Steubenville-like point and pottery association as recorded for the deposits in which they lay, the researchers considered this evidence highly suggestive and as a basis from which to direct further investigation into the problem.

. . .Both Mayer-Oakes and Dragoo, upon studying specimens from the Ford site, commented (personal communication to Funk 1964-1965) that the Hudson Valley specimens were not identical with Ohio Valley Steubenvilles and probably belonged to a late Paleo Indian or Early Archaic period. Dragoo very kindly sent a few Ohio Valley Steubenvilles (from the Carnegie Museum collections) to Funk, who was unable to see important morphological differences between this group and most Hudson Valley specimens.

In a summary of present knowledge of New York prehistory, Brennan (1963: 8) commented on the interval between fluted point users and the makers of Lamoka-like points:

Either there was a long hiatus between this residency and the earliest Archaic occupation at Lamoka Lake at 5500 B.P. or a very thin scattering of fluted point makers lingered on for some 3500 years. The Steubenville point types, found in New York with pottery (Christman and Johnson 1960) obviously do not fall within this hiatus.

COASTAL NEW YORK STEUBENVILLE-LIKE POINTS

Through the course of fifteen years (1951-1966), the author has investigated 24 shell midden sites in the Pelham Bay area of Bronx County. Snook Kill, Rossville and Bare Island projectile points, currently thought diagnostic of New York's Late Archaic to Early Woodland periods have, on rare occasions, been recovered by excavation and as surface finds. For this time interval, only meager and uncertain archeological evidence can be found in the local museum collections from Pelham Bay. To the author's knowledge, there has not, as yet, been a single discovery in this area of a pure Archaic site, or a Woodland site containing a component or concentration of remains attributable to the Archaic.

All of the (24) sites investigated had been dug over several times by museum and private collectors, yet most retained small undisturbed culture material bearing segments. From the surviving portions of these sites, although sampling error and intrusion may be suspected, it was possible by careful examination of the deposits and familiarity with the culture material recovered from them, to obtain indications of context and relative chronological order often missed in the analysis of deficient data from comparatively extensive and undisturbed sites.

The data, as shown in Table 1, was utilized as a preliminary test of the author's hypothesis, placing Steubenville-like points in the Middle Woodland period.

Thirteen of the 24 sites contained mixed wares characteristic of the Windsor and East River ceramic traditions. Five sites of this group produced Steubenville-like points. Three of four sites producing Windsor ceramics only also produced Steubenville-like points, and seven exclusively East River Aspect Sites showed no Steubenville affiliations.

To protect the surviving sites of the above group from total destruction, so that they may be included in a site survey in the future, Table 1 does not identify these sites by name or map location. This information is, however, in the possession of the author.

The evaluation of data from these sites indicated not only consistent pottery association with Steubenville-like points (the strongest negative evidence for an Archaic provenience) but also the isolation of the major culture group (Windsor Aspect) who utilized the point types in this area's Woodland period.

Prior to concentrated research in the Pelham Bay area, out-of-context artifactual recoveries were described in a preliminary report from the Schurz Site (Lopez 1955: 8, 9; Figure a, b, c) located a short distance southward on the East River. The descriptions and illustrations show 2 Steubenville-like stemmed and 1 lanceolate point. In association with these finds were:

... various body sherds including Vinette 1.

Additional data from the Trowbridge-Younkheere excavation of the site lists "projectile points include stemmed and side notched types, both narrow and broad, of quartz, chert, flint, argillite."

Beside plain and cordmarked surface potsherds of the East River and Windsor Aspects (12):

... and quite a few pieces, all of them thick, are heavily stippled. It would not be surprising if plasticine casts of some of the sherds showed impressions of a net wrapped around a paddle.

The net impressed sherds have been identified by the author as North Beach Net Marked (Kaeser 1964: 4, 6: Figure 1:3), one of the terminal Windsor Aspect (Middle Woodland) ceramic types found in the western portion of Coastal New York.

TABLE 1
 STEUBENVILLE POINT-CERAMIC ASSOCIATIONS
 PELHAM BAY AREA SALVAGE SITES

(13) Multicomponent sites producing ceramics of Windsor and East River traditions	Site Numbers (*) - associated Steubenvilles												
	1 *	2	3	4 *	5 *	6	7	8	9	10	11 *	12	13 *
Windsor tradition:													
Modified Vinette	X	X	X	X	X	X	X	X	X	X	X	X	X
North Beach Net-marked	X		X	X							X		X
Abbott Zoned Incised	X										X		
East River tradition:													
East River Cord Marked	X	X	X	X	X	X	X	X	X	X	X	X	X
Bowmans Brook Stamped											X		
Bowmans Brook Incised		X			X			X				X	X
Clasons Point Stampled						X							
(4) Multicomponent sites producing ceramics of Windsor tradition only										14 *	15	16 *	17 *
Windsor tradition:													
Vinette I										X	X		
North Beach Brushed										X	X		
North Beach Net-marked										X		X	X
Modified Vinette												X	X
(7) Multicomponent sites producing ceramics of East River tradition only							18	19	20	21	22	23	24
East River tradition:													
East River Cord Marked							X	X	X	X	X	X	X
Bowmans Brook Stamped								X	X			X	
Bowmans Brook Incised							X	X	X	X	X	X	X
Clasons Point Stamped							X	X	X		X		
Eastern Incised									X		X		

In 1958, the author excavated the Morris Estate Club Site, an area approximately 300 yards westward of the Schurz Site. From the middle and bottom zones of the midden, and from a feature described as a stone circle, presumably delineating a house floor and containing numerous objects of domestic utility, (128) Windsor tradition potsherds were recovered (Kaeser 1963: 15-18). The floor produced two concentrated piles of sherds three feet apart representing two individual vessels, one Clearview Stamped (35 sherds) the other vessel, North Beach Net Marked (67 sherds).

With the exception of 5 Vinette 1 sherds found at the junction of bottom zone and subsoil, all sherds from the middle and bottom zones are constituents of Coastal New York's (Middle Woodland) Clearview Focus, totaling 22 Clearview Stamped and 5 North Beach Net Marked. The Steubenville-like stemmed and lanceolate points of purple argillite recovered

from the junction of the Bottom and Middle zones of the midden are included in the Clearview Focus. Also provisionally added to this assemblage are the four sherds of Abbott Zoned Incised found not in situ on the beach embankment.

Pit 1, the orifice originating at the subsoil line, produced 5 Vinette 1 and 28 North Beach Brushed sherds diagnostic of the culturally antecedent North Beach Focus (Early Woodland) period.

This site, although its area of excavation was greatly restricted, demonstrated to the author better than any other site he had thus far investigated the validity of the ceramic sequence as established for Coastal New York (Smith 1950: 193-197). The repeated coincident appearance of Steubenville-like points and Middle Woodland ceramics in convincing association at this site led the author to attempt to fit these points into a chronological framework that would affect a more accurate relative sequence in Coastal New York. To stabilize the shifting viewpoints of the author and others with a mutual interest in age of Steubenville-like points, many more specimens and corroborative archeological data had to be sought out before any definite conclusions could be reached and presented with any confidence.

METHOD

The area of collections surveyed consisted of the five boroughs of New York City, Nassau and Suffolk Counties of Long Island and Westchester County from the Bronx County line north to Peekskill, thence eastward from Peekskill to Port Chester on Long Island Sound.

Ritchie's methodology (Ritchie 1961: 6) was employed to test the validity of the type for identification as found in Coastal New York. The morphological description of the holo-type Steubenville Stemmed and Lanceolate point (50-52) is adequate for typological comparison of attributes with Coastal New York specimens. The stemmed and lanceolate forms contain characteristics which cannot be confused with any other type found in the area under investigation.

The extensive study collections housed in local museums and catalogued as of Coastal New York provenience are of little value to a study aimed at contextual correlation. The bulk of these collections were acquired prior to or early in this century mainly as curios, with little, if any accompanying pertinent data. No attempt was made to record all Steubenville-like points from Coastal New York. An inspection of collections containing Steubenville-like points did not reveal any specimens which differed significantly from the defined types.

The largest source of research material representative of Coastal New York and contiguous areas was made available to the author through the courtesy of the Museum of The American Indian, Heye Foundation. I am immeasurably indebted to Edward S. Rutsch, Research Curator of this museum, for the many personal courtesies extended to me during this research.

From the Coastal New York collection of projectile points numbering in excess of 8000 specimens, 246 lanceolate and 94 stemmed were selected. Within the range of analysis of this sample of 340 complete points, it was possible to confirm occurrence, determine axial distribution, variation and preference of lithic materials of manufacture. Table 2 tabulates the distribution of Coastal New York Steubenville-like points by county and shows by analysis the lithic materials of manufacture.

Because of incomplete documentation of the survey collection, this phase of method is regarded as indicative rather than inferential. It is possible, however, to make some general deductions that appear reasonably meaningful and can be discussed.

- (a) The lanceolate type more than doubles numerically the stemmed type in the collection. The preponderance of lanceolate over stemmed forms might be of trait importance or of chronological significance. This data, in the absence of documented cultural manifestations, must be tentatively considered as adventitious.

- (b) The largest number of stemmed and lanceolate points cluster in Suffolk and Richmond Counties, diminishing in frequency northward into Westchester County. This could signify a major reciprocating flow of the point types from the east and west extremities of the survey area, or a comparative density of aboriginal populations in these counties. A more valid explanation might be simply that Suffolk and Richmond Counties, at the time of the gathering of the collections, had suffered least from the encroachment of modern urbanization, allowing for large surface collections by vacationers and unhampered excavation by museum personnel.
- (c) With the exception of quartz and a few varieties of chert and quartzite, all specimens are manufactured from exotic stone. The largest concentration of quartz in Coastal New York is found on the north shore of Long Island. The water-tumbled quartz pebbles and cobbles covering the beaches of Long Island Sound represent a common constituent of the Wisconsin glacial outwash and, as attested in the majority of Long Island collections, comprised the most easily available and practical lithic material utilized by the aboriginal Indians in the area. Chert and flint pebbles, usually small in size, are occasionally found intermixed in the glacial till. Most of these pebbles lack the consistent fine-grained quality and the size necessary to production of large projectile points, particularly those of Steubenville-like dimensions. Generally ovoid-shaped, quartzite cobbles of good quality, ranging in color from yellow to russet, are abundant throughout the area; however, of the 14 specimens made of quartzite, only 2 possibly represent local stone utilization. Purple, gray and black argillite was the preferred stone material for manufacture (209 specimens or 61% of the total collection). To the author's knowledge, no known outcroppings or glacial deposits of this material occurs in Coastal New York, nor do jasper or chalcedony.

Typical examples of Coastal New York, Steubenville-like stemmed and lanceolate points are illustrated in Plate 1. Several of the lanceolate points suggest the basal intergrading of stemmed and lanceolate forms. It is of interest to note that only lanceolate forms are recorded for Montauk, Suffolk County, the southeastern end of the survey area. Of the 6 specimens from Montauk, 5 are of purple and gray argillite and 1 is light colored chert. At the northern end of the survey, as recorded for Peekskill, Westchester County, the stemmed and lanceolate types occur in equal number. Purple and gray argillite is the dominant material for lanceolates. Of the 6 lanceolate specimens, 4 are gray and purple argillite, 1 is light colored chert and 1 is flint. In this same area, chert dominates the stemmed type. Of 6 stemmed specimens 1 is purple argillite, 1 shale, and 4 are light colored chert.

In summary, beside demonstrating broad distribution throughout the area surveyed, the lithic analysis of this single collection (considered by the author to be areally representative) evokes a significant observation. Although a variety of lithic materials was readily available in Coastal New York's glacial moraine, these found little popularity in the manufacture of the Steubenville-like projectile point types. The preponderant lithic source of Steubenville-like point makers in Coastal New York was to the west and, to a lesser extent to the north, where the favored materials are available.

Although many of the groups of artifacts forming the Coastal New York collection included pottery and Steubenville-like points in their inventory, a singularly significant group, catalogued as the M. R. Harrington collection from Tottenville, Richmond County (Cat. No. 10-1711), contained 282 ceramic specimens, 1 stemmed and 4 lanceolate Steubenville-like points of purple argillite. Of the ceramic sample, 60 specimens represent North Beach Net Marked, while 1 large rim-body sherd and 30 non-contacting sherds are of Abbott Zoned Dentate. The remainder of the collection are ceramic diagnostics of the Bowmans Brook focus of the East River Aspect (Bowmans Brook Stamped, Bowmans Brook Incised) and the type Windsor Cord Marked, contemporary with the East River Aspect, Clasons Point focus, but generally found on eastern Long Island.

In a personal communication (11-30-67) from Albert J. Anderson regarding the relative

dating of Steubenville-like points and their associations on Staten Island, Richmond County, Anderson illustrated 3 lanceolate and 1 stemmed specimen recovered from the Page Avenue Site. The lanceolate forms were found in a definite Middle Woodland context containing: "net impressed cord and Abbott styles as well."

The stemmed type was found in a disturbed area containing Early Woodland material: ". . . it is assumed it must not be earlier than Early Woodland, but perhaps belongs in the Middle Woodland with the other types."

Five additional lanceolates are listed from sites known to Anderson in Tottenville; all associated with Middle Woodland pottery sherds.

In reply to my question about lithic materials used in the manufacture of Staten Island, Steubenville-like points Anderson said: "Since the local material is glacial pebbles, it was a must to bring in material from N.J. and Penna. to make the larger points used here in so many cultures. When smaller points were made (such as Brewerton) no argillite points seem to be present to any extent."

In 1899, M. R. Harrington tested the Pelham Boulder Site for the American Museum of Natural History (Harrington 1909: 167-179). More than half a century later, this site became the first to be stratigraphically excavated in Coastal New York and served as the field classroom for a large group of students of Coastal New York archeology. The largest documented collection of Steubenville-like points from the Pelham Bay area of Bronx County was recovered from this site (Smith 1950: 185), (Lopez 1956: 15). The in situ association of pottery with Steubenvilles at this site (Ritchie 1961: 52) brought the first hint of contemporaneity of this association in Coastal New York.

At the time of the author's participation in this excavation, he observed a close association of Steubenville-like points with North Beach Net Marked pottery and with a group of atypical sherds which were tentatively ascribed to alien contacts or to trade with peoples believed to be contemporaneous with Coastal New York's late North Beach and Clearview foci (Kaeser 1964: 1-8). The pottery specimens, of unique decorative technique and motif, were recognized as typologically similar to New Jersey's Abbott Zoned Incised, Abbott Zoned Dentate and Abbott Zoned Net-impressed (Cross 1956: 131-160) and can now be equated with types for which there are adequate descriptions from sites elsewhere in the coastal region of New York State, Connecticut and Rhode Island (Kaeser 1963: 19), (Lopez 1958).

The loss in 1961 of our colleague, Julius Lopez, who directed research at this site, terminated further field work and data analysis. Fortunately, a large volume of the Pelham Boulder Site culture material and field records have been turned over to the Garvies Point Museum of Glen Cove, New York, for preservation and study.

To add support to the author's thesis, proposing a Middle Woodland provenience for Coastal New York's Steubenville-like points, an analysis and evaluation of the culture material and contextual data from the Pelham Boulder Site was proposed intending to define the associated ceramic tradition as a culture stage determinant or possibly as evidence of the contemporary use of this site by a near western neighboring people.

Because all the Pelham Boulder Site material has not, as yet, been examined and catalogued, a complete analysis was not feasible. Through the courtesy and kind assistance of Ronald J. Wyatt, Curator of Archeology at the museum, the author was permitted to examine 27 whole and fragmentary stemmed and lanceolate Steubenville-like points and the field records of the squares from which they were recovered, permitting a tabulation of provenience and material association data.

Of the 27 points, 11 are purple and 13 gray argillite. Two lanceolates and 1 stemmed point are of dark and mottled gray chert. The recorded vertical provenience showed the lateral clustering of these points at -6 to -9 in. in a midden stratum averaging 13 in. in thickness, representing the lower middle zone of the stratum. From the corresponding squares which produced the points and, generally, throughout the excavation, the ceramic types Abbott Zoned Net-impressed, Abbott Zoned Dentate, Abbott Zoned Incised, North Beach Net Marked, Clearview Stamped and Modified Vinette clustered at -6 to -10 in., the zone of Steubenville-like projectile point provenience.

TABLE 2
COASTAL NEW YORK STEUBENVILLE-LIKE PROJECTILE POINT ANALYSIS

Steubenville-like stemmed										total 94	
Point type frequency by county	Lithic frequency by county									Stone type preferred	
	Argillite	Chert	Quartz	Jasper	Quartzite	Chalcedony	Flint	Shale	%		
Bronx	3	3	0	0	0	0	0	0	0	Argillite	69.0
Kings	7	6	1	0	0	0	0	0	0	Chert	14.1
Nassau	5	6	0	0	0	1	0	0	0	Shale	5.3
New York	1	0	0	0	0	0	0	0	1	Quartzite	3.1
Queens	1	1	0	0	0	0	0	0	0	Quartz	3.1
Richmond	31	22	2	0	1	1	1	2	2	Flint	2.2
Suffolk	38	26	7	3	0	1	0	0	1	Jasper	1.6
Westchester	8	3	4	0	0	0	0	0	1	Chalcedony	1.6
Total	94	65	14	3	1	3	1	2	5		100%

Steubenville-like lanceolate										total 246	
Point type frequency by county	Lithic frequency by county									Stone type preferred	
	Argillite	Chert	Quartz	Jasper	Quartzite	Chalcedony	Flint	Shale	%		
Bronx	4	3	0	1	0	0	0	0	0	Argillite	58.5
Kings	21	15	2	0	0	2	0	0	2	Chert	18.6
Nassau	28	20	4	3	0	0	0	0	1	Quartz	10.6
New York	2	2	0	0	0	0	0	0	0	Jasper	4.3
Queens	3	2	0	1	0	0	0	0	0	Quartzite	4.3
Richmond	38	30	4	0	2	0	0	0	2	Shale	2.3
Suffolk	141	69	33	20	9	7	2	1	0	Flint	0.7
Westchester	9	3	3	0	0	2	0	1	0	Chalcedony	0.7
Total	246	144	46	25	11	11	2	2	5		100%

The consistent archeological association of Abbott and Middle Woodland Windsor ceramics and Steubenville-like points from all the sites for which the author has data points to a cultural similarity and contemporary site occupation. Based on the relative frequency of associated Steubenville-like points and Abbott ceramics as demonstrated again at this site, the most obvious place to look for the roots of the Steubenville-like projectile point users of tidewater New York would be in a material culture complex dominated or amply represented by the Abbott ceramic tradition.

The Metropolitan Chapter, N.Y.S.A.A. excavation of Oakland Lake Site (Har 13-4), Queens County, New York, was terminated in the fall of 1967. Mr. F. Newton Miller

directed the 1966, spring season of research on the site, and this author took over direction of the work until its close. A brief typological and provenience analysis was made of a portion of the second season's data as a progress report to the Chapter. This preliminary analysis indicated, strictly on ceramic typological grounds, that the site was first inhabited by a people producing Windsor tradition pottery of Early Woodland time. Occupation continued and reached its developmental climax during the Middle Woodland period, demonstrating a strong ceramic association with types developed or more frequent to the west, in the Delaware Valley. This tradition apparently died out and the site remained either sparsely or totally uninhabited until the Final Woodland period, evidenced by pottery of Iroquoian manufacture or inspiration. The East River ceramic tradition which usually fills the temporal gap in western Coastal New York between late Middle Woodland and the Final Woodland periods was absent.

In the earliest stages of excavation at this site, in addition to the continued recovery of Steubenville-like points, the author noted distinct relationship of fresh-out-of-the-ground, Steubenville-like points and Middle Woodland pottery in significant stratigraphic distribution. Completion of this study was delayed until this spring (1968) when the entire collection and the provenience data were turned over to him for analysis and site report preparation.

In the light of a pottery and projectile point typological and vertical provenience analysis the culture material is assignable to three culture zones. The Upper Zone, measured from ground surface to 4 in. in interpreted as the Final Woodland horizon, containing Cayadutta Incised and Eastern Incised wares with small Levanna and Madison projectile points. Although no definite sterile stratum occurred below the Upper Zone, to prove abandonment of the site during the early Late Woodland period, ceramic types diagnostic of this period were absent except for 2 Owasco-like sherds, as yet unidentified. This early Late Woodland period evidence duplicates and bears out the sequence much as the preliminary analysis had predicted. The Middle Zone, from junction of Upper Zone to -9 inches, is assignable to the Middle Woodland period, with the authors estimated age at 1 A.D. to 700 A.D. This zone contained the bulk of ceramic recoveries, the Middle Woodland-Windsor ceramic tradition predominating with 604 specimens and Abbott ceramic tradition types numbering 296. It was from this zone exclusively that 18 Steubenville-like stemmed and lanceolate projectile points were recovered, in closest association with the ceramic type Abbott Zoned Net-impressed. Two large Levannas also came from this zone, suggesting contemporaneity or overlap with the Middle Woodland occupation. The bottom Zone, measured from 9 in. in -14 in. plus, is interpreted as representative of the Early Woodland period of occupation. In the upper portion of this zone 17 specimens of Vinette 1 and 1 steatite bowl rim sherd were recovered at -10 in. The steatite sherd possibly represents the Late Archaic to Early Woodland transition as demonstrated elsewhere in Coastal New York (Ritchie 1959). Recovered from the basal portion of this zone were 2 Bare Island points at -10 in.; 1 Brewerton Eared-Triangle at -12 in.; 1 Normanskill at -13 in.; 1 socketed antler-tip point at -13 in.; and 1 Brewerton Side-Notched at -14 in. The Brewertons and Normanskill are generally considered to be of the late Middle Archaic period.

This analysis of the Oakland Lake Site recoveries, in the author's opinion, provides satisfactory answers to the cultural continuity and material association of Steubenville-like points set forth in the introduction of this paper. The absence of the ubiquitous East River ceramic tradition at this site allowed a finer recognition of the suggested, but not completely convincing, cut-off stage of the late Middle Woodland-Windsor Aspect, Clearview focus, which appears to be the terminal horizon marker in western tidewater New York.

The Oakland Lake Site Middle Woodland horizon included in its material culture complex not only constituents of Coastal New York's Windsor ceramic tradition but also well defined New Jersey (Abbott) ceramic types in numbers indicating cultural kinship, or at least compatibility with, peoples who traveled possibly one hundred miles or more from their settlements in the Delaware Valley to cohabit with indigenous peoples and share in Coastal New York's shellfish harvest. With the relative chronology data derived from the Oakland Lake Site, I could finally relate the New York Abbott culture complex to data collected from other sites in Coastal New York.

Since more than half the Steubenville-like points examined in the survey collection were made of argillite, as it is also the predominant material of "Steubenville" point manufacture at all sites referred to in this study, the place of origin of this non-local stone is an important clue in tracing the origin of Coastal New York's Steubenville-like points and their cultural and temporal relationships to the Abbott Complex.

Approximately 1000 yds. northward from the Oakland Lake Site excavation an erosion-exposed cache of 13 argillite blanks and several Steubenville-like points (Venuto 1967, a: 13-20) were recovered as surface finds. The cache of prepared lithic material can be regarded as most significant and is, possibly, the first documented occurrence of its kind in Coastal New York. The blanks resemble in material and form those found in quantity at the Abbott Farm Site, Bordertown, New Jersey (Cross 1956).

As an outgrowth of this discovery, a physicochemical analysis was made on the cache blades and points, using Upper Lockatong argillite as reference samples. As a conclusion to this analysis (Venuto 1967b: 21-29) says:

. . . the material in a number of argillite artifacts found near Oakland Lake has been found to be virtually identical with reference samples obtained from the Upper Triassic Lockatong strata of western New Jersey. This implies that the argillite used in the manufacture of the Oakland argillites originated in the Upper Lockatong beds of western New Jersey - or similar beds in adjacent Bucks Co., Pennsylvania. The fact that most of the artifacts were fashioned from altered (highly albitic) argillite further restricts the source to argillite beds located in close proximity to a diabase sill.

DISCUSSION

Because no similar physicochemical analysis has been made of Abbott Farm specimens, a direct relationship cannot, as yet, be established. Even if the argillite quarries and source of other exotic stone are pin-pointed, we would not know whether this material was imported into New York, and the Steubenville-like points made according to a local point tradition, or whether complete implements were carried into the area as part of a neighboring culture complex assemblage. With due regard for the significance of the argillite cache discovery, there is evidence to discourage the former probability. The author has never seen, in Coastal New York, a Steubenville-like point reject or discarded specimen in the process of manufacture. At all site excavations he has personally worked, argillite chippage is usually non-existent; this is also true of jasper, chalcedony and the light colored cherts. At Steubenville-like point producing sites, drills and stemmed scrapers are commonly recovered, all of which appear to be alterations on broken projectile points. The rarely found, small argillite flakes represent, with little doubt, this simple tool dressing, and suggests the value placed on even the broken objects by their users. It should also be noted that only two very small flakes of purple argillite were found in the Oakland Lake excavation.

Lacking radiocarbon data, the Steubenville-like points can be only relatively dated, by inferences drawn from excavation context and provenience. From the foregoing evaluation of archeological evidence, the Steubenville-like points can be temporally placed with reasonable confidence within the Middle Woodland period. The consistent association of the point types with previously considered aberrant Abbott ceramics and late North Beach and Clearview foci diagnostic types now make cultural linkages plausible. The lithic distribution and preference data compiled by collection survey of the Coastal New York area and the physicochemical analysis of the Oakland Lake specimens are additional cause for aligning tidewater New York and Delaware Valley Middle Woodland culture manifestations, and suggests the most likely route for the entrance of a Steubenville-like point-Abbott ceramic assemblage into Coastal New York.

The Abbott Farm Site, from whence the ceramic series derives its name, is situated approximately two miles south of Trenton, New Jersey. This site, to the author's knowledge, has yielded the largest volume of the distinctive Abbott Zoned ceramic types. The types

forming the series of the "Abbott Tradition" are: Abbott Zoned Net-impressed, Abbott Zoned Incised, Abbott Zoned Dentate, Abbott Horizontal Dentate and Dentate Criss-cross (Cross 1956: 137, 144-45, 147-48). To this series are added the types Net-impressed (comprising one third of the pottery recovered from the Abbott site) and Thin Interior Cord-Marked, resembling Coastal New York's, North Beach Net Marked and Modified Vinette.

The above ceramic series is given a relative temporal position of Middle Woodland by Cross (1956: 180):

Incised, Net-impressed and Dentate appear to have been developed at the Abbott Farm site in Middle Woodland times and to have dispersed in their true form over a very limited area. They probably gave rise to later decorated types such as Overpeck Incised, Bowmans Brook Incised, and Indian Head Incised, directly or through other types, which were widely dispersed, but continued in their true form at the type site into the Late Woodland.

. . . The zoning which is characteristic of these types and the dentate stamping developed in one of them probably are remotely connected with the Hopewell culture.

The spread of Abbott ceramic wares eastward into Coastal New York was investigated by Lopez (1961: 8) and they were found in assemblages at 3 sites in Richmond County, 1 in New York County, 1 in Kings County, 2 in Queens County, 2 in Bronx County, 1 in Nassau County and 3 in Suffolk County. To this inventory the author can now add Pelham Bay salvage sites Number 1 and 11 and the Morris Estate Club Site in Bronx County, and the recently excavated Oakland Lake Site in Queens County, totaling 17 sites, widely spread from Tottenville, Staten Island (the ware's probable entry-place), to the Shelter Island Site on Long Island, approaching the eastern terminus of Coastal New York.

Steubenville-like projectile points were associated in nearly all of the component sites listed above and although not temporally defined at the Abbott Farm site, they are illustrated (Cross 1956: lanceolate: Plates 20: a; stemmed: Plates 20: b, 21: b).

Archeologically, the culture history of the Middle Woodland period in Coastal New York reflects the process of diffusion of ceramic tradition elements from the western interior resulting in what appears as, or creates the impression of, sub-stages within the late North Beach and Clearview foci. However, the consistent in-situ association of Middle Woodland, Windsor ceramic types with Delaware Valley, Abbott wares in quantity, eliminating trade as an explanation for their occurrence, makes evident a concurrent occupation of resident tidewater peoples and probable kinship-linked interior groups engaged in seasonal shellfish gathering.

It was also from somewhere in the Delaware Valley that the Steubenville-like points were made and introduced into Coastal New York as part of the Abbott Complex material culture assemblage. It is possible that some Steubenville-like points were actually manufactured in Coastal New York by these people utilizing local material. The evidence, however, indicates that even though suitable local material was available, the finished points, the majority of which are of exotic stone, mainly argillite, were manufactured elsewhere and carried in.

It is questionable whether any of the shell midden sites situated in close proximity to the open waters of Coastal New York were occupied throughout the year, due to their exposure. So far as the writer is aware, no conclusive evidence of a permanent shelter attributed to this period is known. To venture a guess, the indigenous Windsor people probably spent their winters in more permanent settlements somewhere in the heavily wooded and hilly areas of lower Westchester County and southern Connecticut.

Besides the archeological presence of scallops, conchs, and tortoise as food remains, deer bone refuse often shows a high proportion of immature individuals and antlers broken out of the skull, all of which can be considered as additional evidence for proposing a general summer season of occupation of these sites.

Aside from the distinctive Abbott Zoned pottery tradition, the material culture inventory of Coastal New York's Abbott Complex approaches identity with the categories listed for the Windsor Aspects, late North Beach and the Clearview foci (Smith 1950: 140-41). Table 3,

TABLE 3
COASTAL NEW YORK, ABBOTT COMPLEX TRAIT LIST

Category (X) = trait presence	Components											
	Pelham Boulder	Oakland Lake	Shurz	Morris Estate	Salvage sites							
					1	4	5	11	13	14	16	17
Chipped stone												
Projectile points												
Cony Stemmed	X	X	X	X	X	X	X	X	X	X	X	X
Cony Lanceolate	X	X	X	X	X		X	X		X		
Knives												
narrow-triangular	X		?	X						X		
lanceolate	X		X	X			X					
Scrapers												
stemmed, reworked point	X	X	?		X			X		X		
Drills												
stemmed & rounded butt, reworked point	X	X	X			X		X			X	
Ground stone												
Axes												
three-quarter grooved	X		?	X			X		X			X
Rough stone												
Hammer stones												
unpitted pebble	X	X	X	X	X	X	X	X	X	X	X	X
double pitted pebble	X	X	X	X	X			X	X			
Abrading stones												
tablet	X	X	?					X			X	
Choppers												
ovate	X	X	X		X	X			X		X	X
Anvil stones												
pitted cobble	X	X	X	X		X			X			
Paint stones												
limonite geodes	X	X	X	X	X				X			X
worn limonite & hematite fragments	X	X	X	X	X			X				
Bone												
Awls												
splinter, polished tip	X	X	X	X	X	X	X	X	X	X	X	X
ground, polished splinter	X	X	X	X	X	X			X		X	
notched, polished splinter	X	X	?	X				X				
incised, polished splinter	X	X	?	X								

lists the material culture traits other than pottery, defining Coastal New York's Abbott Complex.

Although present data is inadequate, the occasional recovery of large Levanna-like, concave base triangular points in association with Abbott assemblages might in the future be interpreted as an additional projectile point trait.

CONCLUSION

This study had two objectives; first the testing of the validity of the nomenclature and typology of projectile points defined in New York State as Steubenville Stemmed and Steubenville Lanceolate; and second, their placement in a space-time framework in Coastal New York.

As the major conclusion to this research, based on corroborative evidence and concurring opinions of others in eastern New York, the author defines the Steubenville-like, stemmed and lanceolate projectile point types as assemblage elements of Coastal New York's Middle Woodland Abbott Complex. The Abbott Complex does not constitute a developmental focus within the Windsor culture sequence but is, rather, a separate contemporary manifestation with (except for its distinctive ceramic series) few significant material culture trait additions when compared to those traits diagnostic of the late North Beach and Clearview foci of Coastal New York. The mixture of Abbott and Middle Woodland, Windsor tradition ceramics, resulting from coeval habitation of seasonal shellfish gathering sites, strongly suggests that the Middle Woodland period as manifested in Coastal New York, was of composite structure. The indigenous people drew upon and participated in the exchange of ideas with groups from the Delaware Valley area, and extracted from and added to those of other groups residing northward into Connecticut.

Although exceedingly reluctant to do so the author sees a necessity to apply a new nomenclature to the stemmed and lanceolate projectile points presently identified in New York as Steubenville Stemmed and Steubenville Lanceolate. The argument is clear and insistent that we disassociate these projectile point types from the various inapplicable temporal placements and culture complexes postulated for them elsewhere.

Again, referring to steps four and five of Ritchie's outlined method of determining projectile point typology (Ritchie 1961: 6,7), and particularly for the convenience in future identification of these points, the localized nomenclature Cony is proposed, combining the first two letters of Coastal and the abbreviation of New York, for Steubenville-like points of Coastal New York.

The author would not yet attempt to interpret a stemmed and lanceolate point sequence division within the Abbott Complex. The cultural material associated with both varieties corresponds at this writing, with a single culture unit. As more refined data become available, the prospect of a sequential ordering of the two varieties will command serious attention.

The ethno-historical and archeological record calls attention to cases of cultural devolution to lower planes of technology and also to the static retention of certain traits. The latter is the only conceivable solution the author can rationally propose for the archeological existence of Steubenville-like, Cony projectile points in a context including ceramics of comparatively high technological and artistic quality. Whatever the motivating cause for change or retention of this unique projectile point type tradition as it appears in Coastal New York, the personal theory of the author, that the Indian did not, as a race, tribe or family group, universally and automatically evolve technologically or culturally, is strengthened.

It is hoped that the data assembled in this study may be utilized as a means of plotting the geographical distribution of the Abbott Complex within Coastal New York, allowing for a synchronization of the local sequences into a broader, regional framework.

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NOMENCLATURE

In the preceding articles, by Funk and Kaeser, and in the following one by Hesse, the evidence is so persuasive for a Middle Woodland placement of the fraternal lanceolate and broad-stemmed projectile point types heretofore known as Steubenvilles, by reference to Ritchie's "A Typology and Nomenclature for New York Projectile Points," that the Steubenville appellation is no longer admissible for New York and probably for the Northeast.

Funk has applied the name Fox Creek to these styles, using the type site name he introduced in a report read at the NYSAA meeting last April. Kaeser's designation, Cony, as explained in the text, derives its justification from his study and analysis of a comparatively large series of points from the Lower Hudson and coastal New York. As the matter now stands there has been placed on the record two names for what, by reason of temporal and form congruence and the rare fraternal pairing of lanceolate and broad stemmed forms, has reasonably to be considered a single, far flung projectile point trait with strong implications of cultural correlation.

This occurrence adumbrates the need for dialogue among researchers, either at the annual meeting or in the pages of The Bulletin, on any matter that may lead to misunderstanding or confusion. It can hardly advance our comprehension of New York archaeology if a cultural continuum becomes arbitrarily clichotomized simply because different investigators are working at its opposite ends.

L.A.B.

THE FREDENBURG SITE:
A SINGLE COMPONENT SITE OF THE FOX CREEK COMPLEX

F. J. Hesse

Upper Susquehanna Chapter

In the spring of 1965, during a survey northeast of Otego, Otsego County, New York, a small but important site of the recently defined Fox Creek complex was discovered on the east side of Mill Creek near its headwater at 1500 ft. above sea level. This site is located on a slight rise of ground 12 ft. above the creek bed. The rise is mound-like in appearance and is bounded on the north side by a spring that drains into the creek proper. To the east a gentle upward slope merges with a prominent ridge that runs north to south, while the western edge of the site is confined by placid Mill Creek which flows to the south for six miles where it discharges into the Susquehanna River.

Predominant flora in the Mill Creek Valley today are maples, with a few oaks, pine, hemlock, and tag alders. The site proper was covered with a moss-like duff on which several wintergreen colonies grew. Fauna observed during the excavations were a few deer, rabbits, partridge, squirrels, crows, and hawks, while in Mill Creek itself small varieties of fish were seen.

Various tools were recovered in testing the site. Conclusions made at this time were that the site appeared to be of a single component with the main characteristic being the "Steubenville" point type (now Fox Creek Stemmed).

In the spring of 1967, excavation was begun by the Upper Susquehanna Chapter, NYSAA, after an invitation to do so was extended to them by the Chapter President. A reference point was established and the selected area was staked out in five foot square grids, covering an area of 1050 sq. ft. During brief visits assistance and advice were provided by Dr. Robert Funk and David Wilcox of the New York State Museum, and David Tuggle of Albany State University.

The vertical profiles of the site (Plate 1) revealed the following soil differences: The surface was a moss-like duff, 1 to 2.5 in. (approximately) in depth; stratum 1, averaging between 9 and 12 in. in depth, was a medium brown loam mixed with occupational debris and artifacts; stratum 2 consisted of a hard-packed, clay-like subsoils, pinkish in color and mixed with various-sized shale rocks. This sterile layer was of an unknown depth and was undisturbed in context save for some of the features which intruded into it.

A statement should be made in regard to the lack of continuity of stratum 1. While drawing the vertical profiles, it was observed that in several areas the topmost layer lacked both evidence of occupation and other indicative features of the stratum. These areas were light tan in color. Wherever this condition occurred, there was a sterile overlay of mixed soil within a radius of several feet. A possible interpretation of this condition is that trees may have been growing here at the time the site was occupied. As time passed, so did the trees, uprooting as they fell and causing the breaks in stratum 1; creating, at the same time, the sterile overlays. It was also noted that where the lack of continuity occurred, traces of roots, long ago transformed to dirt, left their marks angling irregularly downward into the subsoil. The possibility should not be overlooked that the initial testing of the site could have created some of these disturbances.

Thirteen pit features were revealed in the area excavated (Plate 2). They may be divided into three basic horizontal outlines which are as follows: (1) round, represented by features A, B, and K; (2) oval, represented by features C and E; and (3) rectangular, with round corners, represented by features D, F, H, I, J, L, and M.

There are four distinct types of cross sections: (1) flat bottomed with vertical sides, characterizing the rectangular type; (2) the shallow dish-shape which represented the charcoal feature found within the rectangular type; (3) a deep bowl-shape characterized the

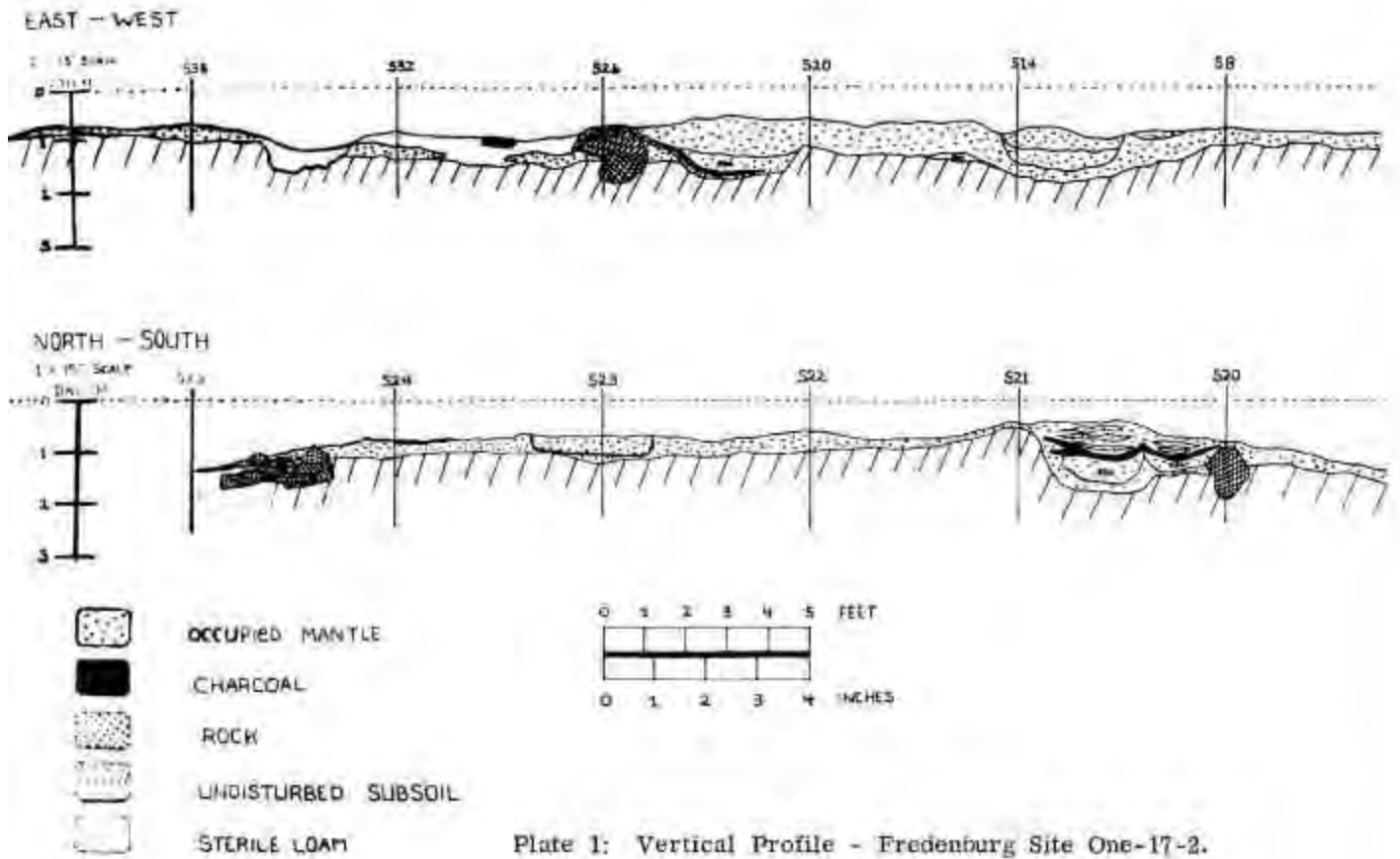


Plate 1: Vertical Profile - Fredenburg Site One-17-2.
 Fox Creek Culture.

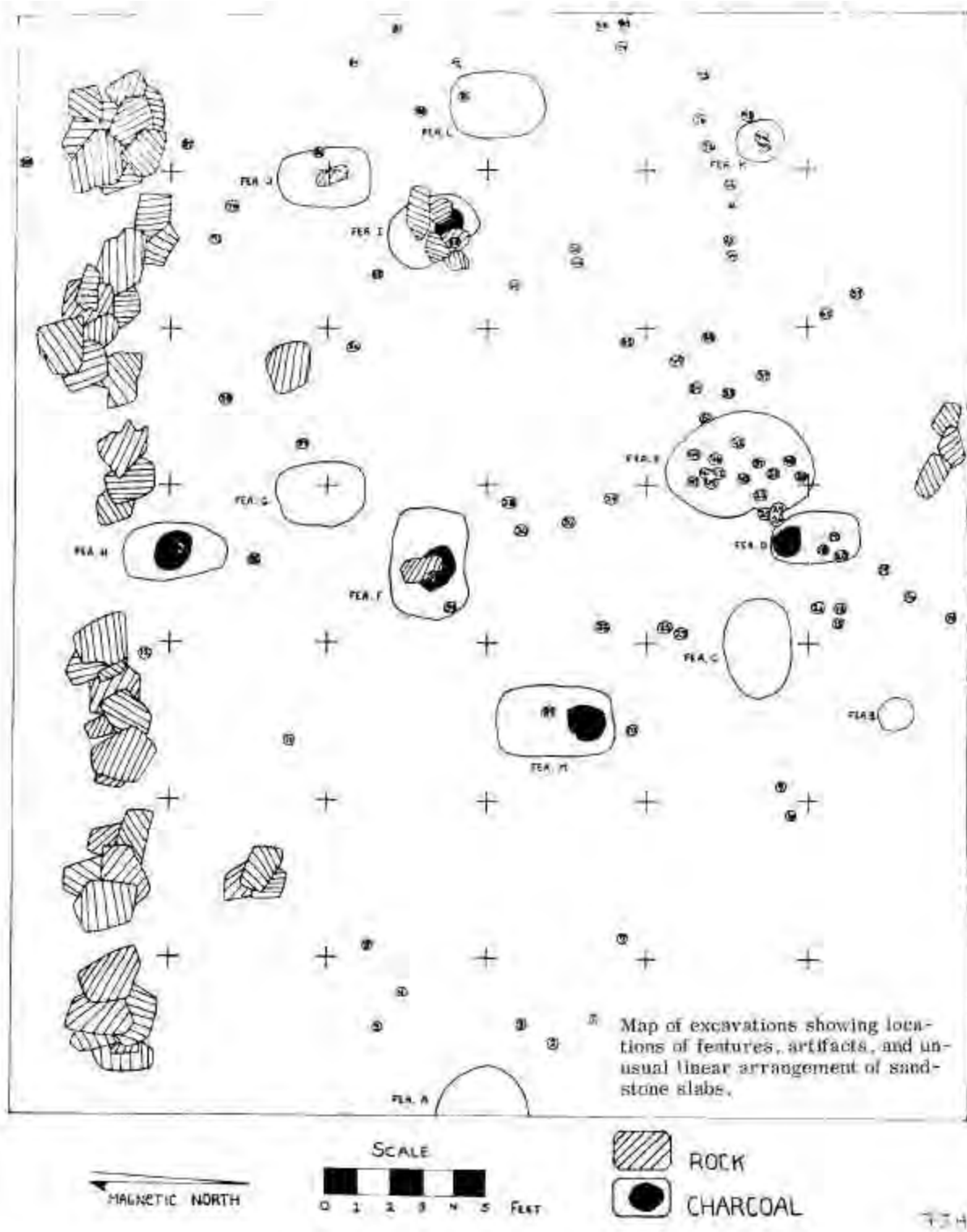


Plate 2: Fredenburg Site, Otsego County, New York.

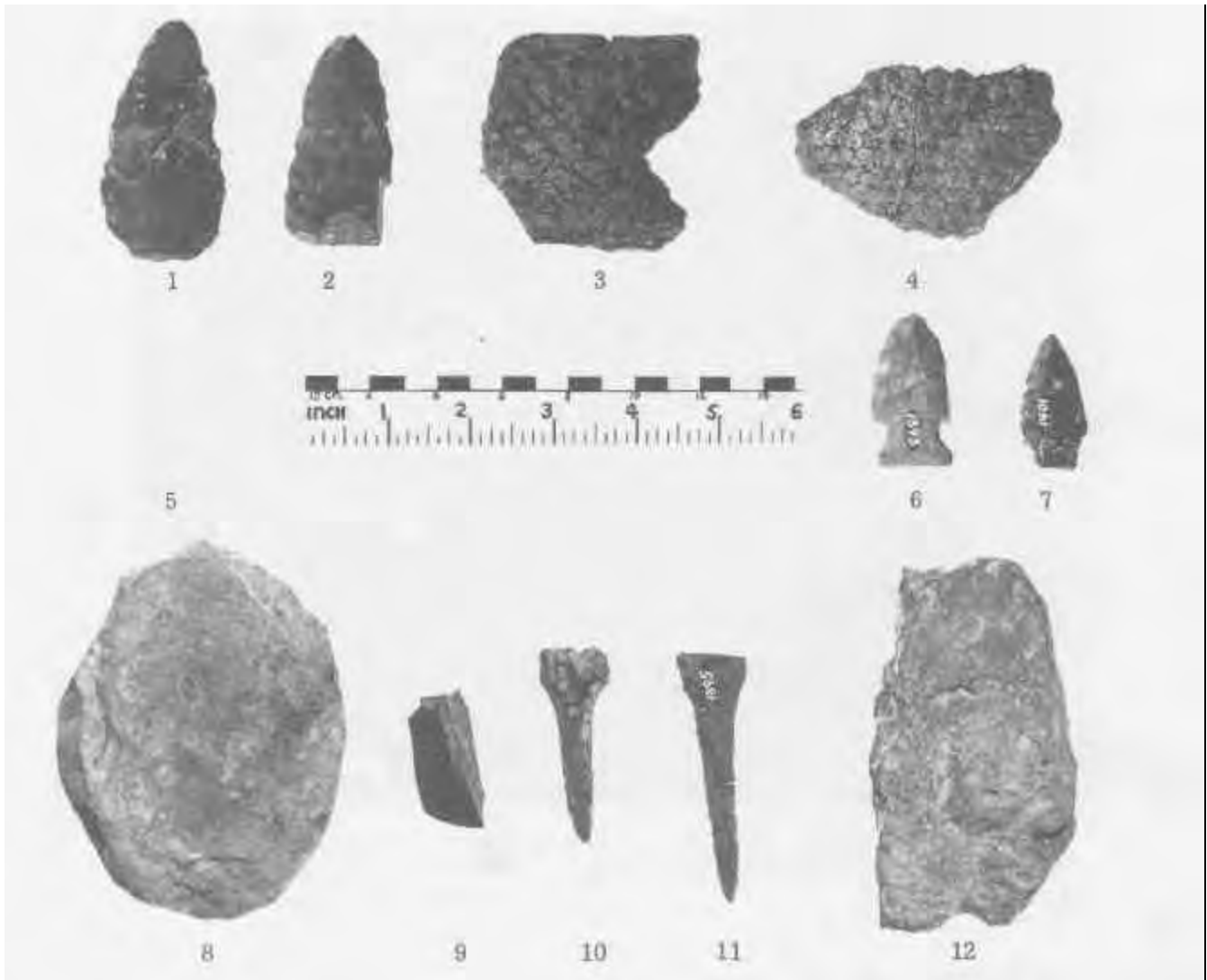


Plate 3: Figs. 1, 2, knives; 3, 4 net impressed sherds; 5, 6, 7 atypical projectile points; 12, notched abrader; 9, celt fragment; 10, 11, drills; 8, hammer stone.

vertical cross section of the oval type; while (4) a conical cross section characterized the round type.

A further description of the rectangular hearths should be offered. After the removal of 4 to 6 in. of medium brown loam from the top of these features, a layer of reddish-orange fire-burned earth appeared. This layer was more compact than the medium brown layer and extended to a depth of nearly 4 to 6 additional inches in each feature of this type. Ash, chips, and artifacts were interspersed throughout. Five out of a total of eight of these features contained a second feature, saucer-shaped in cross-section, round to oval in horizontal outline and measuring between 12 and 16 in. in diameter. In the fill was charcoal, mixed with ash, calcined bone, fire-cracked stones and black earth.

The small, broken pieces of calcined bone, found mainly in features, were the only subsistence remains found. It seems impossible to identify any of these small fragments as to the species represented. The high acid content of the soil accounts for the absence of perishables. (A pH reading of the soil was 4.5 for subsoil, and 5.4 for the reddish-orange soil.)

Feature E, which represents the oval type, was the largest feature on the site and yielded the greatest quantity of artifacts. It appeared to have been comprised of two fire pits, one intruding on the other. The horizontal measurements are 54 in. by 38 in., with a depth of 28 in. The cross section of this feature provided the following information: a lamination of ash, chips and specks of charcoal and brown soil comprised the upper layer. Beneath this, at about 12 in., a layer of black earth occurred which was between 3 and 6 in. thick. This black layer contained a mixture of chips, charcoal, cracked stone, and tools. The next lamination was gray ash residue mixed with occupational debris. Beneath this lay the bottom layer of ash and brown soil again mixed with chips. The midden in this area of the site was fairly thin and, due to the depth of this feature, most of the pit extended down into and was confined by the surrounding sterile subsoil.

A total of 199 artifacts were recovered from this pit. They are as follows: 8 projectile points of the Fox Creek Stemmed type, 1 knife, 1 scraper, 1 notched shaft abrader, 1 drill, 2 broken tips, 184 pot sherds of the net impressed type, and one unworked block of multicolored chert. A portion of feature E was disturbed due to a rodent burrow.

A second feature of the oval type (feature C) measured 26 in. by 36.5 in. and was 14 in. deep. It was found to be lacking in artifacts. Its contents were dark brown in color with slight mixing of chips, ash, and charcoal specks.

The remaining three features were of the round type with conical bottoms. Their fill was of a gray to black soil with a few chips. Only one of these features yielded artifacts. (See Table 2 for metrical data pertaining to features.)

No house patterns or even scattered post molds were found. This absence and the small size of the site indicate that it was perhaps a seasonal station occupied briefly by a small band of Indians. While hunting appears to have been the main activity, nuts, seeds and other wild plant foods were probably collected.

The site was moderately productive of artifacts despite its small size.

The lithic assemblage may be divided into 13 classes, as follows: (1) projectile points, 53 in number, mainly of Fox Creek Stemmed (formerly called Steubenville Stemmed) type (Front cover, fig. 29) but including a few stemmed and side-notched specimens deviating from the type (Plate 3, Fig. 1, 7); (2) 19 ovate and trianguloid knives (Pl. 3, Fig. 1-2); (3) end scrapers on modified points (cover, fig. 1); (4) 4 expanded-base drills (Pl. 3, Fig. 10, 11); (5) graters on flakes; (6) 11 notched stones apparently used as shaft abraders (Pl. 3, Fig. 12); (7) a single-grooved shaft abrader; (8) pitted anvilstones, (9) discoidal objects, chipped around the edges and battered, which may be hammers (Pl. 3, Fig. 8); (10) a chopper; (11) a sharpening stone; (12) fragments of 2 celts (Pl. 3, Fig. 9); (13) bifacial flint blanks.

Of particular interest are the notched objects. These artifacts are made of local sandstone and have been altered only slightly from their natural shape. The defining feature present on these tools is either one or two notches that are chipped or rubbed into the edge of the stone. I would postulate that these artifacts were used for the shaping and smoothing of a wood shaft. The large number of these artifacts found on the site indicates that they played an important role in the tool kit.

Also worthy of note is the absence of the classic trianguloid end scraper; the only scrapers represented on the site were on modified projectile points. A total of five of these artifacts were recovered.

The majority of chipped lithic tools were manufactured from drab gray Onondaga chert; argillite and chalcedony were used in a few cases. Most rough stone tools are of the local sandstone. The celts were made from schist and diorite.

Ceramics are represented by three basic modes: net impressed (Plate 3, fig. 3, 4), dentate, and plain. All show manufacturing by the coil method. Each of the 4 rim sherds is round-lipped. Tempering material is grit. Testing of the nearby spring bed revealed a source of clay that may have been utilized by the occupants. Four pots seem to be represented on the site, judging from the rim sherds found. However, the majority of sherds are net impressed.

There are 2 remaining artifacts of historical origin to be discussed. They are a brass bell and a glass bead. The brass bell measures .5 in. in diameter and still retains its clapper. The bead is irregularly cylindrical in shape, constricting on one end and blunt on the other. It is translucent and has a milky white background with ten wavy to spiral stripes of blue, yellow, green, and red. Both of these objects were found in the duff area and are considered to be intrusive to the site proper.

With the exception of the two artifacts just mentioned, the site seems to represent one component of the Fox Creek complex, a Middle Woodland manifestation recently defined by Robert E. Funk (Ms.). A charcoal sample from one of the hearths was submitted by Funk to Isotopes, Inc. which provided a C-14 date of A.D. 360 ± 100 years (I-3442).

Special thanks are due to Mrs. Leslie Fredenburg, Johnstown, N.Y., the landowner, who granted us permission to carry on the excavation. We are grateful to Dr. Funk of the New York State Museum and Science Service, Albany, N.Y. for obtaining the C-14 date. Thanks also to Dusty Pinney who did the site photography, to Howard Hoagland who compiled the metrical data, and to the members of the Upper Susquehanna Chapter who participated in the field work.

REFERENCE

Funk, Robert E.

M.S. Recent Contributions to Hudson Valley Prehistory.

TABLE 1
MORPHOLOGICAL DATA FOR PROJECTILE POINTS,
DRILLS, and SCRAPERS
FREDENBURG SITE ONE 17-2

Projectile Points	Quantity
A. Constricting stemmed	21
1. straight	5
2. concave	5
3. convex	3
4. angular	4
5. broken (undetermined)	4
B. Expanding Stemmed	16
1. straight	4
2. concave	5
3. convex	5
4. broken (undetermined)	2
C. Side-notched	4
D. Remaining basal fragments	12
1. expanding straight	3
2. expanding concave	1
3. expanding convex	1
4. constricting concave	3
5. undetermined concave	2
6. undetermined	2
<u>Drills</u>	3
A. expanding squared base	2
B. expanding flared	1
<u>Scrapers</u>	6
A. Constricting stemmed	3
1. concave	2
2. convex	1
B. Straight stemmed	2
1. concave	2

TABLE 2
METRICAL DATA FOR FEATURES
FREDENBURG SITE ONE 17-2

Rectangular with Round Corners (Hearths)			
Feature D	3' 8" x 2' 4"		8" deep
Feature F	2' 6" x 3' 5"		11" deep
Feature G	2' 8" x 1' 11"		6" deep
Feature H	3' 2" x 1' 11"		8" deep
Feature I	3' x 2'		13" deep
Feature J	2' 11" x 1' 10"		12" deep
Feature L	3' x 2' 1"		14" deep
Feature M	3' 8" x 2' 4"		8" deep
Round (Pits)			
Feature A	3' x 3' 1"		13" deep
Feature B	1' x 1' 1½"		3" deep
Feature K	1' 6" x 1' 5"		9" deep
Oval			
Feature C	2' 2" x 3' ½"		14" deep
Feature E	4' 6" x 3' 2"		28" deep

New York State Archeological Association
1969 Annual Meeting

The Frederick M. Houghton Chapter has announced that the next annual meeting will be held April 25, 26, and 27 in Buffalo. The headquarters will be the Mapleleaf Motor Lodge, 1620 Niagara Falls Boulevard. The motel can be reached easily by following the New York State Thruway to Exit 50 where Interstate 290, the Youngmann Expressway, can be picked up. Take the Youngmann to the Niagara Falls Boulevard exit and go south or left on Niagara Falls Boulevard about 1/8 mile.

Papers are now being requested. You may submit your title on a form which your chapter Secretary has or directly to Thomas Lamphear, 4570 Harris Hill Road, Williamsville, New York 14221.

Reservations for rooms should be made directly with the motel. Rates are \$10. for a single; \$13. for two with a double bed; \$15. for a double with twin beds. Reservation cards can be obtained from the Chapter Secretary. On Saturday there will be a social hour followed by the Annual Banquet. Reservations can be made at Registration. Further questions should be addressed to Charles Pierce, 188 Southwood Drive, Buffalo 14223, or Richard Burke, 77 Millbrook Drive, Williamsville, New York 14221, Local Arrangements Committee.

A preliminary program will be mailed.

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