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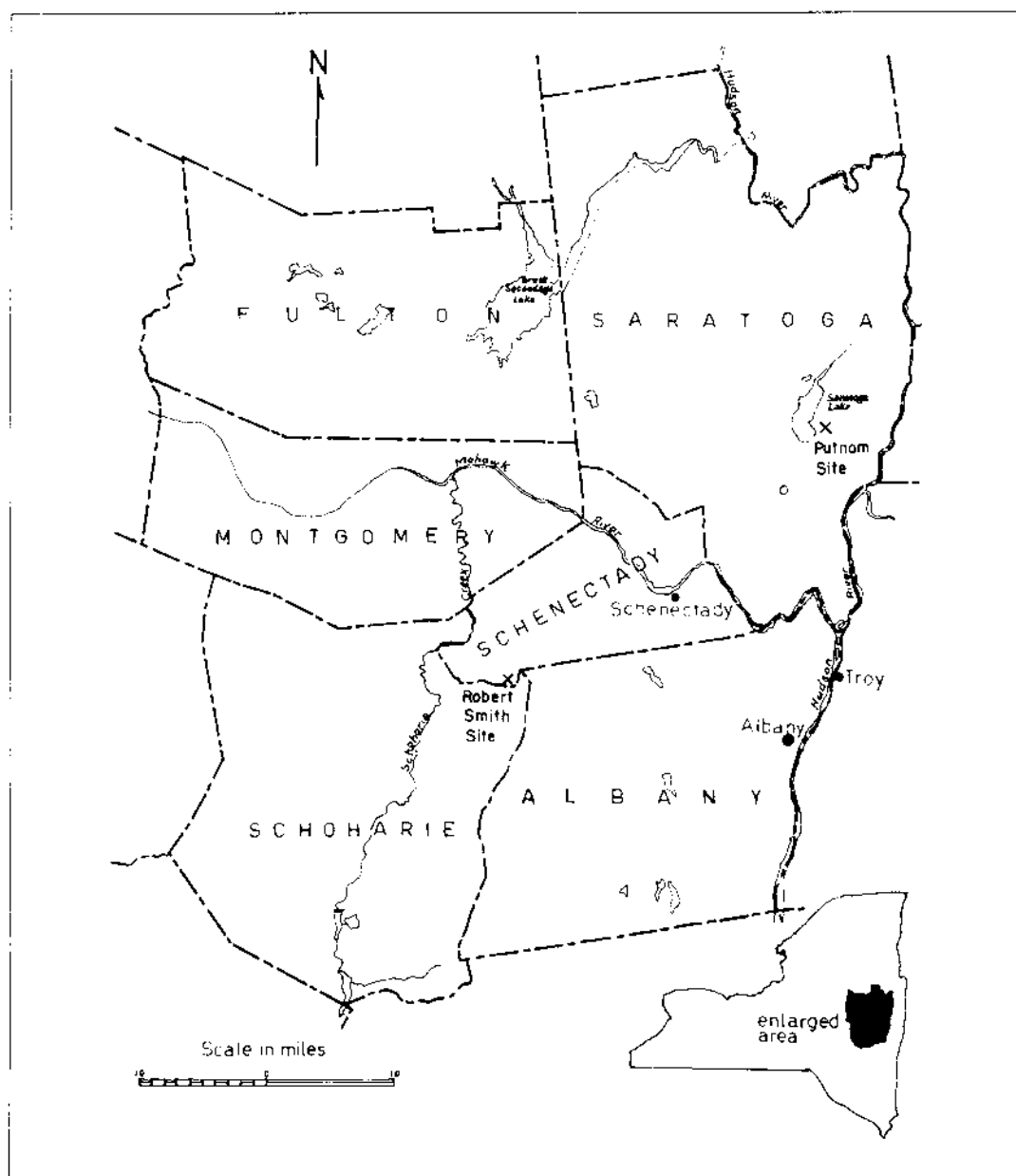
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The Bulletin

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The Robert Smith and William R. Putnam Sites

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Evidence of Late Paleo-Indian Occupation at Saratoga Lake, New York

Robert E. Funk and James Walsh, New York State Museum

Late Paleo-Indian artifactual evidence from Saratoga County includes a pentagonoid lanceolate fluted point, a trianguloid point, a lanceolate fluted point and a fluted point preform. Nearness to fresh water and game movements are proposed as reasons why the area was occupied.

Introduction

On separate occasions the junior author found three unusual projectile points on a parcel of land formerly owned by his grandfather, William R. Putnam, in Saratoga County, New York. This property is located 2 mi (3.2 km) due east of the hamlet of Snake Hill, which borders the east shore of Saratoga Lake, and is about 0.4 mi (.6 km) south of Ketchum Corners (Figure 1). The site occupies the western slope of a hill about 500 ft (152.4 m) from an unnamed creek, and lies at an elevation of about 420 ft (128 m) above sea level. An outcrop of Snake Hill "flint," a siliceous shale extensively quarried and worked by prehistoric Indians, is located on the east shore of the lake about 3 mi (4.8 km) north of Snake Hill (Wray 1948).

Walsh found one of the points (Figures 2 and 3, No. 2) in the dirt under the roots of a fallen tree within a wooded, never cultivated strip of land between the Jack Halloran road and an open plowed field. The two other points (Nos. 1, 4) were recovered from the surface of the field. All three points and a fourth specimen (No. 3), previously found somewhere on the same property by William R. Putnam, appear to be of PaleoIndian affiliation. Relatively few Paleo-Indian artifacts have been reported for Saratoga County (Ritchie 1957, Wellman 1982). Artifacts of cultures other than Paleo-Indian have not been recovered from the part of the farm where Walsh made his finds. Late Archaic items from another part of the farm were found by Mr. Putnam in the course of agricultural activities.

After Walsh reported his discoveries to the senior author, we decided to examine the site for possible additional evidence of Paleo-Indian occupation. On a spring day in 1972, Funk, Walsh, and Beth Wellman of the New York State Museum staff spent several hours on the site with R. Arthur Johnson and several anthropology students from the State University at Albany. The wooded area was walked over and at least a dozen shovel tests were excavated, including some under thrown trees. Special attention was given to the tree fall where Walsh had found one of the points. The entire crew also inspected

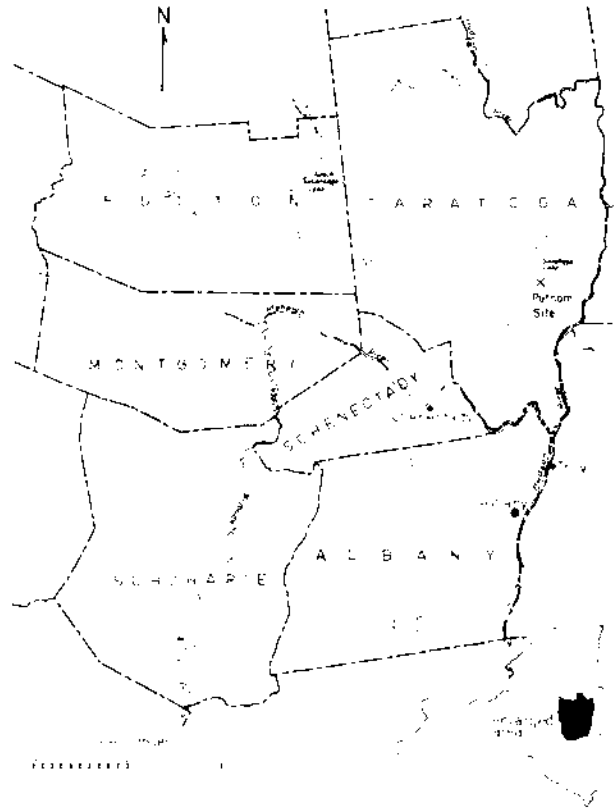


Figure 1. Map showing location of William R. Putnam Site, Saratoga County, New York.

most of the adjoining large plowed field, where it was obvious that the deposits consisted of sand and silt mixed with gravel, presumably derived from glacial till. A few test pits were dug in the field. Despite a heavy downpour that should have washed away loose dirt and left artifacts and debitage exposed on the surface, literally no prehistoric lithic remains were found in the field, and none occurred in the wooded area or in any of the shovel tests. Subsequent inspection by Walsh also failed to disclose any cultural material. The property has since been sold and partly developed for residences. A house now occupies the wooded area where one of the projectile points was found.



Figure 2. Bifaces from the Putnam Site. 1. Small trianguloid point with short channel flake removed from center of illustrated face; 2. midsection of large fluted point broken in process; 3. biface in process with long end-thinning channel flakes removed from each face but struck from opposite ends; 4. pentagonoid fluted point. Materials: 1. siliceous shale ("Snake Hill Flint?"); 2. white weathering Normanskill flint; 3-4. eastern New York Onondaga flint.

Description of the Artifacts

1. *Pentagonoid lanceolate fluted point* (Figures 2 and 3, No. 4). Finished (Stage 3).¹ Complete. Length, 64 mm. Maximum breadth, 30 mm. Basal width, 14 mm. Maximum thickness, 6 mm. This point attains its maximum width just forward of middle of the long axis. Size of channel flake scar on one face, 30 mm long, 6-11 mm wide; on reverse face, 21 mm long, 7 mm wide. Base slightly concave. Flaking pattern: initially broad transverse flaking (soft hammer) over both faces, with scars occasionally extending past midpoint of blade, followed by pressure-flaked retouch, with small, short flakes removed between the primary flake scars to create straight edges. Single (not multiple) channel flake driven from base on each face. Base shows no sign of subsequent beveling by retouch. Wear patterns: moderate grinding on lower lateral edges. Material: gray-brown flint with a small number of brown flecks; probably an eastern Onondaga variety.

2. *Trianguloid point* (Figures 2 and 3, No. 1). Finished (stage 3). Complete. Length, 40mm. Breadth, 23 mm. Thickness, 4mm. Lateral edges slightly convex, narrowing abruptly to tip from a location about 3/4 of distance from base. Thinning flake (short channel flake?) 17 mm long and 9 mm wide driven from the concave base on one face. The other face is nearly unifacial and flat, retaining part of natural cleavage surface and showing very little edge flaking. Wear patterns: slight rounding and gloss on upper edges and tip; much rubbing/smoothing of upper faces and flake scar arises near tip. Also some rounding/gloss on basal corners but little or no basal rubbing. Some smoothing of flake scar arises on lower face. These attributes suggest some use as a knife. Material: dark gray siliceous shale (?) displaying lighter streaks; probably Snake Hill "flint."

1. In these descriptions, the stage designations refer to the process of reduction from a roughed-out biface preform (stage 1) through the symmetrical percussion-flaked form (stage 2) to the thinnest and often pressure retouched finished artifact (stage 3).

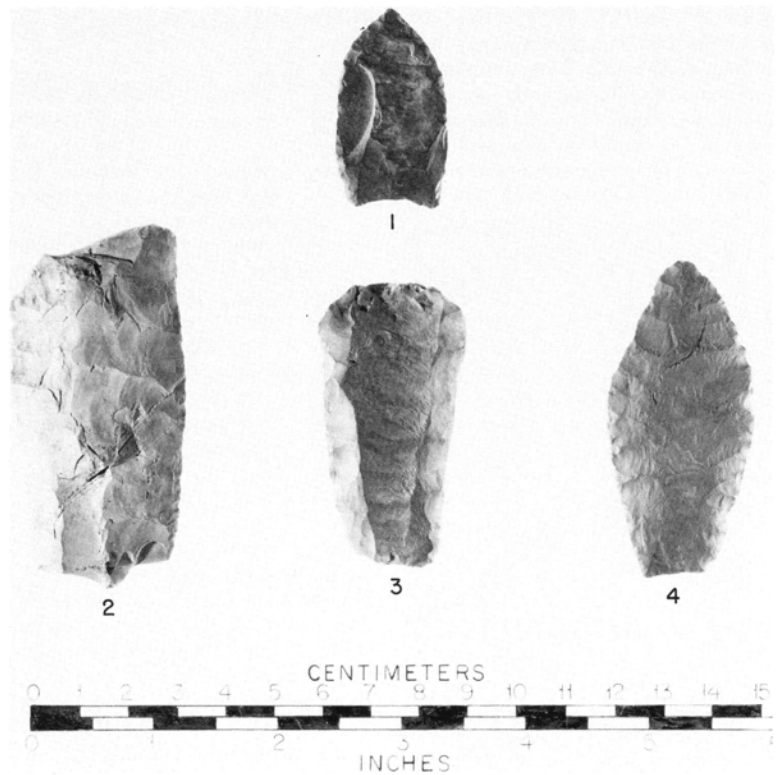


Figure 3. Reverse faces of bifaces shown in Figure 2. Note near absence of flaking on face of No. 1.

3. *Lanceolate fluted point* (Figures 2 and 3, No. 2). Unfinished (stage 3 broken in production). Midsection fragment. Piece is 73 mm long, 36 mm wide, 7 mm thick. Shows regular soft hammer flaking along edges, few scars cross midline. Some retouch manifested as small, short flake scars along edges. One face bears single channel flake scar now 21 mm long and 8 mm wide, probably near 30 mm long before base broken. On reverse face is a single large flake scar running the full length of the fragment. Scar is nearly as wide as the blade (18-32 mm). Point apparently broke at base during the attempt to flute this face, and the flake hinged through the upper part of the blade along a seam in the material. Wear patterns: none on edges. Material: faintly banded light gray flint: probably a Normanskill variety that has undergone weathering.

4. *Fluted point preform* (Figures 2 and 3, No. 3). This item was found by W.R. Putnam years prior to Walsh's discoveries. Unfinished (stage 2). Complete (?). Length, 59 mm. Maximum breadth, 30 mm. Minimum (basal ?) width, 17mm. Maximum thickness, 9 mm. Trapezoidal in outline, with straight lateral edges, a straight "basal" edge, and a blunt, convex "end." There is

no tip or point. Object is definitely bifacial but unusual in that although each face has a long end thinning flake scar (channel flake scar), these scars originate at opposite ends, not from the same end as is usually the case. Short flakes driven from the blunt end apparently represent an unsuccessful effort to thin it down or perhaps to create a scraper bit. One channel flake scar is full length at 58 mm. The other is 41 mm long. Wear patterns: no visible rounding or grinding on edges. Material: gray-brown flint with brown mottling; probably an eastern Onondaga variety.

Discussion

The cultural significance of the three projectile points found by the junior author and that of the fluted object from his grandfather's collection are not entirely clear. Two points (Figures 2 and 3, Nos. 2, 4) are indisputably of Paleo-Indian origin. The pentagonoid fluted point (No. 4) closely resembles points of identical form reported from the Late Paleo-Indian

Reagen Site in Vermont (Ritchie 1953: Fig. 89, Nos. 6-8). Though broken, the large midsection fragment of gray flint (Figures 2 and 3, No. 2) appears to have been a typical example of the lanceolate fluted point form most commonly associated with Early Paleo-Indian assemblages. Also, the trianguloid point (Figures 2 and 3, No. 1), despite the absence of long channel flake scars, is similar to the group of trianguloid points from Reagen (Ritchie 1953: Fig. 89, Nos. 16-19, 27-34). No particular comparison is feasible for the fluted biface in process from the Putnam collection (No. 3).

If three projectile points define a site, as opposed to a stray find, then the location of Walsh's discoveries can be referred to as the Putnam Site. However, the apparent lack of debitage, organic staining, or features in the plowed field or in our tests within the woods is puzzling. Conceivably, thin scatters of debitage remained unobserved in the woods or adjoining field. If so, some of this evidence was probably obliterated by construction of a house and yard in the formerly wooded area. If indeed a Paleo-Indian habitation site was present, was it single-component? We are tempted to conclude that it was a Late Paleo-Indian component, since the two complete projectile points resemble some Reagen site bifaces. But with so little information this chronological interpretation is on very shaky ground.

It is also inadvisable to draw any firm conclusions concerning why Paleo-Indians were attracted to the locality or what kinds of activities were represented at the site. Although it is on fairly level, well-drained ground and is close to fresh water in the creek, the locality displays no obvious advantages over the surrounding terrain except that it is on one of the highest hills in the area. In a period of sparse vegetation Saratoga Lake would be visible to the west and the Hudson River to the east from the summit. Conceivably the movements of game could be spotted from a vantage point on the summit. The two bifaces in process suggest that projectile point manufacture was one on-site activity although no debitage was found. The artifacts do signify Paleo-Indian occupation of Saratoga County and are unusual enough to merit publication in this report.

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The Pugsley Avenue Site

Michael Cohn and Robert Apuzzo, Metropolitan Chapter

A Late Archaic workshop site was excavated in the northeastern part of Bronx County (NYC). It is located at the head of Pugsley's Creek, about 1/4 mi (0.4 km) from the shore of Long Island Sound. The presence of variety of exotic stone materials indicates an active exchange with the middle Hudson Valley as well as the Raritan River region of Southern New Jersey. This exchange was presumably by water routes. Faunal remains show that the Pugsley Avenue site was occupied in late summer-early fall. No evidence of shellfish collecting was found.

In 1986, a small team consisting of the writers, Lucy Oxios and Susan Cohn excavated a workshop site at Pugsley Avenue in the Clason's Point section of the Bronx. The site was first discovered by Arthur Seifert, a local resident. Since the term "Clason's Point" was given to a Middle-Woodland site (Skinner 1919), the name of "Pugsley Avenue" was assigned to this workshop, with "Pugsley's Creek" reserved for any future finds in the area.

Approximately 400 sq ft (37.2 sq m) were excavated with trowel, and the soil was screened. No features were found. There had been some disturbances by collectors, some nineteenth century activity and secondary tree growth.

Geographically the site is located on a knoll at the head of Pugsley's Creek, now mostly filled in, and about 1/4 mi (0.4 km) from the shore of Long Island Sound. Much of the surrounding land consists of small knolls rising above the salt marsh, although there has been considerable filling and house construction in the last few years.

Artifacts found include 40 points, a chopper, a hammer stone, graver and side scraper, about 400 flakes and numerous quartzite pebbles and cobbles. Flint pebbles were also found. Some of the quartzite and flint cobbles show signs of splitting and/or chipping.

The points are Lamoka, Bare Island, Brewerton Side-Notched and Normanskill types, all of which have been defined as Late Archaic. (Funk 1976; Ritchie 1961, 1965). Cultural affiliation seems to be with the Squibnocket-Wading River-Lamoka group (Ritchie 1969). (See Figures 1 and 2). A single deer mandible with a milk premolar shows that the site was occupied in late summer-early autumn, although it may have been occupied at other seasons as well. Since the bone was preserved, we can assume that no shells existed here.



Figure 1. 1-15. Rejects; 16. Brewerton side notched point; 17. Bare Island point; 18. Lamoka-style point; 19. Normanskill point; 20-21. large notched points; 22. graver perforator; 23-24. reject knife bases; 25. side scraper. Materials; 8. chert; 17. limestone; all others quartz.

Thirty-six percent of the flakes and approximately the same proportion of the points are of the greyish-black flints from the Mid-Hudson region. Nine percent are of South Jersey origin (Rutsch 1970; Sloan 1975:39). It is possible, although speculative, that the milky white quartz is of Long Island origin (Wisniewski and Gwynne 1982:6). On the other hand the translucent quartzites were from local beach cobbles.

Flint and jasper seem to be better working material for the maker of points than quartz. This can be shown by the proportion of complete to broken points: 1:4 for quartz, 2:1 for flint.

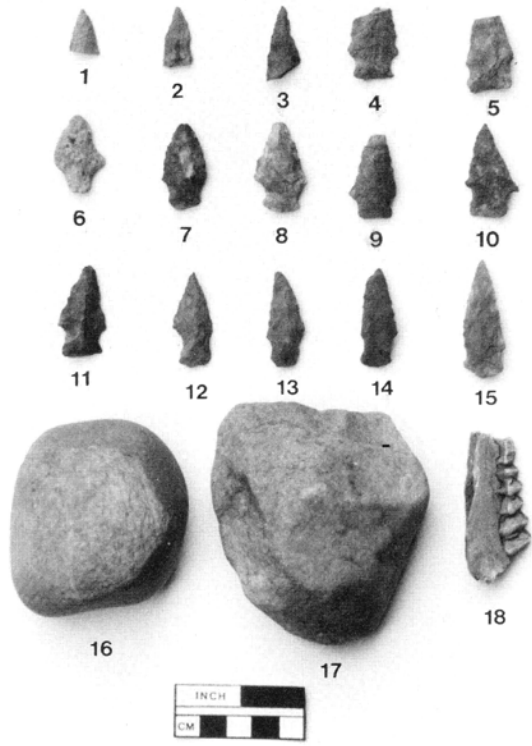


Figure 2. 1-5. Rejects; 6. Bare Island point; 7-12. Lamoka-style points; 13-15. Normanskill points; 16. hammerstone; 17. chopper; 18. deer jaw bone. Materials; 4, 6. schist; 5. argillite; 16, 17. quartzite; all others flint.

Raw material was imported at this site, perhaps by "traders," gift exchange or visits to the source. Since stone cobbles pack poorly in baskets or cloth backpacks (personal experience), water routes are much more likely to have been employed than overland carriage. Graphite seems to have been another exchange item in the Late Archaic (Latham 1956; Wisniewski 1986:21) although none was found at our site.

In historic times, New York coastal Indians had 20 ft dugout canoes capable of carrying 12 to 14 men (Bolton 1920). Such canoes would have been ideal for carrying on trade up and down the Hudson and along the shores of New York Bay and Long Island Sound. Their round bottoms make them unsuitable for rough water. The only difficult spots for canoe navigation would be Hell Gate, where Long Island Sound becomes the East River, and the area at the south end of Manhattan Island (the Battery). At Hell Gate, tidal currents can reach 5.3 knots (6 mph), and at the Battery there is a strong cross tide. Both spots can be avoided. Going from southern New Jersey along the western shore of the bay and well up into the Hudson there is smooth water all the way. Hell Gate can be avoided by using the Harlem River-Spuytten Deyvil

Creek system, up and around northern Manhattan. Both routes touch at Inwood, where indeed a large settlement has existed since Archaic times. (Smith 1950; Bolton 1920).

Conclusions

Pugsley Avenue is a small workshop site of the Late Archaic period where dart and stabbing points were made of local and imported lithic material. We know that the site was occupied in late summer and that hunting was a major activity. We do not know if or to what extent shellfish gathering or fishing was carried on, nor have we found any dwellings.

Acknowledgements

We wish to thank Marie Lawrence (AMNH) for identifying the age of the deer jaw and Modernage for their effort in printing the photographs.

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An Unusual Concentration of Biface Blades from Schenectady County, New York

Robert E. Funk, Beth Wellman, and Rebecca Elliot, Division of Research and Collections, New York State Museum

A cache of finely-worked biface blades from the Smith property in Schenectady County, New York, is described. The cultural affiliation of the bifaces is clearly with the Susquehanna Tradition, specifically the Frost Island Phase. Speculations are offered as to the use of the blades as offerings.

Introduction

The accidental discovery of a possible cache of finely worked biface blades was brought to our attention in the fall of 1984 by Robert Smith of Delanson, Schenectady County, New York. Mr. Smith found several whole and fragmentary blades lying on or near the surface while working in his backyard. Further digging yielded more blades. Smith then contacted the present writers, who conducted a survey and limited excavation of the site on three occasions in June, 1985 (Figure 2). Mr. Smith's assistance and hospitality are much appreciated.

The general location of the site is shown in Figure 1, and the spatial relationship between Smith's recently built house and the locus of discovery is shown in Figure 3. Robert Smith's house is situated near Darby Hill Road about 1.25 mi (2.0 km) south of the Village of Quaker Street and New York Route 7. It occupies the north slope of an east-west trending ridge that attains a maximum elevation of about 1300 ft (396.2 m) above sea level. The ridge is about 1.0 mi long and consists of sandstone of the Schenectady Formation thinly veneered by glacial till (Fisher 1980). Smith's backyard is at an elevation of about 1280 ft. At the foot of the ridge north of the house is an artificial pond that drains north and east into a small tributary of the Normans Kill, itself a tributary of the Hudson River. Here the Normans Kill is at an elevation of about 810 ft (267.7 m).

Adjoining Smith's backyard about 15 m (50 ft) south of the house is an east-west running swale 10 m (33 ft) wide that drains eastward and northward into another small tributary of the Normans Kill. Beyond and south of the swale is a large open field that forms the crest of the ridge.

The biface blades were encountered about one m (3 ft) from the edge of the swale. All of Smith's finds occurred within a few centimeters of the lawn's surface. Some of the blades were complete, others broken; the breaks seemed to be quite fresh.

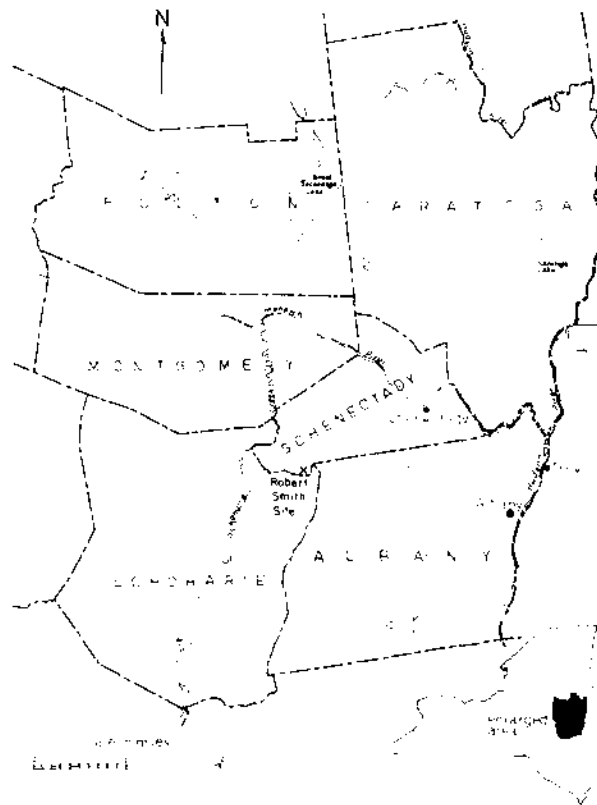


Figure 1 Map showing location of Robert Smith Site, Schenectady County New York.

We set up a small grid of 1 m (c. 3 ft) squares that incorporated the area of Smith's explorations and commenced a search for more blades and any other artifacts, features, or occupation debris that might be associated. All new finds were plotted on a map of the grid (Figure 3). A total area of 7 sq m was excavated. We calculate that at least 90 percent of the whole and fragmentary blades were recovered, since the frequency of finds declined sharply outside the initial locus of discovery.

It quickly became obvious that the artifacts found below surface were no longer in their original context. The deposits showed many signs of disturbance. A loose, dark brown



Figure 2. View of June 1985 excavations in back yard of Robert Smith home, Delanson, New York, looking southwest. Shallow wooded depression adjoins locus of discovery.

humus 5-20 cm (1.7 - 7.9 in) thick contained nearly all of the bifaces, numerous unmodified pebbles and cobbles, rusty nails, a kaolin pipe fragment, and scattered charcoal that appeared to be very recent. The underlying zone was yellowish brown in color, full of pebbles and cobbles, culturally sterile, and extended below our excavation limit at 30 cm (12 in) below surface. It was obviously glacial till. No debitage, fire-cracked rocks, or prehistoric artifacts other than bifaces were recovered. Reddened earth, in situ charcoal, pits and other evidences of features were lacking. Furthermore, shovel test pits throughout the yard, the bordering woods, and along the ridge on both sides of the swale failed to disclose any additional evidence of Indian occupation.

The clustering of the bifaces within an area of about 4 sq m (4.3 sq ft), and the evidence of recent breakage on many of them suggest that they originally formed a tight concentration. The yard had been graded by power machinery (possibly a tractor with a blade) during the period of construction, resulting in the removal of up to 30 cm (12 in) of sand and gravel on its eastern boundary, probably less in other parts of the yard. Presumably this grading dislodged the artifacts from their pre-disturbance context, moving them horizontally and damaging many of them. Actually much of the original topsoil seems to be missing from the yard.

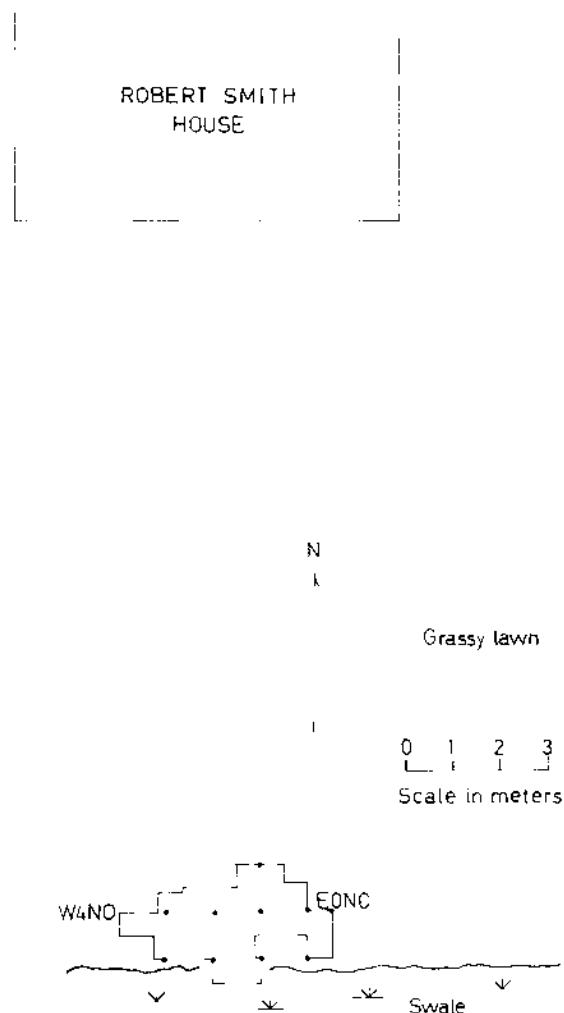


Figure 3. Map of locale and excavations, Robert Smith Site.

Description of Artifacts

Rebecca Elliott measured and analyzed the bifaces from the site and condensed the data in summary form (Tables 1-5 and Figures 4-6). A total of 86 prehistoric artifacts were recovered from the site. These include 14 whole or reconstructed bifaces, 23 nearly whole bifaces, 13 bases, 14 tips, 11 midsections, 3 base fragments, 5 miscellaneous fragments, and 1 base reconstructed from 3 small fragments. Sixteen of the bifaces have been wholly or partially reconstructed, but a large number of fragments cannot be matched, and suggest that part of the site has been removed and redeposited in an unknown location.

Table 1: Robert Smith Site. Average Dimensions for Whole and Nearly Whole Bifaces Sample size = 22, including 6 with estimated length (not > 5 mm added)

Range					
Variable	Mean	Minimum	Maximum	Std. Deviation	Unit
Length	89	66	108	11	mm
Maximum Width	41	34	50	4	mm
Dist. from Base to Max. Width	22	17	32	4	mm
Maximum Thickness	7	6	8	1(0.5)	mm
Dist. from Base to Max. Thickness	37	19	57	10	mm
Weight	24	14	35	6	g
Base Length	25	22	29	2	mm
Avg. Ratio		Length: Maximum Width		2.2:1	
Avg. Ratio		Length: Maximum Thickness		13.1:1	

An examination of the bifaces and biface fragments (especially the bases), indicates that there is little variation in size or shape (Figures 7, 8; Tables 1, 3; Figure 4). Statistical analysis of the sample shows that the ranges for all measurements (maximum width, the distance from the base to the maximum width, and maximum thickness in particular) are very small (Table 1). Scatter diagrams of length vs. maximum width and length vs. maximum thickness show that both maximum width and maximum thickness tend to increase with increasing length (Figures 5, 6); however, maximum thickness increases very little and is confined to a narrow range of a few millimeters.

In general, the bifaces are approximately twice as long as they are wide with an average ratio of length to maximum width of 2.2:1. They are also very thin, with an average proportion of length to maximum thickness of 13.1:1. By examining the whole and nearly whole bifaces, it can be seen that they are all pentagonoid with edges that angle out from the tip in a gentle curve towards the maximum width, which is closer to the base than the midpoint. From the point of maximum width the lower lateral edges contract to a straight or slightly concave base (Figure 4). Those edges are straight, slightly concave, or in a few cases slightly convex. The most frequently occurring type of biface has one lower edge that is slightly concave and another that is straight (Table 3). There are also quite a few on which these edges are either both straight, or both slightly concave. There is usually a sharp angle at the point of maximum width where the sides that have been sloping out from the tip meet the sides that angle in towards the base. In the few examples that have slightly convex lower edges, the change in direction at the point of maximum width is much less obvious, and is more of a gradual curve than an

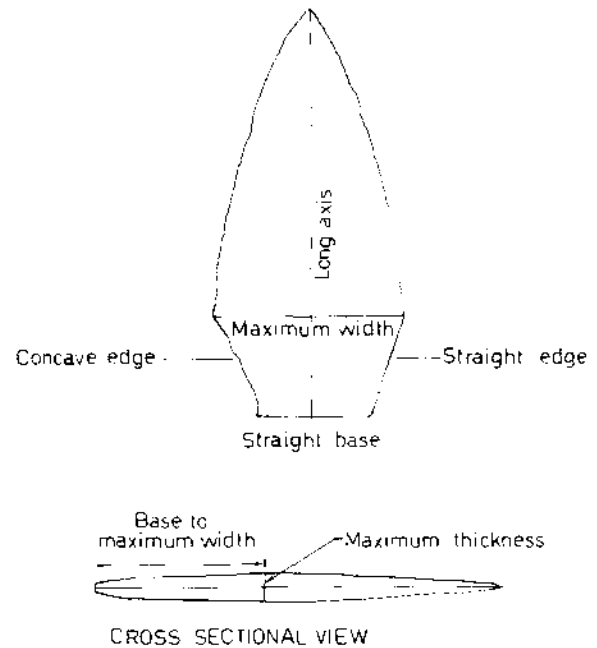


Figure 4. Lines of measurement on idealized biface from the Robert Smith Site.

angle. The bases themselves are almost all straight to slightly concave; however, there is one instance each of a very concave base and a convex base. Several of the bifaces have lower edges that are concave enough to suggest that they were

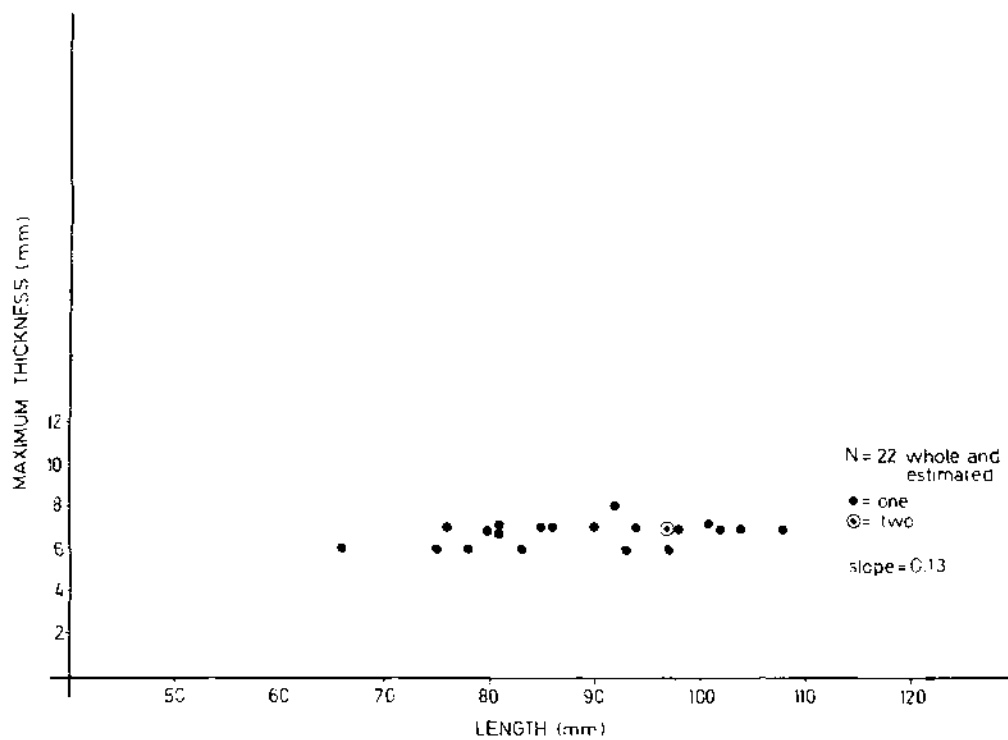


Figure 5. Scattergram of length vs. maximum thickness for the Robert Smith Site.

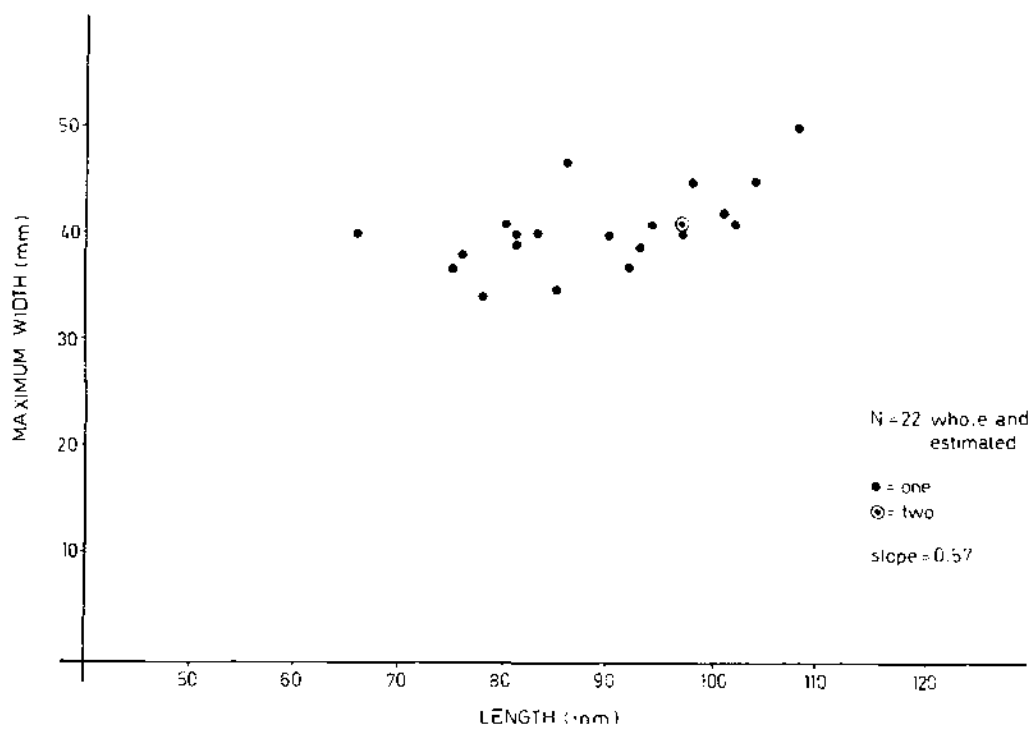


Figure 6. Scattergram of length vs. maximum width for the Robert Smith bifaces.

Table 2: Robert Smith Site. Location and Type of Breakage on Bifaces. Sample = 37 (whole or nearly whole)

Condition	Number	Percent of Total
Complete (Whole or Reconstructed)	12	33
Tip Off	13	35
Tip and edge off	6	16
Edge off	4	11
Tip and edge of base off	2	5
Total	37	100
Type of Break *		
Clean	6	18
Flaw in Material	7	21
Cortex	6	18
Hinged	7	21
Hinged + flaw or cortex	2	6
Thermal	1 possible (or flaw)	3
Struck	2 possible	6
Recent fracture	3	9
Recent fracture	3	9
Total	34 breaks	100

*Of all breaks on 27 artifacts. If reconstructed, artifacts were already glued and there was no way to examine break type.

intended to become finished points or knives of Susquehanna Broad type (Ritchie 1971).

The overwhelming majority of the whole and fragmented bifaces were produced from a light gray to light brown chert that is frequently mottled or banded and often includes the cortex (Tables 4 and 5). This is undoubtedly eastern New York Onondaga chert. The cortex is evident on 82% of the whole or nearly whole bifaces, and 33% have cortex on both the tip and the base. This feature is interesting because it indicates that the bifaces were probably manufactured from quarried chert blocks or tabular plates with matrix included at both the top and bottom. The manufacturing technique used to produce the bifaces was such that the chert as well as cortex could be reduced to the impressive degree of thinness that characterizes these bifaces. Some of the bifaces have broken at the cortex, but many of these remain whole, a testimony to fine flint knapping technique.

There are also two biface fragments made of a medium gray to bluish gray material with quartz inclusions, which could easily be a variation within the prevalent material. Also, there is one incomplete blade made of a lustrous, mottled bluish gray chert with bold reddish-brown banding, rather different from the chert of which the rest of the bifaces are made. (Figure 7, top row, far right) This striking material may be western New York Onondaga chert.

As previously mentioned, many of the artifacts are broken. The majority of the fractures are either clean or hinged. Approximately half of the breaks occur where there is either a flaw or cortex in the material (Table 2). It is presumed that many, if not all, of the breaks occurred when the site was disturbed by heavy machinery. It is possible to identify nearly all of the breaks as recent because of their unweathered surfaces. There is only one break that could tentatively be identified as thermal (Figure 8, top row, fourth item from left), but it is in the cortex area of the biface, and the rough breakage that makes it appear to be thermal could also be attributed to the manner in which cortex breaks.

There are two breaks that appear to have been caused by a direct blow to the biface at the point of breakage. It is this type of break that usually identifies artifacts that were "killed" for ceremonial purposes. Since only two such breaks are seen in this sample, it is presumed that no such ritual "killing" of artifacts occurred in this instance.

Discussion

The cultural affiliation of the bifaces is clearly with the Susquehanna Tradition, specifically the Frost Island Phase (Ritchie 1965:155-163). Morphologically the bifaces resemble the Susquehanna knives known to be associated with

Table 3: Robert Smith Site. Shapes of Lower Lateral Edges on Bifaces. Sample = 49 (37 whole or nearly whole + 12 bases)

	Number	Percent of total
One concave + one straight	13	27
Both concave	9	18
Both straight	9	18
One side broken, other straight	7	14
One straight + one convex	5	11
One side broken, one concave	4	8
One side convex, one side concave with convex base	1	2
Concave (very) base + straight sides	1	2
Total	49	100

*Bases that are considered "straight" are actually straight to slightly concave.

Table 4: Robert Smith Site. Location of Cortex on Bifaces. Sample = 27 whole or nearly whole, 22 bases. 14 tips

Cortex Location	Whole or nearly (27)		Base only (22)		Tip only(14)	
	Number	Percent	Number	Percent	Number	Percent
Tip	4	15	-	-	2	14
Base	1	4	5	23	-	-
Tip and Base	9	33	-	-	-	-
Edge	7	26	0	0	2	14
Tip and Edge	0	0	-	-	1	7
Base and Edge	0	0	0	0	-	-
Throughout	1	4	-	-	-	-
Total with some cortex	22	82	5	23	5	35

Table 5: Types of Material used for Bifaces.

Material Type	37 whole or nearly	13 bases	14 tips	11 midsections + 8 fragments
1	36	12	13	19
2	1	1	0	0
3	0	0	1	0

Material Type

1 = Light gray and light brown chert, mottled and/or banded, some include cortex (eastern Onondaga variety).

2 = Possibly variants of same material medium gray with quartz inclusions and vacuoles.

3 = Lustrous mottled blue and gray chert with bold reddish-brown banding (possibly a western Onondaga variety).

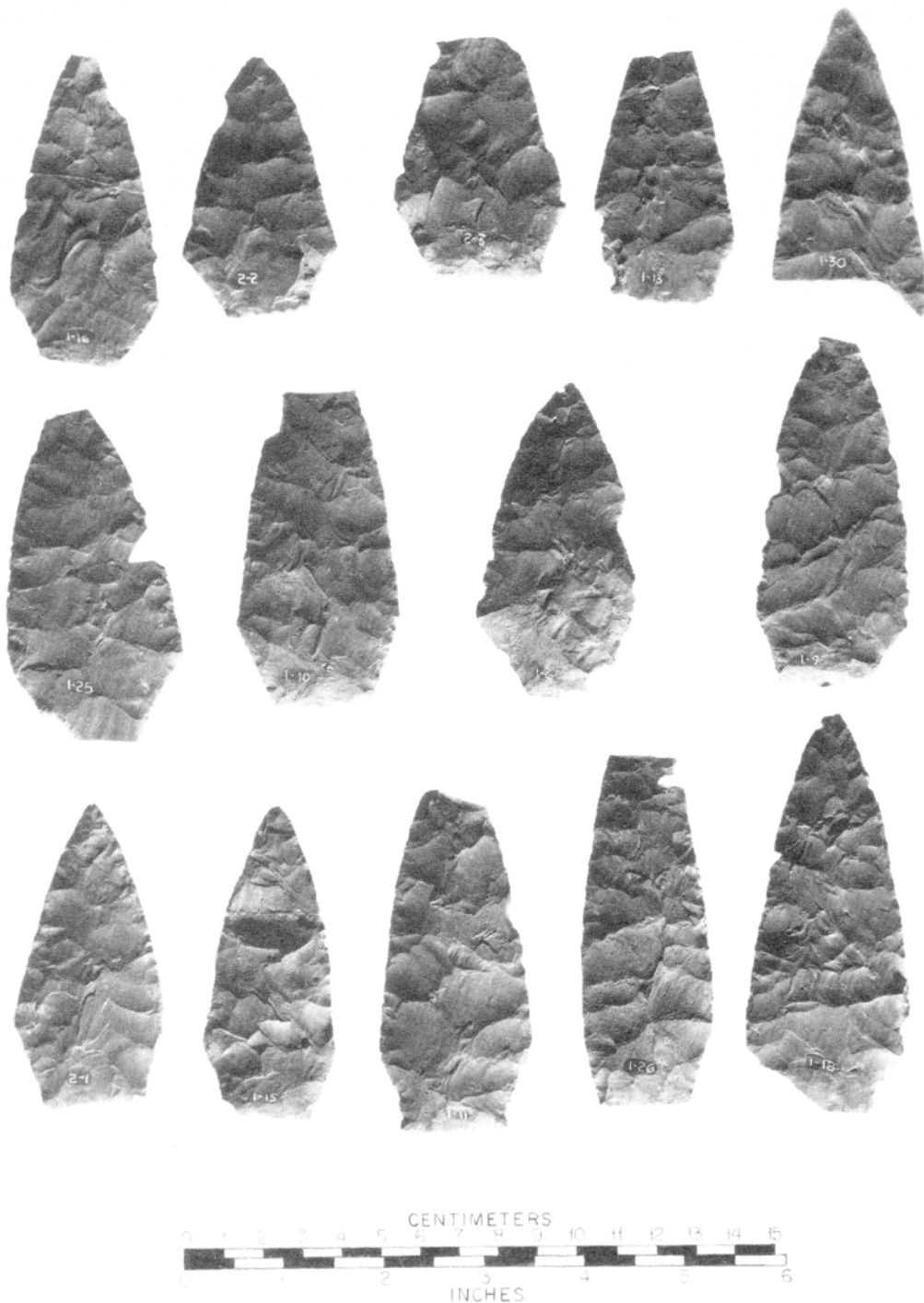


Figure 7. Thin pentagonoid bifaces from the Robert Smith Site. All of gray, brown-mottled eastern New York Onondaga chert, except last specimen in top row, to right, which appears to be of lustrous brown, blue-gray, and reddish-brown handed western New York Onondaga chert.

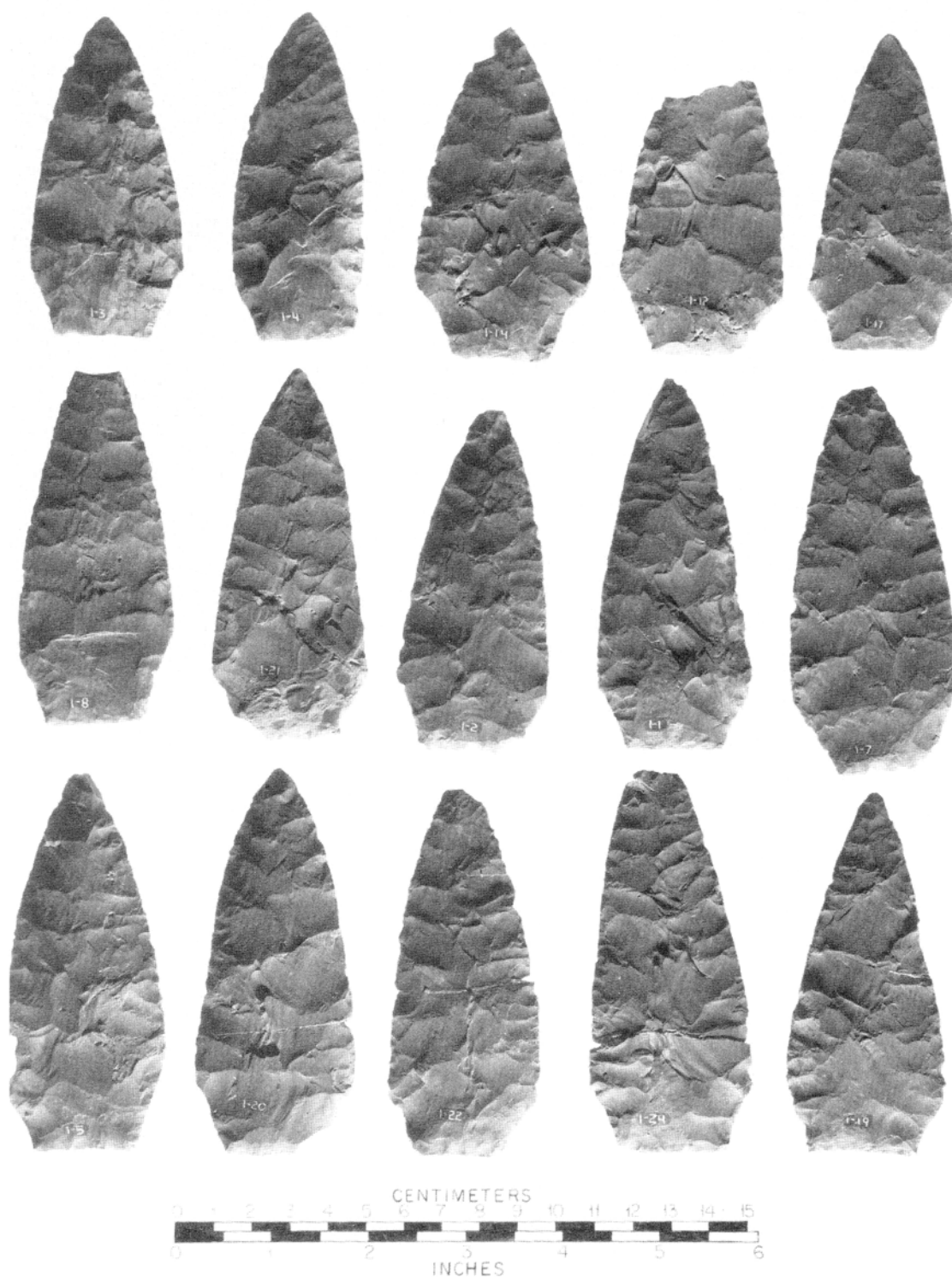


Figure 8. Thin pentagonoid bifaces from the Robert Smith Site. All of gray, brown-mottled eastern New York Onondaga chert.

the phase. Generally those knives are not as thin and well-manufactured as the Smith site bifaces. Nevertheless, equally fine specimens have been found on a number of Frost Island habitation sites. In some respects, the manufacturing technique used to produce the Smith bifaces is similar to that used to produce so-called Meadowood cache blades, but the two blade types are dissimilar in both size and shape. A highly controlled soft-hammer technique followed by marginal retouch using pressure-flaking was employed in order to produce such delicate and symmetrical bifaces. In fact, the Smith site blades are so similar as to suggest that they are all the work of one master craftsman.

It also appears likely that all the blades were tightly clustered before disturbance, perhaps in a single pile with tips aligned in the same direction. They may have been placed on the ground surface, or in a shallow depression scraped into the subsoil. This leads to the functional inference that the blades constituted a "cache." A cache could serve either a utilitarian purpose or a ceremonial one. Two possible utilitarian functions come to mind. First, the blades were placed in temporary storage until needed as knives, presumably for meat-cutting. Second, they were preforms, stored until the time they were needed for conversion into projectile points. It is difficult to test such propositions by experimentation without breaking or damaging the edges of the blades or completing the reductive process by making them into Susquehanna Broad points. Intuitively, at least, they are probably too fragile for use as either points or knives. Also, microscopic examination of most whole and some fragmentary blades did not produce any convincing evidence of edge-wear.

A ceremonial function seems strongly indicated by five considerations:

- 1) the bifaces are too delicate for use as knives or points,
- 2) they lack signs of edge-wear,
- 3) they are more finely made than most Susquehanna tradition bifaces,
- 4) as far as can be determined, the cache was an isolated phenomenon, not associated with a habitation or workshop site, and
- 5) it was emplaced next to a swale or spring in a remote upland setting.

There are few comparable occurrences in the Northeastern U.S. archaeological literature. Caches of various kinds have been reported for prehistoric manifestations from the Late Archaic through the Middle Woodland stages (Ritchie 1965:152-154; Witthoft 1953; Prufer, et al. 1984). One example is the cache of Perkiomen Broad points found with a

cremation burial at the Piffard site, western New York (Ritchie 1965:152-154). Witthoft (1953) stated that no caches of blanks or preforms were known to have been associated with the Susquehanna Broad points and related forms. However, one such feature was present in the Frost Island level at the Camelot No. 2 site in the Upper Susquehanna Valley; it consisted chiefly of large, relatively thick, oval preforms but also included some thin, well-fashioned bifaces. Most of these items displayed extensive fire-damage interpreted as ritual "killing" (Funk, et al. 1987). There was no evidence of an associated burial.

It is possible that the Smith site bifaces were offerings associated with a burial feature destroyed during the landscaping operations. However, the hypothesis offered here is that the cache bore some conceptual relationship with the swale, perhaps intended as an offering to the supernatural beings who were believed to control the spring.

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A Unique Decorated Bone Artifact from Southeastern New York

Stuart J. Fiedel. Brennan-Lower Hudson Chapter

An incised bone artifact from the Hermit's Hut Rockshelter in Putnam Count-N, is believed to be Late Woodland in origin. Associated artifacts and stylistic comparisons suggest an Owasco connection, but an Archaic origin cannot be excluded because of other components on the site.

The Hermit's Hut Rockshelter is located in the southeastern corner of Putnam County, about 25 mi (41.5 km) north of Long Island Sound and 18 mi (29.9 km) east of the Hudson River. It is situated on a fairly steep slope near the former course of the Croton River. Excavation of the rockshelter was undertaken when extensive disturbance by recent visitors was reported to the author. Unfortunately, the site lacked clearly defined natural strata and had been disturbed by humans and rodents. Nevertheless, a good sample of lithic artifacts, potsherds, and well preserved bones and shells was recovered. Analysis of this material is still in progress, but some preliminary observations can be reported. Projectile point types represented include Vosburg, Brewerton, Eared-Notched, Sylvan Stemmed, Susquehanna Broad (1 basal fragment) and Levanna. Several ceramic types are present, including plain, cord-marked, dentate-stamped, and fabric-impressed wares, as well as a very thin-walled ware with incised rim decoration, that resembles such Late Woodland types as Chance Incised and Bowman's Brook Incised. Faunal remains include bones of deer, birds, and small mammals, bits of turtle carapace, and valves of mussel, quahog, and scallop. The clams and scallops can only have been obtained from the waters of Long Island Sound; this indicates a rather wide territorial range for the group that occupied the shelter. The presence of shells may account, in part, for the good preservation of bone.

Among the bones recovered during screening of soil through a 1/4-in mesh was a small polished and incised fragment from a depth exceeding 20 cm (7.9 in). In the laboratory, a similar larger piece was subsequently discovered amidst the bone fragments from another unit from a depth of less than 20 cm below the surface. The two pieces fit together, and the pattern of decoration can be easily discerned.

The reconstructed fragment (Figure 1) is 2.6 cm long with a maximum width of 1.4 cm. Its greatest thickness is about 3.5 mm; it tapers off to 1 mm at the only intact edge. The piece is broken on three sides, so its original size and shape cannot be accurately estimated. One face is black and highly polished;

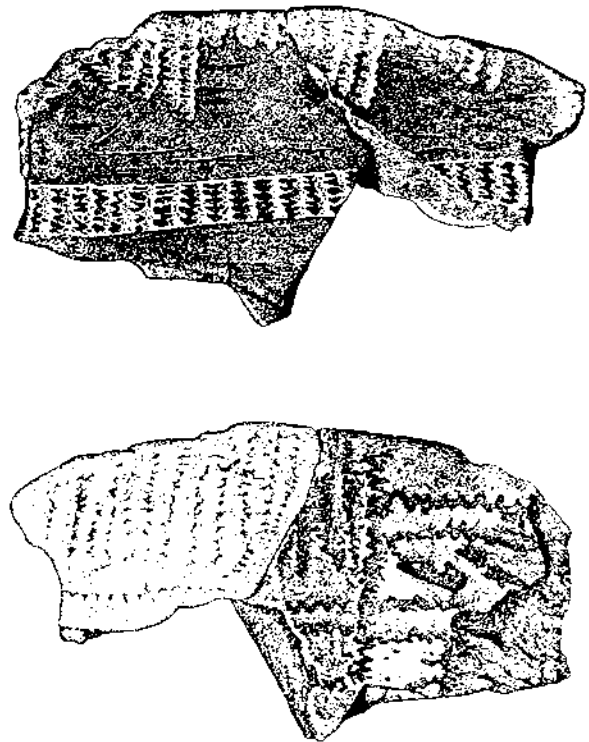
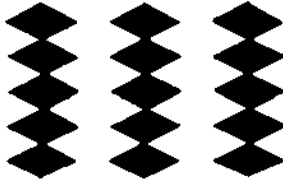


Figure 1. Reconstructed bone fragment from the Hermit's Hut Rockshelter. Length 2.6 cm.

the reverse face is white and weakly polished. The white color extends across the edge onto the margin of the black surface. The coloration matches on both fragments, suggesting that the object was burned before it was broken, and perhaps before it was decorated.

There are two zones of decoration on the black surface: three triangles along the edge, and a band running down the presumed center of the original object. If the band was indeed centrally placed, the original width of the piece was about 1.9 cm. The central band is defined by two parallel incised lines 2 mm apart. The space between them is filled with perpendicular incised bands, spaced at intervals of c.1mm. Each band consists of five connected incisions; between each pair of

bands was thus formed a raised relief pattern comprising 5 linked lozenges:



The same incision technique was used to create the 3 triangles along the edge; these each consist of 6, 9, and more than 5 rows of linked incisions.

The reverse, white side bears a different decorative pattern. About two thirds is covered with very closely spaced rows of incisions; 16 rows are still visible. The remaining one-third displays part of a seemingly rectangular form, defined by two pairs of wavy lines. Traces of lines visible near the broken edge suggest that on the missing half the lines ran perpendicularly to those now visible.

Neither a search through the literature, nor examination of museum collections in Westchester County (MALFA) and Rochester (RMSC), has yielded any closely comparable decorated bone artifacts. A very general similarity can be seen with artifacts illustrated by Fitzhugh (1985: Figs. 16 and 17). A central band and edge triangles appear on an engraved pebble from a Ceramic period (2000-800 B.P.) site in New Brunswick (Fig. 16, P), and on Contact period Beothuk bone pendants (e.g. Fig. 17, A, B, I, J). The incised decoration on ground slate points from the Archaic cemetery at Cow Point, New Brunswick (Sanger 1973: Plate 192) also shows a certain vague resemblance to that of the Hermit's Hut artifact. The very delicate incisions of this piece might be compared to the incised pointillé decoration of some Owasco ceramic pipes (e.g. Ritchie 1965:294, Nos. 1 and 5). The engraved bone and antler objects found by Ritchie at Lamoka Lake (Late

Archaic) and Kipp Island (Middle Woodland) are not similar in detail to the Hermit's Hut artifact.

Obviously, lacking both chronometric dates and reliable stratigraphic context, the age of this artifact can only be surmised. I suspect that it is of Late Woodland origin, because

1) the Owasco pipes seem to offer the closest parallels to the decoration and

2) the majority of the other artifacts found in the rockshelter can be assigned to this period.

It should be emphasized in this regard that sherds of the thin, incised Late Woodland ceramic ware occurred at all depths in most of the excavated units, so the recovery of a piece of incised bone from below 20 cm does not necessarily imply that it belongs to an earlier period. However, traces of several Late and Terminal Archaic occupations were also found in the rockshelter, so an Archaic origin of the decorated bone cannot be excluded.

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Art Form or Artifact Type?

Donald A. Rumrill, Van Epps - Hartley Chapter

Molded lead and pewter artifacts from seventeenth century Mohawk Indian sites can be analyzed in terms of both art form and artifact type. These unique items may be of assistance in dating the Mohawk sequence as well as Oneida, Onondaga, and Seneca sites.

Molded lead and pewter artifacts raise several questions. Most importantly, are they simply art for the sake of art or are they indeed definitive artifacts? When one considers art forms of the Mohawk Indians, the objects that immediately come to mind are their ceramic efforts such as effigy pipes, cooking pots with their incised rim attributes and associated escutcheon or appliquéd decorations and carved bone and antler work of bears, "September Morn" figurines, Birdman, etc. However, even these pursuits did not have narrow temporal limitations. The establishment of trade at Fort Orange (Albany, New York) provided a basis for using lead and pewter artifacts as time markers. Lead musket balls are found on Mohawk village sites from the very early days of the contact historic period many years before Mohawks actually had the possession and use of firearms. The curious interest in lead is evident in the cuts, signs of pounding and tooth marks found on lead musket balls from this period. Soon after guns were made available to the Mohawks and they learned to mold their own bullets, they discovered another use for this interesting metal. Probably because spilled lead assumed the shape of whatever hollow or contour into which it fell, they began to create forms in the soil and cast objects of their own design. With the tools that they had acquired such as axes, knives and flat and round files, they also transformed cold lead into some very interesting forms. They were creating objects that were aesthetically pleasing and generally in the shape of familiar animals.

The question of crucibles and the pouring of molten lead at that early date puzzled me until one day in the spring of 1985, on a c. A.D. 1660s site, when it was my good fortune to find an iron ladle very similar to that used today by plumbers and others. The capacity of this ladle is approximately three pounds of lead. One piece of evidence of relatively early molten lead work is the project of the lead inlay decoration of a polished slate pipe bowl (Figure 1) from the Rumrill-Naylor site c. A.D. 1632-1646. (Rumrill 1985: 13-16). The Oak Hill # 1 Site of the same period produced an identical polished slate



Figure 1. Polished slate pipe bowl from the Rumrill-Naylor Site.

pipe but without the decorative lead inlay.

Figure 2 is a collection of lead "effigies" of which one of the most common and simplest forms created was the turtle. Figure 2a is an example of the crudest forms I have found on Mohawk sites. The shape of a turtle was possibly made in the soil and molten lead poured into it. Ordinarily, the next process would have been to cut, shave and file the casting into a finished likeness of a turtle.

Bars of lead in various sizes and weights (Figure 3) came to the Indians through the fur traders. It is obvious that ladle-size chunks were cut from the bars by chopping with a trade axe. I believe they also flattened out musket balls and other pieces of cold lead and chiseled, filed and cut them into forms such as the turtle, Figure 2b. This probably was one of the earliest "creative mannerisms." Flattening chunks of lead into sheet lead and cutting and shaping such as what I believe to be a bear by the proportions of its head, legs, tail and position of

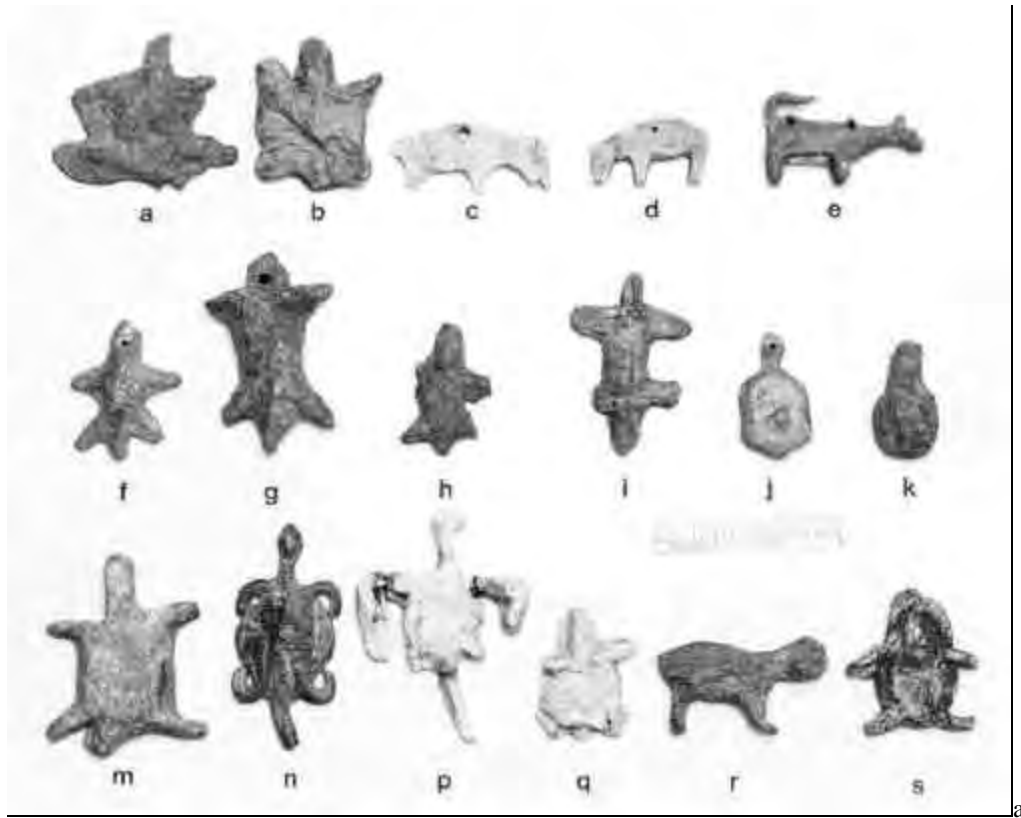


Figure 2. Lead "effigies" from Mohawk sites.

its shoulder hump (Figure 2c), was an early manifestation also. This bear is from the Turtle Clan Bauder Site (Fr. Isaac Jogues' Ossernenon), a contemporary of the Bear Clan Rumrill-Naylor (Jogues' Canagere) and Wolf Clan Oak Hill #1 (Jogues' Tionontoguen) Sites (Rumrill 1985:17). From the Oak Hill #1 Site, there are two of three sheet lead geese (Figure 4) now in the collections of the Rochester Museum and Science Center (RMSC catalog numbers 6105-6107/177). (Photograph courtesy of Dr. James W. Bradley, Survey Director at the Massachusetts Historical Commission).

A second sheet lead bear (Figure 2d) from the collection of the late Lester Wagar, has the appearance of having been fashioned by the very same artist that created Figure 2c, and may well have been, since it is from the Printup site which directly succeeded the Bauder Village Site in the Turtle Clan cluster sequence of main villages (castles) and hamlets c. A.D. 1646-1659. The reverse sides of both of these sheet lead "effigies" reveal laminating qualities which means that a piece of cold lead was probably hammered flat before being fashioned into bears.

The skunk (my interpretation) (Figure 2e) from the Rumrill-Naylor Site, is also very early and appears to have been sculptured rather than cast. This is three-dimensional, and the reasons for my identifying it as a

skunk are first, the proportions of the head, ears, legs, and body are correct and, second, the tail raised over its back in the typical defensive - or "offensive" - posture. The convincing coup de grace by the artist is a symbolic orifice under the tail. Another unusual feature is the double drilling along the back for stringing or suspending.

Figures 2f and 2g are molded or cast lead turtles. The smaller one has had virtually no retouching, denoting a good clean mold to start with, possibly formed in clay. It appears as if repeated use of the same mold was not the case since so far I have not found two identically formed castings. Note that these turtles are also drilled for suspension. Figures 2h and 2i are small and undrilled of the more usual type but Figures 2j and 2k could be called impressionistic or, simply, turtles with their legs and tails retracted.

So far I have been using the term effigy. Is this the correct definition or terminology? In the journal describing his journey through the Mohawk villages in December 1634 and January 1635, the Dutch surgeon Harman Mynderts van den Bogaert elaborated about a chief at the first castle, which he called Onekagonka, as having an "idol". It was a marten head with protruding teeth. Van den Bogaert wrote that, "others

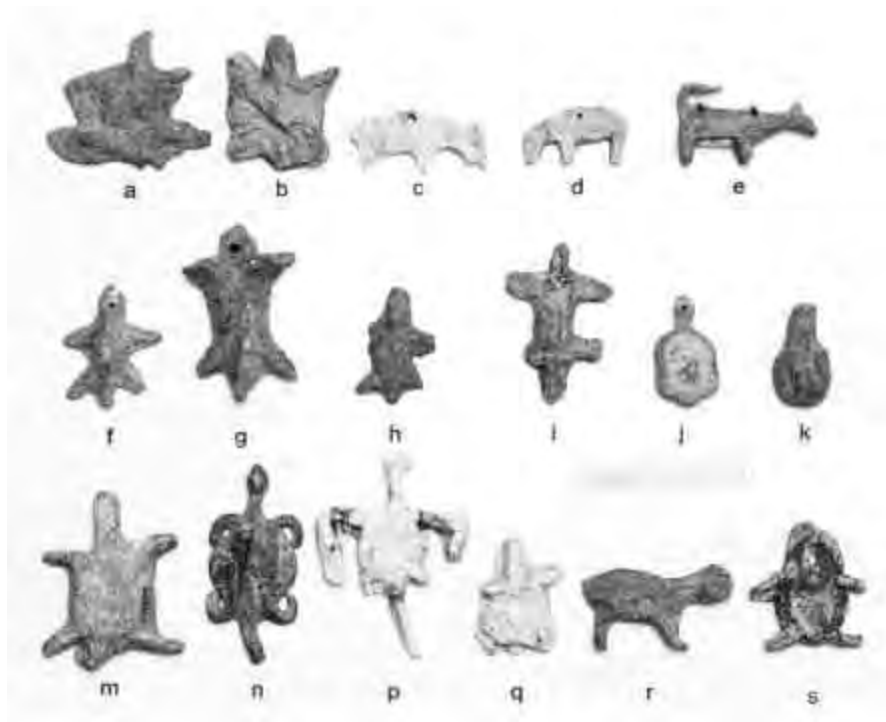


Figure 3. Lead bars.

have a snake, a turtle, a swan, a crane, a pigeon, and such similar objects for their idols or for telling fortunes; they think they will then always have good luck." Van den Bogaert chose to call these objects "idols," which would denote some sort of worship. Another could have used the word "talisman" defined as "a charm; a figure in metal or stone supposed to have magic qualities" or used the strictly North American descriptive word "totem" defined as "an animal or other natural object significant of a clan or tribe - the totem being the symbol of blood kinship or association with an animal."

Figure 2m is very well cast with almost no secondary shaping. It is well rounded and proportioned with the tail slightly to the left. This turtle is drilled transversely through the head instead of straight down, which seems to have been the more prevalent treatment. Figure 2n has the mark of a master craftsman. The body is rounded, the legs swept in graceful curves, and the head has definition from the neck. Figure 2p is unique since it has all of the appearances of being a sea tortoise with a hammer-shaped head and long, trailing flippers. One finds marine shell such as whelk, marginella, and quahog on most seventeenth century Mohawk Indian sites so we shouldn't be too surprised to find images representing marine animals. This is from the Janie Site as is the turtle, Figure 2q.

For a change of pace from turtles, Figure 2r is one of my favorites. I believe this to also be a bear by the body shape and



Figure 4. Lead geese from the Oak Hill #I Site. Photograph courtesy James W. Bradley.

proportions except that this one has a round humanistic face such as one would expect to find on native-made ceramic pipes and pottery castellations; in effect, it is a true effigy.

Figure 5 is a collection of pewter "effigies," the description of which will be divided into three parts.



Figure 5. Pewter "effigies" from Mohawk sites.

First is a nicely cast pewter turtle (Figure 5a) from a Bear Clan village site. There is a casting sprue still attached to the bottom of this image as if it were cast in a two-piece closed mold. Also, though unfortunately broken, is a so-called Thunderbird (Figure 5b) with which one usually associates cultures of western United States. This is from a Turtle Clan village site.

Second are what may be truly called effigies since they were originally attached to pewter pipes. Figures on pipes have been traditionally described as effigies when referring to decorated native-made ceramic or stone smoking devices. The figures or ornaments that follow which seem to fit this criterion will be referenced in the same time-honored manner. Figure 6 is an illustration of a pewter pipe from the Mitchell site, a Mohawk castle of c. A.D. 1646-1659. The ownership of this rare artifact is no longer known to the author. Because of its configuration, it is possibly of European manufacture. Note particularly the raised platform heel similar to kaolin pipes of the same period. Conversely, Figure 7a is a pewter pipe of probable colonial or Indian manufacture. (I am inclined toward the latter.) Though barely visible in the photograph, it does have horizontal and vertical incising on the bowl similar to Mohawk ceramic attributes and the bowl-to-stem angle is quite correct. The stem, of course, was straight when it was removed from its mold.

Dr. Jan M. Baart, the Head of the Archaeological Division at the Amsterdam (the Netherlands) Historical Museum reports that the only pewter pipes excavated in the Netherlands "have been very much the shape of the original clay pipes but of a smaller size ...and we believe they were intended as toys" (Baart personal communication: 1987: brief nr. 1034). Dr. Baart also states that "he has no knowledge of cast lead effigies being produced locally (the Netherlands) and has not located any of these objects in excavations so far." This, of course,

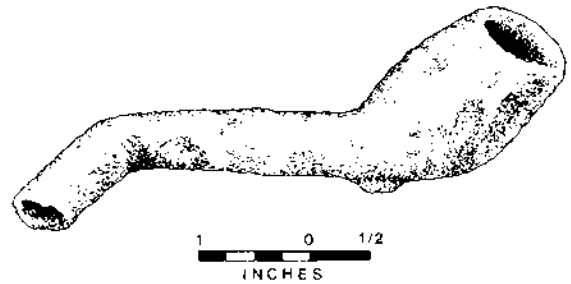


Figure 6. Pewter pipe from the Mitchell Site.

raises a myriad of questions. Where, for instance, was the production center(s) for this specialized endeavor? I would have to theorize that both the Dutch and the Indians were engaged in casting lead and pewter pipes, effigies, ornaments and other artistic creations. It also makes one wonder what historic archaeological treasures were melted down - spoons, beakers, dishes, porringers, cups, contemporarily dated bale seals?

One must also consider that pewter pipes had to have been not only comparatively heavy but became very hot during the smoking process. This may account for their relative scarcity on Mohawk and other Iroquois sites. Figure 8 is an illustration of a pewter pipe with an effigy of a so-called Birdman showing the position of the figure on the bowl. Referring back to an earlier part of this discourse, there are carved bone Birdmen that appear to have human effigy form with the round face found on native-made ceramics but also suggesting a bird-like tail in the posterior region. Figure 5c is a pewter Birdman and it was found on the very same Bear Clan village site as the similar Mohawk carved bone Birdman. It has definitely been cast in the Indian fashion, again referring to the round face effigy form.

Figure 7b is a pewter pipe bowl that is rather bulky and crude. The bowl shape is reminiscent of some native-made Iroquois square-rim trumpet-pipe bowls. The pipe stems (Figures 7c, 7d, and 7e) do not have consistent bore diameters as do kaolin pipe stems of the time, measuring from 7/64" to as great as 21/64".

Other pewter pipe ornaments or effigies are two otters (Figures 5d and 5e); a heron (or crane as van den Bogaert mentioned) unfortunately minus its head (Figure 5f); a hawk (Figure 5g); and an eagle (Figure 5h). After casting or perhaps in the mold, this object has been made to show wing and tail formation details.

The third pewter category includes religious objects. Items pictured in Figures 9a, 9b, 9c are from the Printup Site which appears to have been occupied c. A.D. 1646-1659 (Rumrill 1985: 18-21) during which, for the years 1657 and



Figure 7. Pewter pipes of probable Colonial or Indian manufacture.

1658 almost exclusively, Jesuit missionaries were permitted to wander unmolested in the Mohawk Valley. Items pictured in Figures 9d, 9e, and 9f were found on the Horatio Nellis site which aids in possible verification, along with other material including a lead turtle (Figure 2s), of my previous postulation of a double occupation at this location (Rumrill 1985: 25, 35).

The above is a sampling of lead and pewter objects of the seventeenth century Mohawks, and it brings us back to the question - are these to be considered merely art forms or are they a definite and separate artifact type? They are, without a doubt, a wonderful form of art and pleasing to the eye; but are aesthetics the most important aspect of these animal images, pipes, religious articles and effigies? I would say that in many cases they were an art form to those who originally created and possessed them. I do not believe that they were idols in the manner that van den Bogaert described referring to the chief at Onekagonka, nor were they icons, but they do have a good possibility of being either talismen or totems. Ornament is probably the best description for castings mounted on pipe bowls, but not when the object is impressionistic such as the Birdman. Then, I suppose, the Birdman, the bear with the humanistic face, and the Thunderbird must properly be labeled "effigies."

Are they clan symbols? We know that the Mohawk Nation divided their territory into three distinct clan clusters - the turtle, bear, and wolf. However, the lead bears were all found on turtle clan village site locations and of the fifteen molded turtles I have, only three were found on turtle clan village site locations. Other representations are not Mohawk clan symbols at all, and some are not even a clan symbol within the Iroquois Confederacy. In short, they are an original art form used as both ornaments and talismen but also, in rare cases, as true effigies.

The most significant question now becomes - are these objects an artifact type? Do they fit into a particular span of

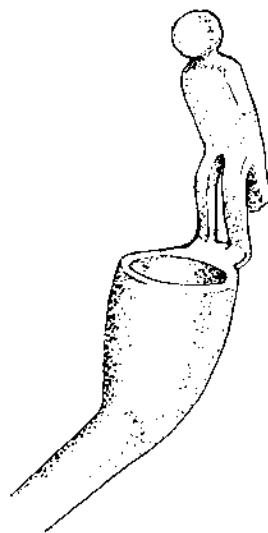


Figure 8. Pewter pipe with "Birdman" effigy.



Figure 9. Religious objects from Mohawk sites.

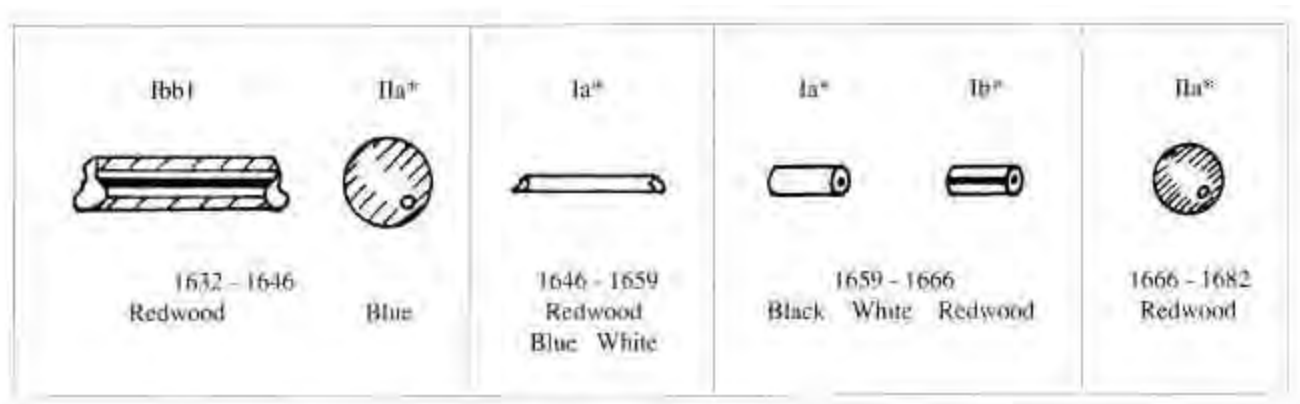


Figure 10. Applicable seventeenth century glass trade beads.

time of cultural change or pattern? Are they unique? MacNeish (1978: 68) defines chronology in this manner: "Although the interdisciplinary studies may give fine chronometric and temporal dimensions to the chronology, the basic description of the chronology must be done in the terms of the artifact sequence. This means that the artifact and/or its attributes must be considered potential time markers."

Molded lead and pewter effigies, ornaments, totems, religious articles, talismen and pipes represent a relatively short span of time of Mohawk habitation in the Mohawk Valley in the seventeenth century. The three-dimensional sculptured skunk, one sheet lead bear and the sheet lead geese are from the Rumrill-Naylor, Bauder and Oak Hill #1 Sites, respectively, with approximate terminal dates of c. A.D. 1646. However, to my knowledge there have been no cast forms recovered from these or four other contemporary habitation areas. No preceding sites on the south side of the Mohawk River including Cromwell (Turtle Clan), Yates (Bear Clan) and Failing (Wolf Clan) - probably van den Bogaert's Onekagonka, Canowarode and Tenotoge respectively - all c. A.D. 1620-1635 (Rumrill 1985: 9-11), nor on the north side which had been their habitat in the immediate previous decades, have produced similar artifacts either.

Except for only two objects, all other cast lead and pewter artifacts including pipes came from the Milton Smith, Janie, Horatio Nellis, Printup and Allen Sites dated to c. A.D. 1646-1659, a period of less than fifteen years. This period is distinguished in the Mohawk sequence by a 65-90% ratio of untumbled tubular Kidd type Ia* (Kidd 1970: 54) glass trade beads (see Figure 10 for applicable bead types), brass Jesuit rings of the incised plaque variety (predominately IHS and L Heart) (Wood 1974) and late snaphaunce gunlocks. (Puype 1985) (Rumrill 1986).

Excavations on sites dating A.D. 1659-1666, at which point the French expedition from Canada led by the Marquis de Tracy destroyed the Mohawk villages on the south side of the Mohawk River resulting in subsequent predominately north shore main village relocations, have produced just one of these molded objects, a small piece of

pewter pipe stem. This was from the Freeman site which was the first village site to be known as Kaghnuwage (Caughnawaga) and was originally occupied at least as early as A.D. 1659. This brief span of time is distinguished by a ratio of 70% short tumbled tubular Kidd type Ia* (1970:54) and 25% redwood color round, oval and circular Kidd type IIa* (1970: 56) glass trade beads. There is an absolute absence of religious articles for this period of time in the Mohawk sequence.

Another exception is the eagle I found on a post A.D. 1666 village site that I am considering as an heirloom artifact. Five other immediate post 1666 sites, including Jackson-Everson which had its middens professionally excavated recently, do not appear to have these lead and/or pewter artifacts. These sites are distinguished by a 90% ratio of monochrome redwood color Kidd type IIa* (1970:56) glass trade beads. The Jesuits were once again permitted to carry on their missionary work amongst the Mohawks from A.D. 1667-1680 (approximate), and we do again find religious articles including finger rings, many of them of the stamped-embossed variety (Wood 1974).

Even though possible diagnostic European manufactured artifacts, such as utensils and bale seals, made from lead and pewter were sacrificed for the process of creating effigies, etc., an even more narrow temporal analysis may become possible. If this proposition holds up, it can only mean that there is another set of definitive artifact types with which to more closely date seventeenth century sites, and other associated artifacts and to help to resolve the question of contemporaneous castle and hamlet total numbers, especially as it pertains to the Mohawk sequence. It may, as well, influence demographic parameters.

At present this study is still an exploratory procedure that has enough merit to continue researching among seventeenth century Mohawk sites and will perhaps be enlightened in the future by similar studies of other Iroquois collections. A preliminary, cursory scan of Oneida, Onondaga and Seneca site reports seems to indicate similar dates and spatial tendencies.

Credits

Photographs (except Figure 4) by Lawrence Van Alstyne.
Illustrations by Mary C. Rumrill.

Personal Communications

- Bradley, James W.
11/11/87 Letter and photograph of geese.
- Baart, Jan M.
3/3/87 Letter and information on lead and pewter castings and pipes in the Netherlands.
- Hayes, Charles F. III
1/4/88 Telephone conversation concerning lead geese. (Rochester Museum and Science Center collection.)

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NYSAA Notes

In Memoriam

Dolores A. Lalock (1915-1987)

The archaeological community is saddened by the untimely passing of Dolores A. Lalock. Dolores succumbed to complications from surgery in October 1987.

Dolores' entry into the discipline of anthropology occurred relatively late in her life. Fulfilling her intense interest to pursue anthropology had to wait until the obligations of raising a family and maintaining a career in business were completed. Dolores credited Margaret Mead for planting the seed to pursue anthropology professionally when Dolores heard her speak many years earlier.

In 1968, at the age of 53, Dolores completed her Bachelor of Science degree at the State University of New York at Buffalo, majoring in Business Accounting. Her undergraduate experience placed her in contact with the late Dr. Marian White. It was Marian White who provided Dolores with her first encounter with archaeological excavation - conducted at the Eaton Site, West Seneca, New York. It was this experience that began Dolores' interest in ceramics - an interest that Dolores never gave up.

That same year, she joined the Frederick M. Houghton Chapter of the New York State Archaeological Association. She was an active member and participant of the Chapter, acting at various times as President, Vice President, and Treasurer.

Dolores' travels took her to Nigeria and involved her with the Michigan State University Project *Diffusion of Innovation in Rural Societies*. She also traveled to Fiji, Samoa, Israel, Meso- America, South America, and most recently China. Her excursion to excavate at Tel El Ifshar in Israel provided the data for her Masters Degree. Granted by the State University of New York at Buffalo in 1982, the Masters was entitled, "The Pottery from Tel El Ifshar Locus 205/216: A Byzantine Trash Pit.

Throughout her life, Dolores was intensely interested in bettering her understanding of people and cultures of the world. In her graduate statement she wrote about herself, "All of the trips I have taken outside of this country were undertaken with the idea that they should be educational as well as recreational. It has always been my practice to learn as much as possible about the places I was to visit beforehand."



In recent years Dolores turned her attention to the problems involved with understanding historic ceramics. She was a dedicated volunteer and integral part of the archaeological research program at Old Fort Niagara, Youngstown, New York.

Dolores will be sadly missed by those of us who knew her as a friend, a colleague, and a researcher. Her devotion to the study of anthropology and her contributions to understanding the intricacies of ceramics should be applauded. Let us strive to continue to carry Dolores's untiring energy and love for archaeology with each of us.

Eleazor D. Hunt, President
F.M. Houghton Chapter, NYSAA

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Louis A. Brennan (1960)

William A. Ritchie (1962)

Donald M. Lenig (1963)

Thomas Grassman O.M.F. (1970)

Paul L. Weinman (1971)

Robert E. Funk (1977)

Peter P. Pratt (1980)

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