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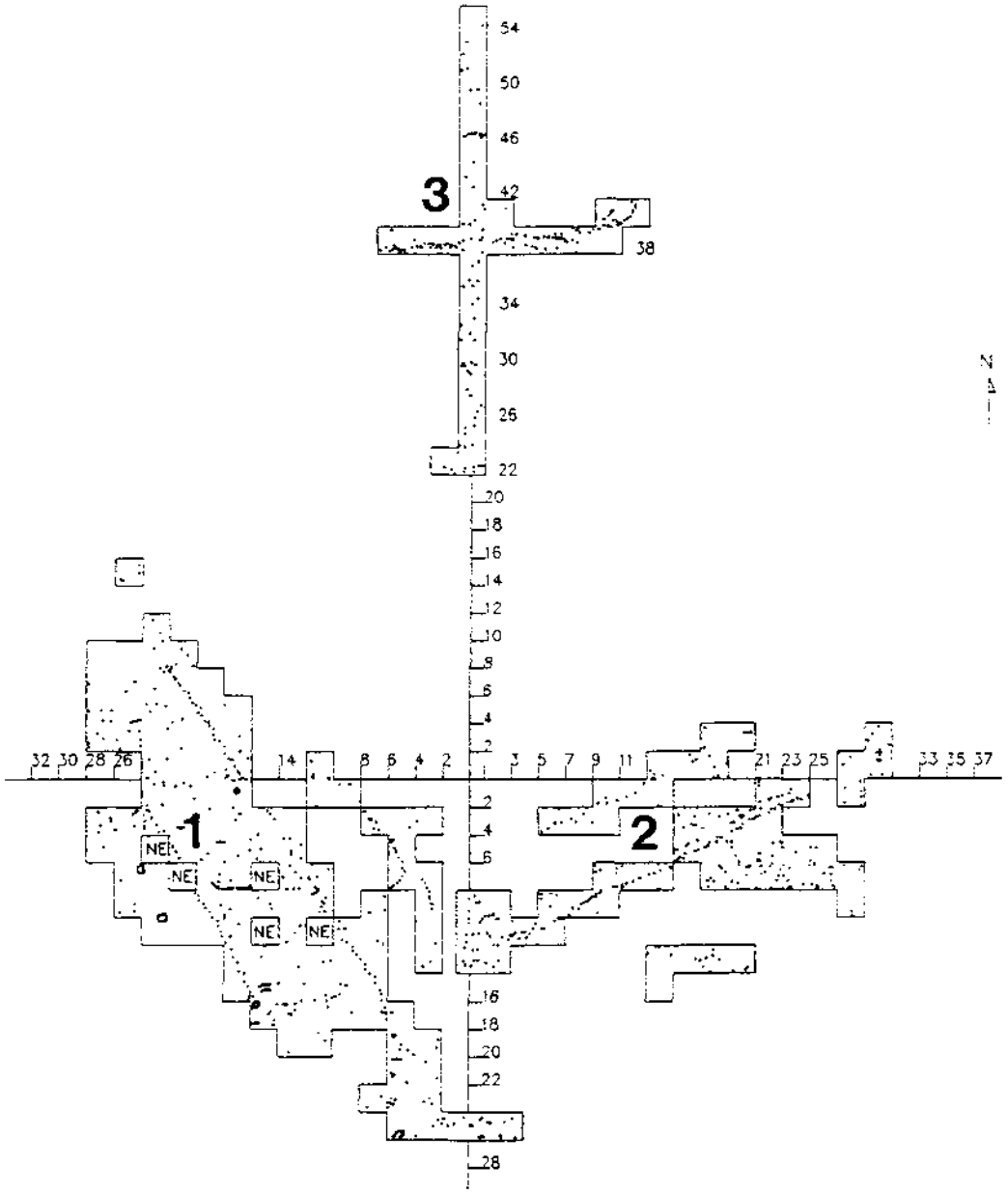

Eaton Site Post Mold Distribution

Number 107 Spring 1994

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Publications Chairman
William E. Engelbrecht
Department of Anthropology, Buffalo State College
1300 Elmwood Avenue Buffalo, New York 14222

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The Eaton Site: Preliminary Analysis of the Iroquoian Component

William Engelbrecht, Houghton Chapter, Buffalo State College

Twelve seasons of work by archaeological field schools have resulted in the partial excavation of an Iroquoian village at the Eaton Site, located in western New York. One longhouse has been almost totally excavated, and two others have been partially excavated. This paper reviews what is currently known about the site and presents information on the quantity and type of some of the artifacts recovered. It also looks at the distribution of some material relative to the excavated longhouses.

Introduction and History of Investigation

The Eaton Site is located in West Seneca, New York, on a knoll which drops off 15-20 ft on the south and west to the flood plain of Cazenovia Creek. The site has been known since the last century and both Houghton (1909:310-311) and Parker (1922:551) refer to it. The New York State Division for Historic Preservation site number is A029-25-0003. Other designations are Buf 2-4 and UB 221.

The major component is an Iroquoian village believed to date to the mid-sixteenth century. No sixteenth-century European trade material has been identified from this occupation. The Iroquoian inhabitants of the site are generally assumed to have been Erie, although there is the possibility that they were Akhrakvaeronon (Kahkwa) or even Wenro (Engelbrecht 1991). Late Archaic and Early Woodland projectile points as well as nineteenth-century material have also been recovered from the site.

At the turn of the century, the Eaton and Schaub farms included portions of the site, which was plowed well into this century. Part of the northern portion of the site was destroyed by sand and gravel operations in 1967 and by the subsequent construction of a nearby business. In the early 1970s, the eastern portion was lost to the construction of a health-care facility.

The Houghton Chapter of the New York State Archaeological Association began excavating the site in the 1960s with the encouragement of Professor Marian E. White. Erie Community College and the State University of New York at Buffalo also carried out some small-scale excavations on the site in the early 1970s, under the direction of Karen Noonan and Neal Trubowitz, respectively. At the 1979 annual meeting of the NYSAA in Rochester, Chapter members presented a series of papers on the site, including one by Carolyn Pierce on the history of investigations at the site. I have drawn on the latter (Pierce 1979) for some of the historical background presented in this paper.

In 1975, I directed an archaeological field school on the site for Buffalo State College, the first of twelve such field schools to date. Six of these field schools (1981-1984, 1992, 1993) were run as joint SUNY Buffalo and Buffalo State College classes. Field-school participants, in conjunction with Houghton Chapter members, have excavated a total of 194 2.00 m x 2.00 m units since 1975. After each field season, a report has been issued describing the units excavated and tabulating material recovered. These reports have had a limited distribution. Until the fall of 1993, little analysis had been performed on the growing body of data from these excavations, although Kathleen Allen (1988) utilized rim sherds recovered from Eaton in her doctoral dissertation.

During the fall term of 1993, I conducted a senior seminar in archaeology, the latter half of which was devoted to working with Eaton material. This article incorporates many of the results of the student projects from this seminar. The students and their projects were as follows:

Tyler Barnett	Madison Points
Juana Colon	Identification of Shell-Tempered Ceramics
Penny Jakubowski	Non-Iroquoian Projectile Points
Martin Mauro	Scrapers
Neil O'Donnell	Site Map
Dana Stewart	Organization of Written Documentation
Justin Sweet	Lithic Sourcing
Charlotte Townsend	Population Estimate
Michael Waite	Computerization
Tracy Wright	Ceramic Style

Each student presented a brief summary of their project at the December 1993 meeting of the Houghton Chapter at the Buffalo Museum of Science.

The projects were chosen from a long list of possibilities. The efforts reported here therefore represent only the first step in what I envision as a series of analyses and publications.

Recently, Oscar Bartochowski, a graduate student in the Department of Anthropology at the State University of New

York at Buffalo, examined a sample of debitage from Eaton as part of his doctoral dissertation. Chris Andersen, an archaeologist with the Ministry of Culture and Communications in Ontario, is undertaking the analysis of faunal remains from Eaton as part of his doctoral dissertation for the University of Toronto. Other students at both SUNY/Buffalo and Buffalo State College are currently working with portions of the collection. Professor Donald Mitchell of the Anthropology Department at Buffalo State College has established a computerized database for the Eaton material using Paradox for Windows ' and is using data from Eaton in teaching statistics to social science majors. During the spring term of 1994, many of these students worked with metric data recorded by Tyler Barnett on the Madison points from the site.

Site Size, Population Estimate, and Current Condition

In 1954, before portions of the site were destroyed by construction, Charles Gillette and Marian White made a site map. Based on this map, White (1961: 60) stated, "The total area of the knoll which is suitable for occupation is approximately 2.2 acres." White (1961:60) also stated that the limits of occupation were unknown. Subsequent destruction of eastern and northern portions of the site before systematic investigations occurred renders an exact determination of the site's size problematic. At present, the figure of 2.2 acres is the best estimate available.

Snow and Starna (1989:143) argued that for most periods, the density of Iroquoians within a village would have been 1 person for every 20 meters squared. Utilizing this figure along with White's site-size estimate of 2.2 acres (approximately 8,903 meters squared) gives a population estimate of 445 for the Iroquoian village at Eaton.

During the spring term of 1992, Neil O'Donnell received a small grant from the Division of Natural and Social Sciences at Buffalo State to construct a composite map of all known excavation units, including the 5 ft x 5 ft units excavated by the Houghton Chapter in the 1960s and early 1970s. This map incorporates a number of the physical changes that occurred at the site since Marian White and Charles Gillette made the original site map in June of 1954. This map, which is based on the original 1954 map, appears in Figure 1.

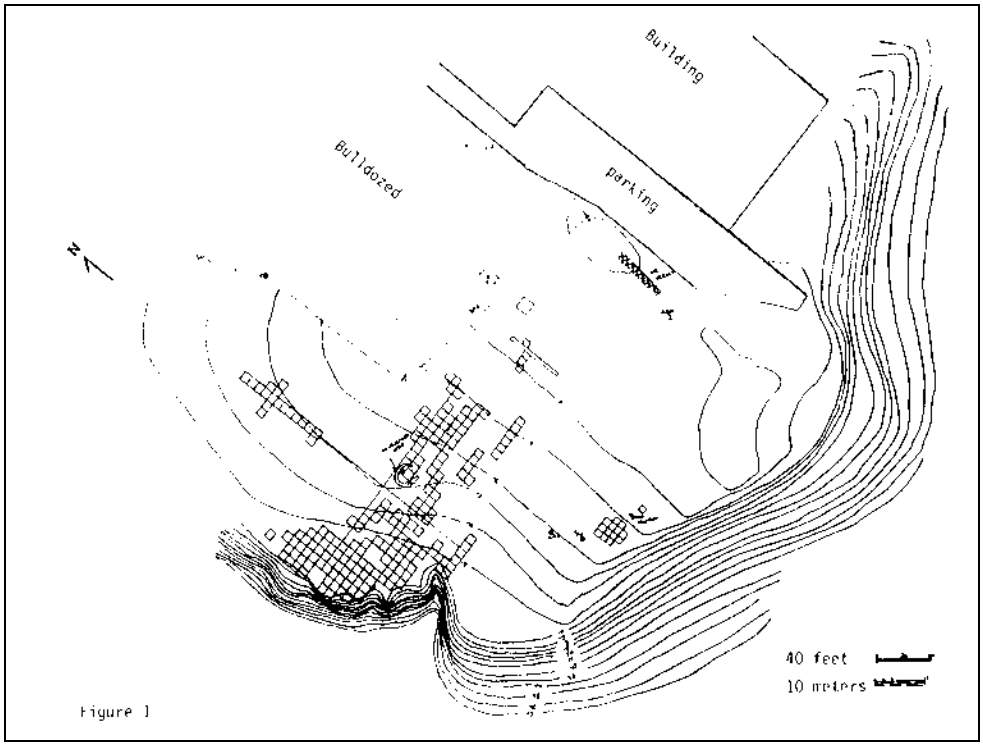

Figure 1. Eaton Site. West Seneca, New York.

Site Structure

In 1967, Gordon Schmahl, a Houghton Chapter member and technical specialist in the Anthropology Department, SUNY/Buffalo, visited the site while the northern portion was being destroyed and was able to record the location of post molds exposed by the bulldozer. Some defined a portion of a ton-house, and one line of posts approximately 18 ft in length may represent a palisade (Figure 1). While the latter line of posts is too short for certain identification as to function, a palisade is suggested by the location and configuration of the post molds.

Excavations by field schools along the steep western bank have not confirmed the existence of a palisade, although a few large posts along the very edge of the western bank are suggestive. It is not known how much of the western bank has been lost in the past through a combination of both erosion and careless digging by pothunters. At present, the remaining northern edge of the knoll is a gentle slope covered in a thick secondary growth dominated by hawthorn. A future goal is the continued excavation of a trench 2 m wide to the north in order to determine the northern limits of occupation and to further investigate the possible existence of a palisade.

Figure 2 illustrates the distribution of post molds recorded by field schools from 1975 to the present. Portions of three longhouses are visible, the most complete being located in the southwestern excavated area. A second structure is suggested by a clear line of posts in the southeastern area, with a fainter second line of posts paralleling this about 6 m to the north. The third structure is visible in the northern area, the south wall having been exposed for a distance of 20 m. Approximately 7.5 m to the north, a clear line of posts running parallel to this was exposed in the northern trench.

During the seminar, Neil O'Donnell redrew the post molds representing the one long-house which was almost totally exposed and rechecked the original field notes in the process. Also included on this map were all observed features, including pits, hearths, burials, and a portion of a wall trench. This map appears as Figure 3. A small gully cutting into the extreme southwestern portion of the structure and some scattered large trees prevent the total excavation of the structure.

The longhouse appears to have been between 34 and 35 m in length and 7 to 8 m in width. A shallow, wall trench was observed along a 14-m section of the west wall. It appeared as a linear stain just beneath the plowzone. When the stain was scraped down, post molds appeared within a few centimeters. It is possible that the shallow nature of the wall trench prevented its detection elsewhere. Shallow wall trenches have been observed along portions of the walls of the two other longhouses. These wall trenches bear a resemblance to plow scars, but they are wider and the soil is generally not as dark. Plow scars at Eaton generally run in a north-south direction, having the same orientation as the grid.

Lithics

Over the years, a large quantity and variety of stone tools were placed in boxes marked "scrapers." These included utilized flakes, side-scrapers, and end-scrapers. After examining these specimens, Martin Mauro determined that 34 fit the definition of a "classic" end-scraper. These tools were made from thick flakes and were unifacially worked with steep retouch on one end. The ventral side of the flake was smooth with a bulb of percussion generally visible. It is assumed that these tools were used in scraping hides, although no edgewear analysis was conducted on this sample.

Tyler Barnett recorded measurements of length, width, thickness, and weight on 247 Madison points. Median values were as follows:

Length	27.2	mm
Width	13.9	mm
Thickness	4.7	mm
Weight	1.53	g

Some 25% of the sample (62 points) exhibited stacking: that is, the points were thick and could not be further thinned. There were 8 examples (3.2% of the total) of unifacially worked points. None of these 8 points was perfectly straight. Base shapes within the total sample were as follows:

Concave	118	(47.7%)
Straight	103	(41.7%)
Convex	14	(5.6%)

Justin Sweet examined 259 Madison points with the aid of a microscope in an effort to determine the source of the raw material. He considered color, patina, luster, and texture, comparing points against lithic samp les which Jack Holland provided to the Anthropology Department at Buffalo State College. He also consulted Eley and von Bitter (1989). His conclusions were as follows:

Clarence Member,		
Onondaga Formation	240	93.0%
Bois Blanc chert,		
Bois Blanc Formation	12	4.5%
Morehouse Member,		
Onondaga Formation (?)	3	1.0%
Unidentified	4	1.5%

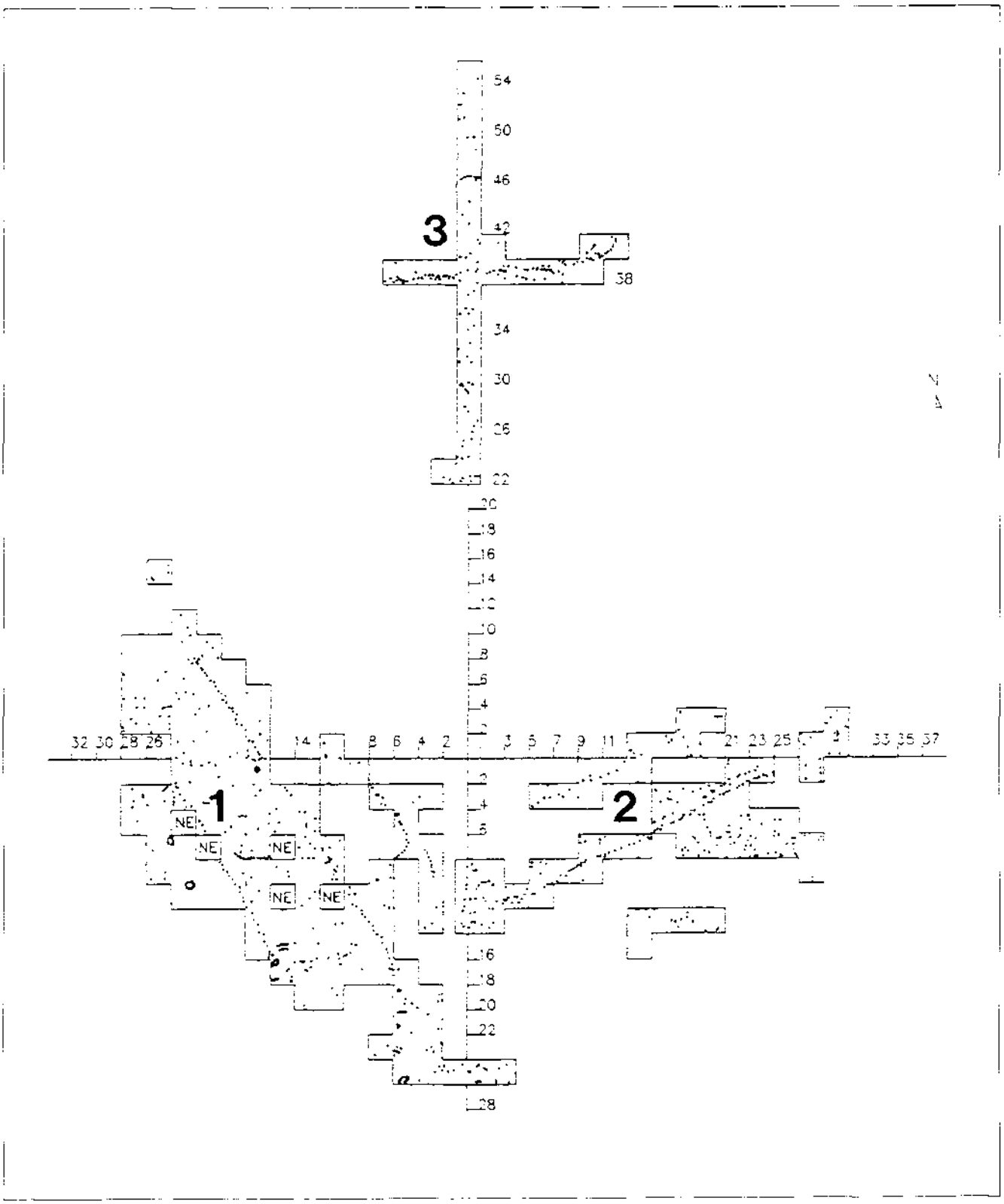

Figure 2. Post mold distribution, Eaton Site.

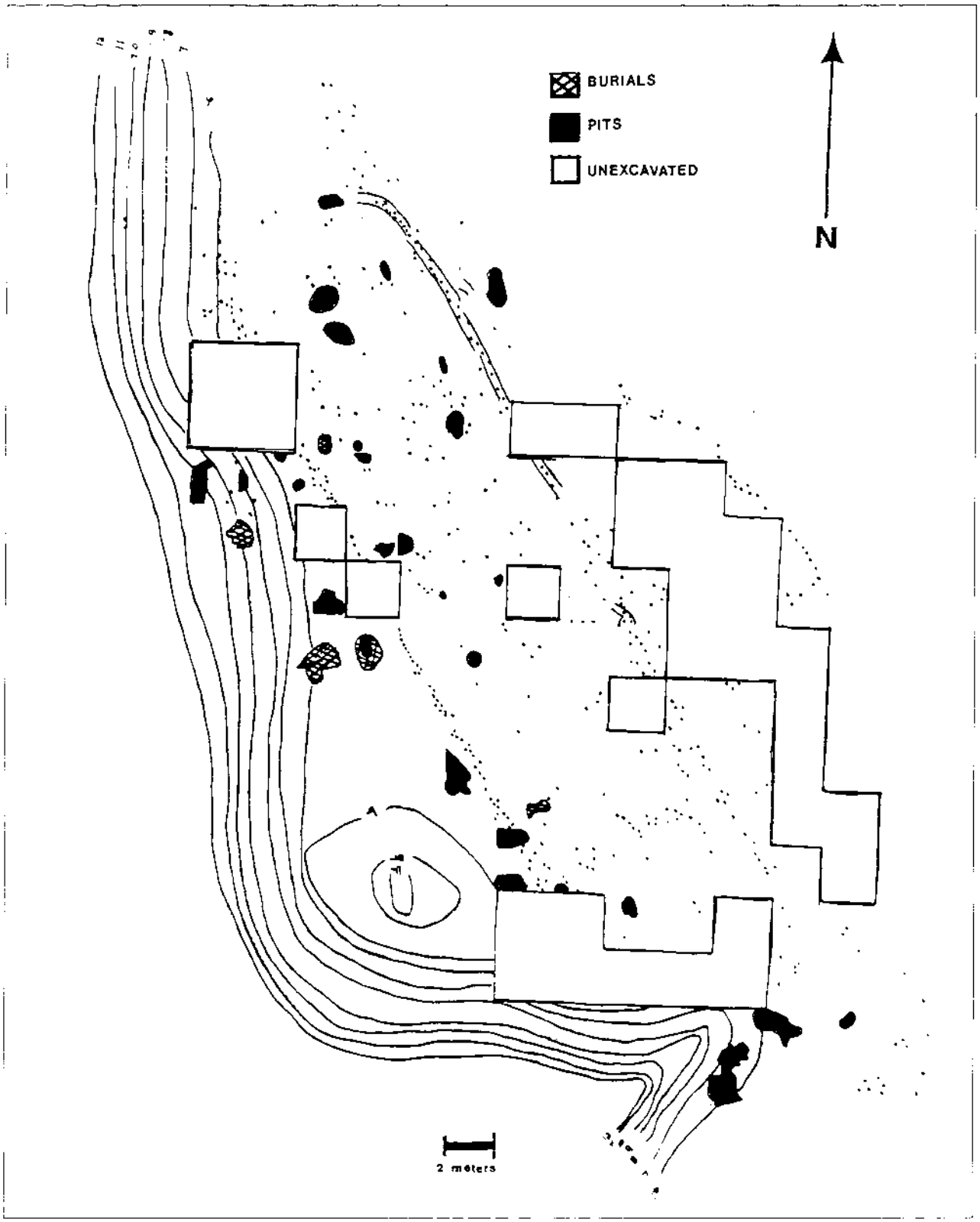

Figure 3. Longhouse pattern, Eaton Site.

Jack Holland, research associate at the Buffalo Museum of Science, examined some of the points identified as Bois Blanc chert and was of the opinion that the material was of the Edgecliff Member, Onondaga formation. Petrographic examination of both Bois Blanc chert and chert from the Morehouse Member, Onondaga Formation might be undertaken along with visually, similar debitage from Eaton as the next step in the identification process.

It should be noted that many more complete or nearly complete Madison points (259) were recovered than endscrapers (34). This is a ratio of end-scrapers to points of 1:7.6. At present, I do not have comparative figures for comparable sites from this time period. The distribution and frequency of other tools which may have served the same function as endscrapers also needs to be examined.

Ceramics

From time to time, I have been asked whether any shell-tempered sherds have been recovered from Eaton. In order to answer that question, Juana Colon examined 6,847 sherds, 24.7% of the total sample of 28,844. The units sampled came from all areas of the site. Thirteen sherds (0.085%) were found to be shell tempered. A small quantity of dilute hydrochloric acid (HCl) was placed on each of these sherds to test for a reaction.

Eleven of the shell-tempered sherds were found near one another and are believed to have come from the same vessel. The remaining two shell-tempered sherds were found nearby and apparently represent two additional vessels. Such small portions of these three vessels are represented that it is not possible to determine if they are stylistically different from other vessels at Eaton.

Tracy Wright attempted to determine whether matrilocal residence at Eaton might be inferred from the study of ceramic style. Since Iroquoian women of the same lineage are commonly assumed to have lived in the same longhouse, this study sought to determine whether ceramics from different longhouses could be differentiated stylistically. If this were demonstrated, it could be argued that these stylistic differences reflect ceramic traditions of different lineages.

Using Brumbach's (1985) study of stylistic variability within a Mohawk village as a model, Wright examined ceramics from units lying within the western, eastern, and northern longhouses. The western longhouse sample was further divided into a northern and a southern sample to serve as a control. If longhouses could be differentiated stylistically, it was expected that the samples from within the same longhouse would be most similar to one another.

The samples were based on all available rim sherds from units excavated within longhouses. These were then grouped into vessels, and an attribute list developed to describe ceramic style. Unfortunately, available samples from the northern and eastern longhouse areas were small. The sample sizes were:

Northern area of the western longhouse	19 vessels
Southern area of the western longhouse	18 vessels
Eastern longhouse	8 vessels
Northern longhouse	5 vessels

Despite the small sample sizes, the analysis was continued as an exploratory study. Brainerd-Robinson Coefficients of Agreement were calculated between samples in order to generate relative indicators of similarity. The results were suggestive but not clear cut. If only lip treatment were considered, the samples from the northern and southern portions of the western longhouse were, in fact, most similar to one another. In general, however, there was a tendency for the greatest similarity to occur between the southern sample of the western longhouse and the eastern longhouse. These two areas are immediately adjacent to one another. The very small sample from the northern longhouse was in general least similar to the other samples. That same sample was also spatially the farthest removed from the other samples. This study therefore hints at possible spatial patterning of ceramic style at Eaton. Tracy Wright is now expanding the study to investigate this possibility.

Distribution of Material

Now that one fairly, complete longhouse and two partial longhouses have been defined, the question arises as to whether material at Eaton is differentially distributed with respect to these past structures. That is, are certain artifacts found in greater abundance inside or outside the longhouses? The vast quantity of artifactual material recovered by field schools at Eaton has been recovered from the plowzone, and it could be argued that this activity has seriously compromised the integrity of artifact locational information. However, several studies (e.g., Trubowitz 1978) suggest that spatial patterning of artifacts may survive repeated plowing, albeit in a somewhat "fuzzier" state.

In order to determine whether potsherds were differentially distributed with respect to longhouses. I placed all excavation units into one of three categories with respect to longhouses: inside, outside, and between. Sherd counts for all available units were then tabulated. The results are as follows:

Location	No. of Units	No. of Sherds	Avg. per Unit
Outside	90	17,069	190
Between	46	5,554	121
Inside	58	6,221	107

While some areas of the site produce more sherds than others regardless of location with respect to past structures, it is apparent that on the average, fewer sherds are found in units excavated within longhouses than in other units. A possible explanation for this patterning is that the remains of broken pottery were removed from the interior of the structures.
A similar exercise was conducted with available counts of flakes from excavation units.

Location	No. of Units	No. of Flakes	Avg. per Unit
Outside	86	151,884	1,766
Between	46	59,664	1,297
Inside	58	83,904	1,447

While the results indicate that units lying inside longhouses have less chipping debris than outside units, the magnitude of the difference is not as dramatic as it is for potsherds. In this regard it should be remembered that Eaton is a multicomponent site, and it is not known how much debitage resulted from earlier occupations. If it is assumed that the distribution of debitage from earlier occupations has not obscured the Iroquoian pattern, the question remains as to why there should be less debitage inside the longhouse. Two possibilities are that (1) cleaning activities removed chipping debris from the interior, or (2) knapping more often occurred outside the structures.

Some years ago, Daniel Caulfield undertook an analysis of debitage for a senior project at Buffalo State. He compared debitage from 18S 8W, located inside a longhouse, to debitage from 2S 11E, located outside. The analysis revealed that a significantly higher percentage of small pressure flakes were recovered from the unit inside the longhouse. While realizing the need to look at a larger sample of units, Caulfield's preliminary hypothesis based on this observation was that heavy chert reduction was taking place outside the longhouse, while more pressure flaking was occurring inside the longhouse. Additional study of the distribution of both core fragments and pressure flakes could be undertaken to clarify past tool making behavior on the site.

I also looked at the distribution of the 34 end-scrapers referred to earlier.

Units	No.	%	Scraper No.	Scraper %
Outside	90	46%	11	32%
Between	46	24%	9	26%
Inside	58	30%	14	4114

In this case, there was a tendency for end-scrapers to be found inside the structures, with 41% of the scrapers being found in the inside units, which constitute only 30% of the units. Only one end-scraper was recovered from the northern units. At present, the meaning of this spatial distribution remains unclear. The distribution of other tool types remains to be determined and will form the focus of a future study.

Conclusion

This paper reports on student research conducted on data from the Eaton Site. It is offered as a preliminary report, with the understanding that as more data are recovered and analyzed, some of the conclusions presented here may need to be revised. It is also anticipated that continuing study of these data will suggest additional hypotheses to be tested, both with existing data and the addition of new data through excavation.

The Eaton Site is a major archaeological resource. While the site is listed on the National Register of Historic Places, continued development of areas around the site render its future uncertain. It is hoped that in some measure the continued recovery and analysis of data from the site will serve not only to increase our understanding of its past inhabitants, but also to focus the attention of the general public on the importance of archaeological resources.

Acknowledgments

To date, 205 students have been enrolled in archaeology field schools which have worked at the Eaton Site. A number of these individuals have gone on to become professional archaeologists. The hard work, dedication, and camaraderie of all these students is gratefully acknowledged. Members of the Houghton Chapter, summer school students from West Seneca schools, Upward Bound high school students, and countless other volunteers have all contributed to the Eaton Site excavations. Over the years, I have been fortunate to work with a number of field assistants, including Tim Barker, Dr. Kim Bartolotta, Bill Bern, John Floyd, Barbara Hays, Nancy Herter, Malinda Hutinett, Hugh Jarvis, Andre Lam, Neil O'Donnell, Dr. Fran Picken, Carolyn Pierce, Dr. Mark Rosenzweig, Dave Sadow, Lisa Spaulding, and Kathy Stark. Dr. Margaret Nelson of the SUNY/Buffalo Anthropology Department served as Associate Director of the SUNY/Buffalo-Buffalo State College field school at Eaton in 1984.

Over the years, many volunteers have shared their time and expertise in the laboratory. Kathryn Guest has spent countless hours attempting to reconstruct ceramic vessels from the site. Jack Holland has regularly visited the excavations over the years and given lectures, demonstrations, and advice on stone-tool manufacture and analysis. He has also donated a comparative lithic collection to the Anthropology Department at Buffalo State College.

The excavations at Eaton were carried out as part of the instructional program at Buffalo State College and SUNY/Buffalo, and I gratefully acknowledge the support of these institutions. Finally, I wish to thank Grossman's Lumber and John Nikiel of Buffalo for permitting excavation on their properties, the former Eaton and Schaub farms.

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After Point Peninsula:
Pickering vs. Owasco in the St. Lawrence Valley

The 1992 Excavations at the Mulcaster Island East Site (36H 14), St. Lawrence Islands National Park

Cesare D'Annibale and Brian D. Ross, Parks Canada. Ontario Region

It is generally accepted that both Glen Meyer and Pickering traditions in southwestern Ontario developed out of such local Middle Woodland cultures as the Point Peninsula. Some researchers, though, now argue that the Glen Meyer/Pickering dichotomy may in fact be artificial, with both traditions merely representing regional variations of a single, larger cultural construct. Based on field research in the St. Lawrence Islands National Park and comparative analysis of type collections in the Rochester- Museum & Science Center, this paper suggests that this larger cultural construct must extend eastward to include the Owasco manifestations in the St. Lawrence River valley.

The field research discussed in this report occurred on Mulcaster Island, located approximately 8 km west of Gananoque (Figure 1). The island was first archaeologically investigated in 1978 by J.V. Wright, of the Archaeological Survey of Canada. Using a simple walkover survey strategy of accessible beaches and shorelines, Wright discovered one pre-European contact site - the Mulcaster Island Site (BcGa3) - on the northeasternmost point of the island and dated this site to the late Point Peninsula or early Terminal Woodland Period (Wright 1978:27-29).

In 1991, archaeological testing, using shovel-and-pace survey methodology, was undertaken by the National Parks and Native Sites Unit of Parks Canada's Ontario Region in the area of a proposed new pit privy to the south of Wright's site. As a result of this work, a new pre-European contact site was discovered. This new site has been called the Mulcaster Island East Site (Figure 2). The site's location is topographically similar to Wright's site and lies within the eastern half of a sandy valley or trough between two rock outcrops, connecting two opposing beaching areas. The area comprises about 1800 meters squared. The installation of the new privy was deferred until the construction site could be thoroughly salvaged during the 1992 field season.

The archaeological resources occur in a virtually homogeneous sand matrix. Consequently, the depositional sequence has been affected by such disruptive processes as filtration, percolation, compression, and dispersal, making the identification of stratigraphic chronological indicators difficult. Even so, the results of our excavation do indicate that the Mulcaster Island East Site has witnessed three distinct periods of usage since the arrival of Europeans in the St. Lawrence River valley. These periods can loosely be described as the modern camping period, the historic cottage period, and the historic recreation period. However, only those finds pertaining to the pre-European period will be discussed here.

Despite problems in readily discerning deposition sequences, the horizontal distribution of artifacts has retained some of its original integrity. Definite spatial discard patterns suggest that there were at least two main activity areas during the native period, both of which are centered around hearth features (Figure 3). With respect to these hearths, although very few bones were recovered from the site, the majority of these (i.e., 20 out of 29) were calcined and were found in direct association with one of the hearths. Of tremendous importance has been the retrieval of a radiocarbon sample (SRC #S-3456) from the other hearth that has been dated to 850 ± 170 years B.P.-in other words, a mean date of A.D. 1100.

One activity area was marked by compacted sand and the relative absence of artifacts. In the absence of post molds, this area of compaction could indicate an intramural living floor, an exterior activity area, or a traffic corridor bisecting the gully and the camp. The other discernible activity area produced a small assemblage of paint stone (i.e. limonite) and hematite nodules, as well as a hammerstone fragment. Since both limonite and hematite produce a chalky red stain when rubbed or chalky red grains when crushed, such finds may indicate a small-scale pigment production workshop.

The single most striking feature of the Mulcaster Island East collection is the disparity between a significant native ceramic assemblage and a negligible lithic assemblage. Compared to 854 sherds of native ceramics, only ten artifacts constituted the lithic assemblage, of which four are chipped stone debitage and six are ground or rough stone fragments.

Repeated occupation of the site, spanning the Middle Woodland and Late Woodland periods, is apparent from the ceramic evidence. While our analysis has found evidence of a "classic" Point Peninsula occupation at this site, the bulk of the ceramics associate with a transitional Late Point Peninsula/Pickering/Owasco culture. The radiocarbon date of A.D. 1100 conforms exceptionally well to this identification.

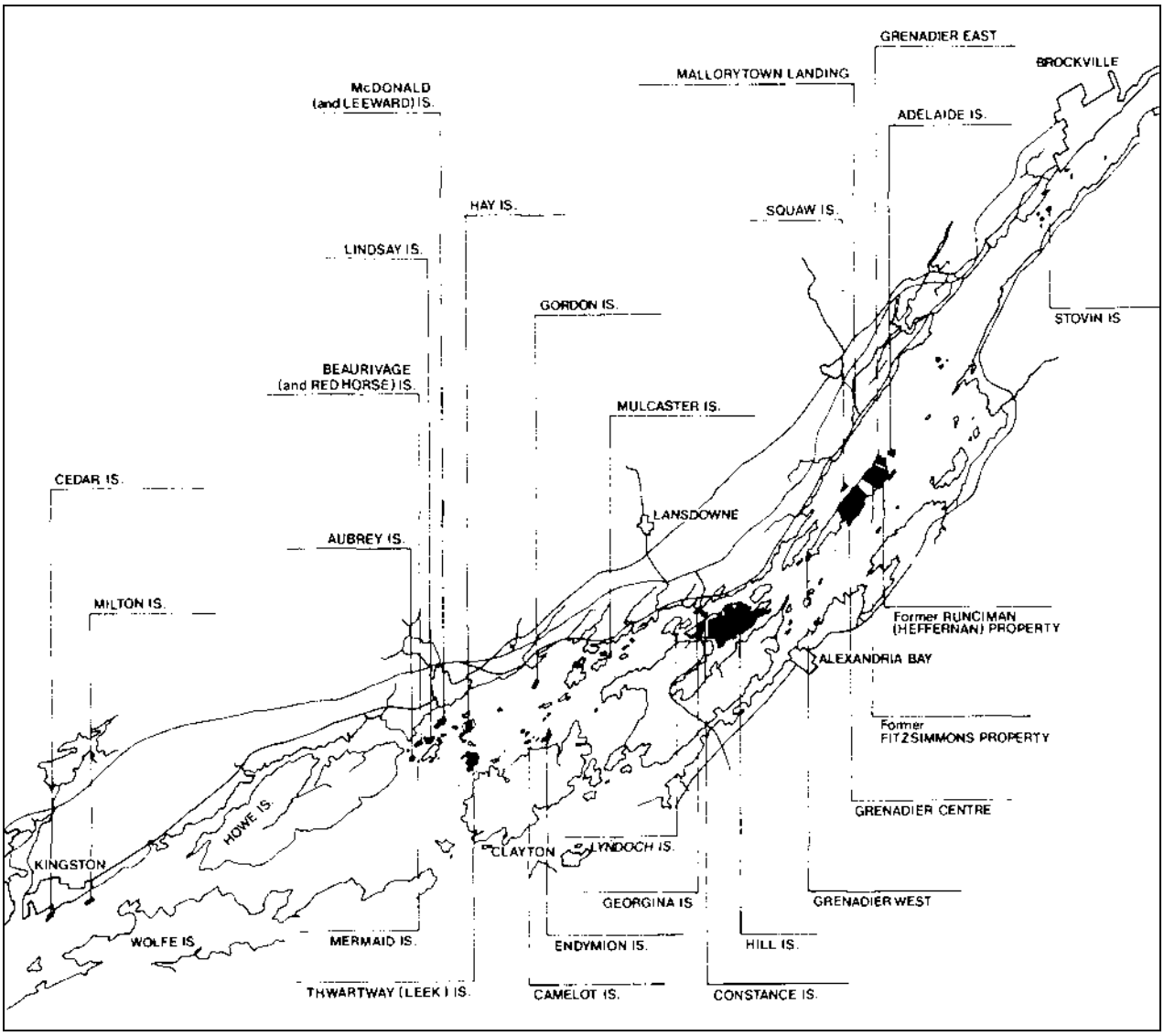

Figure l. Location of Mulcaster Island within St. Lawrence Islands National Park.

Because we were initially uncomfortable with assigning cultural affiliation to this material, we decided that it would be beneficial to compare the Mulcaster Island East material with the collections made by William A. Ritchie in neighboring New York State and used by him to originally define the Point Peninsula and Owasco Cultures. These collections are currently housed at the Rochester Museum & Science Center, in Rochester, New York. Diagnostic ceramic vessels from the Jack's Reef, Bluff Point, Kipp Island, Grindstone Island, Pillar Point, Castle Creek, Carpenter Brook, Hunter's Home, Partridge, Dansville Flats, and Morrow sites were subsequently examined (Appendix 1).

Ceramic analysis, based solely on rim variation, revealed a minimum of eleven vessels from the Mulcaster Island East Site. In order to arrive at a more accurate minimum vessel count, all decorated sherds not likely to be represented by the rims were grouped by taking into consideration various attributes such as decorative technique, decorative motif, exterior and interior surface finish, and fabric composition. This grouping process was complicated by the fact that the decorative technique employed on the majority (92%) of the decorated sherds consisted primarily of dentate stamping. Therefore, the allocation of sherds to individual vessel groups was refined by matching the shape of the imprint left by the decorating tool. Under this strategy, the minimum vessel count increases to between 18 and 22 vessels (Table 1).

The earliest ceramic tradition that can be assigned to the Point Peninsula culture on Mulcaster Wand is represented by

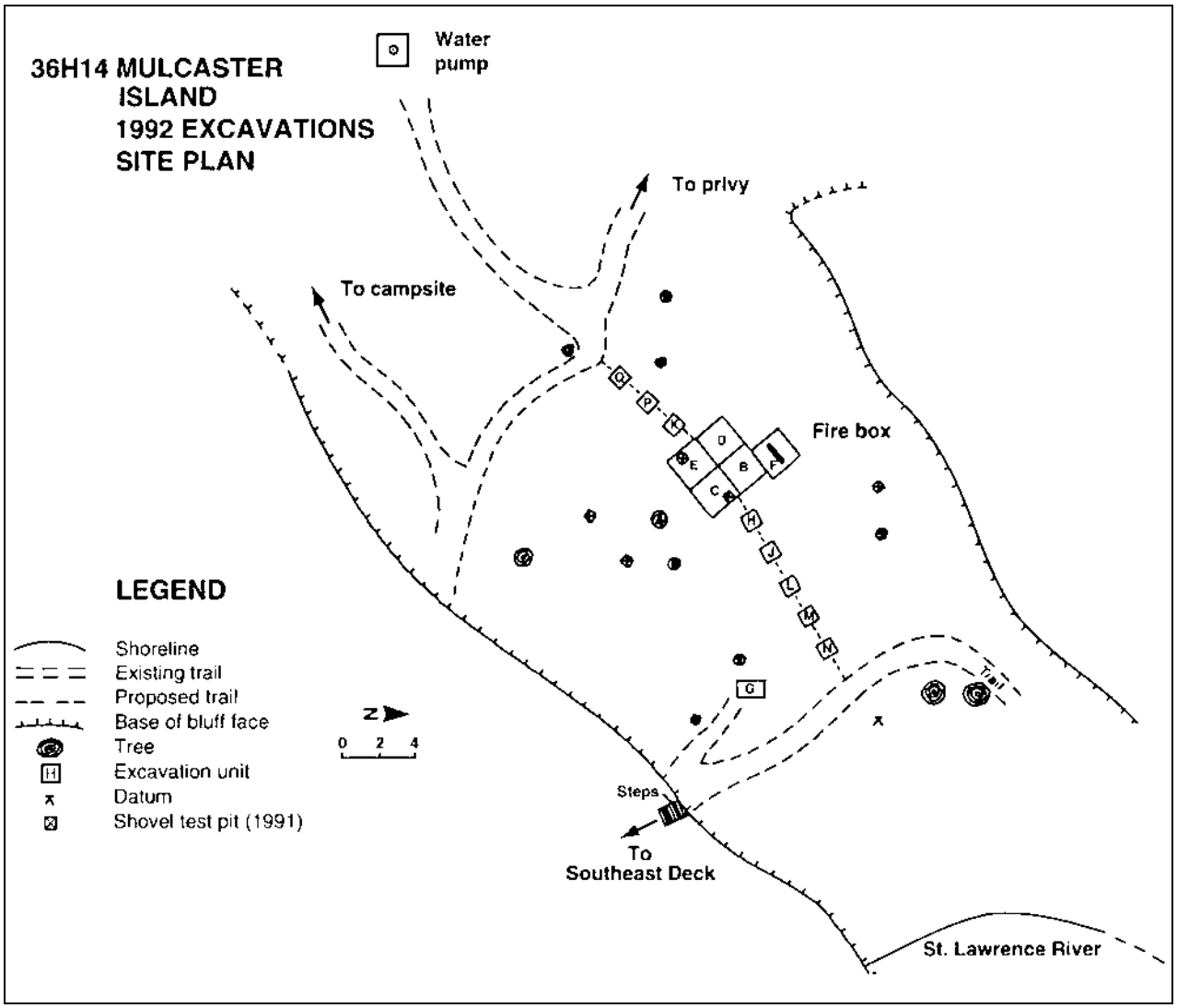

Figure 2. Site plan of the Mulcaster Island East Site (36H14) showing orientation of archaeological investigations.

ten sherds decorated with a pseudo-scallop shell technique. The sherds belong to at least two vessels. The decorative motif, termed St. Lawrence Pseudo-Scallop Shell (Ritchie and MacNeish 1949:103), consists of short oblique impressions on the rim. On body sherds, these impressions are compact and tightly spaced, forming sinuous lines. This type of decoration is primarily a Middle Point Peninsula feature and is quite common in the northern New York and eastern Ontario region, being found on ceramics from such contemporary Middle Woodland sites as Wright's (1979:15) Gordon Island North Site and Spence, Pihl, and Murphy's (1990:163) Ault Park and Wyght sites on the St. Lawrence; on Parks Canada's Percy Boom Site on the Trent-Severn Waterway; and on Daechsel's (1985:75) Plainfield Rapids and Vanderwater-2 sites on the Moira River.

Another typical Middle Point Peninsula ceramic element found in the Mulcaster Island material is Wickham Punctate (Ritchie and MacNeish 1949:104). This decorative technique is represented by 19 sherds from one vessel. These sherds show a considerable variation both in motif and in method of application. Besides the ubiquitous punctates, the typical motif consists of horizontals over obliques that slant to either the left or right on the rim and neck. Interspersed throughout these obliques are indications of rocker stamping whereby the pattern or angle of application shifts back and forth from an orderly linear impression to a slurred, rocked imprint. In most cases the dentate tool was clearly and precisely applied, while in others, it was applied carelessly and at such an angle as to leave an impression similar to that produced by a pseudo

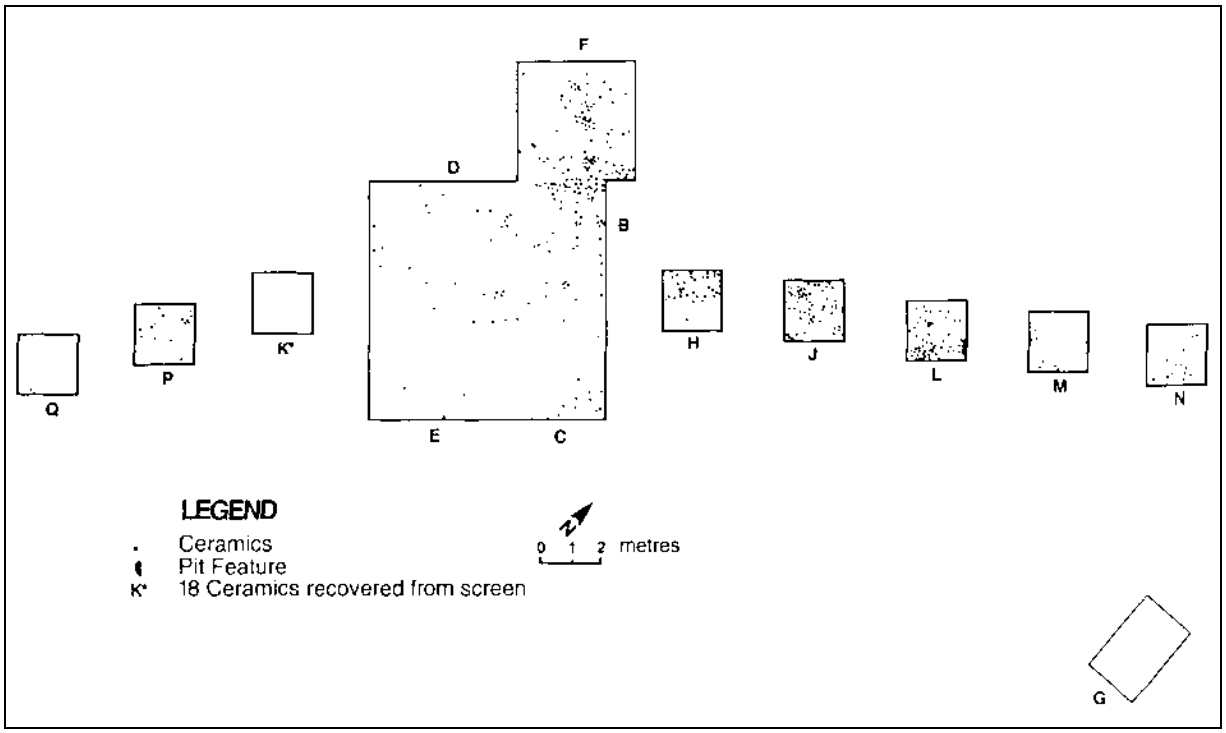

Figure 3. Site plan of the Mulcaster Island East Site (36H14) showing distribution of native ceramics.

scallop shell tool. This variation on the same vessel appears to be a characteristic trait found on Middle Woodland vessels. This is a feature that has been noticed on ceramics from various sites in the National Parks system in Ontario, most notably the Gordon Island North Site in St. Lawrence Islands National Park and the Camp Kitchi Site in Georgian Bay Islands National Park.

Late Point Peninsula ceramic types dominate the Mulcaster Island East ceramic assemblage with at least six vessels represented. The dominant decorative technique again consists of dentate stamping. All the decorated sherds using this technique were grouped under two distinct categories based on the individual tool impression. The first group is characterized by pyramidal or lozenge-shaped impressions. These are well executed and deeply applied into the clay in a linear fashion. Almost exact parallels in shape and execution can be found on ceramics from the Felix component of the Jack's Reef Site in New York. The second grouping consists of rectangular or square dentates. These dentates have been precisely executed as well, but they have only been lightly impressed into the clay, again in a linear fashion. The distinguishing feature of these styles is the high quality of workmanship. Great care was taken in the application of the decorative elements. At least three vessels can be assigned to the Jack's Reef dentate style (Ritchie and MacNeish 1949:106). In addition to examples from the Jack's Reef Site, similar dentate stamping can be seen on ceramics from the Bluff Point Site in Cayuga County, New York.

Although only six sherds decorated with a dragged stamp technique were recovered, they may represent more than one vessel. There is an increasingly high incidence of dragged stamping towards the end of the Point Peninsula ceramic tradition. This is a regional trait which is in evidence at various sites in eastern Ontario (Spence et al. 1990:158).

Another component of the Late Point Peninsula aspect of this site is represented by two vessels that can be attributed to the Kipp Island Criss Cross style (Ritchie and MacNeish 1949:104). In this style, the linear dentates are applied to form a lattice pattern. One example of an appliqué rim, with a horizontal dentate decoration, was recovered. Appliqué rims are a common feature of the Late Point Peninsula, especially in the Jack's Reef ceramic styles (Ritchie and MacNeish 1949:121; Ritchie 1969:239).

The type vessels, if such were to be identified for the Mulcaster Island East Site, are exemplified by three dentate stamped vessels that incorporate a dragged dentate technique. All three were localized around the hearth feature that yielded the A.D. 1100 date. Their localized provenience, similarity in fabric composition, tempering inclusions, striated interior

Table 1. Spatial Distribution of Native by Cultural Affiliation/Decorative Technique

Cultural Affiliation/ Decorative Technique	Sherd Count by Excavation Units													
	Q	P	K	E	C	D	F	B	H	J	L	M	N	Total
Point Peninsula (Jack's Reef Dentate?) Lozenge-shaped dentates	0	0	1	1	1	5	1	32	4	2	0	0	1	48
Point Peninsula Rectangular/Square Dentates	0	0	0	0	0	3	43	8	3	6	4	1	1	69
Middle Point Peninsula St. Lawrence Pseudo-Scallop Shell	0	0	0	0	0	7	0	0	0	1	1	0	1	10
Middle Point Peninsula Wickham Punctate	0	19	0	0	0	0	0	0	0	0	0	0	0	19
Late Point Peninsula Kipp Island Dentate	0	0	2	0	0	0	0	1	0	1	1	1	0	6
Late Point Peninsula Dentate Stamp	2	0	0	0	0	0	0	0	0	1	0	0	4	7
Late Point Peninsula Drag Stamp	0	2	1	1	0	0	0	0	0	2	0	0	0	6
Late Point Peninsula/ Early Owasco Sloppy Dentate Stamp over Drag Stamp	0	0	0	0	0	14	39	25	1	0	1	0	0	80
Early Owasco Wickham Corded Punct.	0	0	0	1	0	2	0	0	1	10	9	2	0	25
Owasco Owasco Incised	0	0	4	0	0	0	0	0	1	0	6	2	0	13
Owasco Trailed Dentate Stamp	0	0	4	0	0	0	0	5	5	30	0	0	0	44
Late Owasco Owasco Corded	0	0	0	0	0	0	0	0	0	0	0	0	2	2
Late Owasco Check Stamp Surface Treatment	0	0	6	0	0	7	3	1	0	0	3	2	3	25
Sub-totals:	2	21	18	3	1	38	86	72	15	53	25	8	12	
													TOTAL	354

surface treatment, and virtually parallel decorative motif all point to their production by one individual. A general characteristic that these vessels have in common is an inconsistent, sloppily rendered, decorative technique. The tool impressions appear to have been applied in a haphazard fashion and range from lightly to deeply impressed.

Despite an apparent disregard for impeccable decorative execution, the morphological attributes and decorative elements of these three vessels parallel those of both Ontario Pickering and New York Owasco ceramic traditions. These traits include a constricted neck with out-flaring rim, a flattened lip, and incipient collar development. Exterior decorative motifs include oblique and horizontal linear decoration over horizontal dragged linear motifs. The inclusion of exterior punctates, either separating or overlapping the two linear designs, is another shared characteristic. Interior rim and lip decoration consists primarily of oblique lines, with horizontal lines occurring less frequently. These three vessels in particular embody changes in

ceramic style, incorporating both established Middle Woodland traditions and new Late Woodland forms.

A series of similar transitional late Middle Woodland to early Late Woodland sites can be traced all along the north Lake Ontario shore, extending down the St. Lawrence River. Such sites include Kenyon's (1968) Miller Site; Ridley's (1958) Boys Site; Donaldson's (1962) Short Site; Ritchie's (1949) East Sugar Island Site; Daechsel's (1985) Elliot, Foster, Plainfield Rapids, and Vanderwater Rapids sites; Wright's (1979, 1980) Gordon Island North and Squaw Island South sites; and Pearce's findings at the Ault Park Site (Williamson 1990) and at the Grindstone Island, Pillar Point, and Putnam sites in Jefferson County, New York (Engelbrecht et al. 1990). Some of these sites have been identified as Pickering, while others have been called Owasco. Six vessels on the Mulcaster Island East Site can be assigned to the Owasco ceramic style.

The early phase of the Owasco sequence on the site is represented by two vessels attributable to the Wickham Corded Punctate type (Ritchie and MacNeish 1949:107). This decorative motif consists of oblique impressions over horizontals on the exterior, impressed decoration across the lip, and oblique over horizontals on the interior. One of the vessels has punctates separating the two exterior motifs. Parallel examples can be seen on the New York Owasco sites of Morrow, Grindstone Island, and Pillar Point.

Thirteen sherds were decorated with incised parallel lines, some of which were crossed or intersected by other lines. This particular decorative technique, and the corresponding motif, are a characteristic Owasco trait which, while occurring in some earlier styles, is found primarily late in the series. Since the examples are unassociated neck sherds, they could belong to a number of styles, such as Castle Creek Incised, Bainbridge Collared Incised, Castle Creek Punctate, or Bainbridge Linear (Ritchie and MacNeish 1949:110-116). Parallel incised examples are found on the Morrow, Bainbridge, Grindstone Island, Castle Creek, and Partridge sites of New York State.

Another major late Owasco form represented at the Mulcaster Island East Site is Owasco Corded (Ritchie and MacNeish 1949:112). One rim sherd, with corded horizontal lines on the exterior of the rim and a portion of an incipient castellation, was recovered. The paste of this pottery far surpasses, in quality, any of the other ceramics found on the site. It is well levigated, with hardly any coarse inclusions. A similar example, in style, is found at the Castle Creek Site in New York.

Yet another late feature of the Owasco series found on this site is the presence of check stamping. This surface treatment was evident on 25 sherds from the shoulder and basal areas of a vessel or vessels. The almost dentated appearance of these sherds results from malleating or striking the surface with an embossed or ribbed paddle. Generally, check stamping is an exterior body finish that becomes more popular on late Owasco sites, such as Castle Creek and Bainbridge (Ritchie and MacNeish 1949:121).

An interesting decorative technique found on 44 sherds appears to be a local variation on dentate and drag stamping. It consists of applying a square-rectangular dentate stamp and then either dragging it, sliding it, or skimming it across the surface of the neck area of the vessel. In this fashion, the initially clear dentate is followed by a trail consisting of a progressively diminishing imprint of itself. Similar examples of this decorative technique are found on central New York Owasco sites, such as the Morrow Site and Castle Creek Site. However, it appears that parallels for this decorative technique are more frequent in the more northerly Owasco ceramic assemblages of Grindstone Island and Pillar Point.

One undecorated pipe bowl rim fragment was recovered from the site. Tempering material consists of very fine grit with an extremely smooth surface finish. Although only a small fragment, it nevertheless can be grouped with Owasco pipes. In general, these are normally plain and uncollared (Ritchie 1969:295-296). Similar examples can be seen at Kenyon's (1968:48-49) contemporaneous Miller Site. Only one ornamental artifact was recovered, a ceramic bead that is tubular in shape and less than 1 cm in length.

In conclusion, our analysis of the archaeological remains of the Mulcaster Island East Site has resulted in some interesting and potentially significant interpretations. The archaeological data indicate that this site was occupied from c. A.D. 100-1300 by both Point Peninsula and Owasco peoples. The evidence suggests that this was a small seasonal camp site, probably both culturally and temporally related to Wright's neighboring site. As such, the site can be seen to be an integral part of an established seasonal lifeways pattern during the region's Middle and Late Woodland periods.

As regards site type, most small sites on record are seasonal camps that usually have a major hunting and/or fishing component. As such, these sites yield a well-represented lithic assemblage and faunal sample. This is not the case at Mulcaster Island East. Very few bones (and no fish bones) were recovered from this site. Furthermore, while the relative absence of chipped stone debitage in the excavated area may be a result of sampling bias, it would have been expected that more lithic artifacts would have infiltrated into the rest of the site than have to date been found. Since this has not been the case, it can be argued that the inhabitants of this site focused on activities not requiring the extensive manufacture, use, or repair of chipped stone tools. In other words, it appears that Mulcaster Island East is not a hunting or fishing camp.

It is a distinct possibility that sites exhibiting a disproportionate quantity of ceramics are representations of either unique, specialized resource extraction sites within a larger regional subsistence pattern, or they reflect specialized activ-

ity areas within a more complex societal or settlement pattern. The few floral specimens recovered suggest that the seasonal harvesting and processing of various, as yet undetermined, plants, berries, fruits, and nuts were the primary functions associated with this site.

The task orientation of such special-purpose sites may provide insights on gender roles at this site. While hunting and fishing are traditionally seen as male activities, the harvesting and processing of plant foods is generally believed to constitute a specialized task performed by female members of hunter/gather societies (albeit assisted by children and the aged of both sexes). It has also been generally accepted that ceramic production and utilization are characteristic female activities; while lithics are indicative of a male presence. While it can be argued that such segregated activities could have been part of a more widely dispersed, multipurpose, and demographically mixed camp located in the archaeologically unexplored areas of the site, the chances of missing all male-oriented activity are very small. Therefore, the compelling predominance of ceramic vessels and the relative absence of chipped stone at Mulcaster Island East leads one to speculate on the existence and nature of gender-specific sites.

Is it possible that the Mulcaster Island East Site was a women's site? More specifically, with the possible association of the ground and rough stone artifacts with a pigment production activity, and the use of pigment generally believed to have been associated with acts of spiritualism and ritualism, could this site have been reserved for such truly female-specific and ceremonially important functions and mysteries as menstruation or birth? Furthermore, the special use of the site appears to have remained unchanged from the middle Point Peninsula to the late Owasco periods-a span of approximately 1200 years. Otherwise, more lithics or more faunal material, resulting from the influx of male users, would surely have been introduced to the site over this time span.

In regards to interpretations of the cultural affiliation of the site, our work indicates that it was very much a culture in transition-from Point Peninsula to Owasco. It may be that the presence of Owasco-style ceramics on the Mulcaster Island East Site is indicative of the movement of cultural traditions or ideas, and possibly even groups of people themselves, into the St. Lawrence River area from the central New York region. Whatever the process, the gradual and subtle differences between late Point Peninsula and early Owasco ceramics suggest that the cultural change was a slow process of local development rather than a sudden intrusion.

Similarly, the stylistic similarities and regularities between the ceramic traditions of the Ontario Pickering and the New York Owasco suggest that this process of cultural transition within the St. Lawrence Valley was merely a regional response to stimuli affecting the entire St. Lawrence Lowlands area, from the Detroit River to the Ottawa River, during the early Late Woodland Period. As such, the Owasco manifestation in general may be yet another regional variation of a much larger, cultural construct that includes more westerly Glen Meyer and Pickering expressions.

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Appendix 1: Comparative Collections Housed at the Rochester Museum & Science Center.

Site Name	Collection Number
Angel Farm Site	AR28948
Bell-Philhower Site	AR42071
Bluff Point Site	**AR41688**, AR41689, AR41690, **AR41691**, AR45474
Carpenter Brook Site	*AR39820*
Castle Creek Site	AR17709, **AR17903**, AR17905, **AR17906**, AR17908, AR17909, AR17911, AR17912, AR17914, AR17915, AR17916, **AR17918**, AR17919, AR17920, AR17921, AR17922, AR17924, AR17925, AR17927, AR17928, AR17931, AR17936, AR17937, AR17938, AR17939, **AR17942**, AR17943, AR43481, AR43482, AR43483, AR43484, AR43485, AR43486, AR43488, AR43496, AR43519, AR43520, AR43590, AR43594, AR43599, AR43601, AR43604, AR43643, AR43644, AR43645, AR43840, AR47066, AR47070, AR47071, AR47072, AR47074, 78.57.2, 78.57.5, 78.52.183, 78.57.156, 78.57.159, 78.57.164, 78.57.319, 78.57.330, 78.57.335, **78.57.547**, 78.57.576, 78.57.598, **78.57.647**, **78.57.649**, **78.57.665**
Dansville Flats Site	AR6000, AR6001, AR6002, AR6212, AR6214, AR6184/206, AR6485/206, AR6487/206, AR6488/206, AR6491/206, AR6493/206, AR6515/206, AR6519/206, AR6523/206, AR7605/200, AR7587/206, AR7670/206, AR7671/206, AR7676/206
Grindstone Island Site	**AR34220**, 85.195, **85.190 (187)**
Hunter's Home Site	AR41662, AR41693, 84.124.4
Jack's Reef Site	**AR39925**, AR39990, AR43493, AR43494, AR43504, AR43507, AR43510, AR43511
Kipp Island Site	AR34094, AR37398, AR41991, AR41992
Morrow Site	AR44207, AR44430, AR44444, AR44477, **AR45405**, AR45406, AR45480, AR48775, **AR51823**
Partridge Site	AR1298, AR1299, **AR28633**, AR28634, AR28635, AR28636, **AR28637**, AR28647, AR43328, AR43331, AR43337, AR43338, AR43488, AR43503
Pillar Point Site	**AR34191**
Sherman Site	AR10063, AR10064, AR10065, AR10066, AR10067, AR43794, AR43816

NOTE: Collection numbers appearing in bold script represent those collections containing specimens directly comparable to the Mulcaster Island East Site (36H14).

Exceptional Preservation of a Shell Specimen at the Goldkrest Site (CNGTL470), East Greenbush, New York

Frank J. Dirrigl Jr., Department of Anthropology, The University of Connecticut, Storrs

At the Goldkrest Site in East Greenbush, New York, the author recovered u hard-shelled dam specimen (Veneridae) of unusual preservation quality at 33-40 cmbs in silty clay. Although the shell remains throughout most of the site consisted of white, chalky, fragmented valves or umbos representing poor preservation, this specimen of at least 100 years old had much of its periostracum intact. I present a taphonomic summary to describe the context of preservation for the specimen. I do this to solicit possible explanations from readers of this paper and to encourage others to report additional instances of exceptional preservation of faunal remains recovered from the northeast United States.

Recent excavations by Archaeological Research Specialists (ARS) of Meriden, Connecticut, for a Phase II project at the Goldkrest Site (CNGTL470) in East Greenbush, Albany Co., New York, recovered a shell specimen of unusual preservation quality. Throughout most of the site, shell remains (*Crassostrea virginica* and Veneridae) consisted of fragmented valves or umbos representing poor preservation. The majority of this material had rounded edges and worn concentric rings, and flaked into soft chalky unidentifiable pieces when removed from the soil. The cultural contexts associated with zooarchaeological remains included material from a hearth feature 60 cmbs dated 410 ± 70 BP, a shell pit feature (Number 6) at 90 cmbs dated 430 ± 80 BP, and a unit having a possible feature or burning layer dated (accelerated) 460 ± 100 BP.

In a 50 cm x 50 cm test pit, S125E10, I found a single specimen of Veneridae (hard-shelled dam family) that displayed exceptional preservation. Similar to other pieces re covered from the Goldkrest Site, this fragmented hinge, umbo, and valve specimen also showed rounding and softening. However, much of the periostracum, or chitinous outer covering of the valve, remained intact. This part of the shell is the first to wear and flake off after the death of the shell. Even specimens deposited on beaches at the high-tide mark loose the periostracum after being exposed to the sun. Therefore, I believe that it is important to report the taphonomic information gathered with this specimen.

Taphonomic studies focus on examining the condition under which a zooarchaeological specimen is hunted/collected, used, buried, recovered, and analyzed. It is impossible for zooarchaeologists to examine all the possible factors that act upon zooarchaeological assemblages. However, the different factors that lead to the preservation of assemblages must be considered by zooarchaeologists when the appropriate data are available. In my analyses of faunal remains, I consider data from at least four different levels: biological, cultural, environmental, and analytical (Table 1). The excavation procedure used by ARS at the Goldkrest Site included shovel-shave testing of 50 cm x 50 cm pits along transects at 5-m intervals. Field crew members screened soil through 0.8-cm hardware mesh and grouped artifacts by 10-cm levels based on the location of the junction of the A and B soil horizons until they reached 100 cmbs. The A horizon ended at 30 cmbs in the test pit where I found the shell specimen, and therefore the levels I established included 0-30, 30-40, 40-50 cmbs, etc.

The environmental setting of the Goldkrest Site is also important taphonomic data. Located 150 m east of the Hudson River and at the 10-ft topographic contour level, the site is in the flood plain. The old agricultural field in which the site is found is a disturbed wetland area. This location has no slope, and soil drainage is good.

Stratigraphic data relating to the recovery of the shell specimen are as follows. The A horizon consisted of plow zone material (clay pipes, historic ceramics, coal slag, glass, etc.) of the nineteenth century and tended to be evenly distributed throughout the site. Soils at the site are characteristic of floodwash, filling, and manuring. Presently, corn is grown by a local farmer in the area surrounding the site. Although the site occurs as a plowed field, there exists only a shallow ground disturbance. Some prehistoric material (cera mics, lithics) can be found on the surface and within the A horizon. The junction of the A and B soil horizons is generally between 30 and 4.5 cmbs, and the B horizon continues beyond 120 cmbs.

ARS recognized two cultural levels at the site, a 0-60 cmbs historic level and a 60-120 cmbs and possibly beyond prehistoric level. However, the prehistoric cultural level includes intrusions of historic artifacts, for excavators found historic material as far as 90 cmbs. The deepest test pit reached 130 cmbs, and ARS has not reached the sterile level in the site (deep testing is planned). I found the shell specimen at 33 cmbs.

Table 1. Taphonomic Levels of Study for Zooarchaeologists.

Site Assemblage
Sample size
Number of taxa
Number of elements
Stratigraphy
Period of deposition

Environmental
Ecoregion
Climate
Soil/sediments
Slope
Weathering

Analytical
Excavation area
Sampling strategy
Screening/flotation
Identifications
Quantification/qualification

Biological/Taxonomic
Sex
Age
Morphology/bone density
Behavior
Population dynamics
Intrusion of non-prey taxa
Scavaging

Cultural
Subsistence
Site structure
Site size
Seasonality
Site location
Period/sequence
Trampling
Food processing methods
Transportation
Use (food/ritual/ornamentation/trade)

Note: Items are subject to constant revision.

The stratigraphy at S125E10 differed from that in other units. S125SE10 contained a 3-cm thick clay layer, whereas only small patches of clay mixed in sandy loam occurred elsewhere at the site. A simple description of the stratigraphic levels is as follows. From 0 to 30 cmbs, the A horizon consisted of sandy loam. A dense clay layer existed between30 and 33 cmbs. Below the clay, at 33-40 cmbs, silty clay formed the context in which I found the shell specimen. Based on these data, I consider the shell specimen to be probably associated with the historic material in level 0-30 cmbs and at least 100 years old.

I would expect a specimen of about 100 years in age to be in a better state of preservation than the prehistoric shell found at the Goldkrest Site (e.g., soft fragmented shell in Feature 6 associated with charcoal dated 430 ± 80 BP). However, discussions of zooarchaeological material found within and near clay layers suggest that bone and shell do not preserve well in this context (Chaplin 1971; Wood and Johnson 1978). With seasonal freezing and thawing in the northeastern United States, clay soils expand and contract, thus moving faunal remains horizontally and vertically. This movement abrades and wears the faunal remains causing rounding and flaking. Therefore, the state of preservation of the shell specimen is an exception. I welcome any suggestions of explanations from readers of this paper.

I hope that this paper will encourage others to report additional instances of exceptional preservation of faunal remains recovered from the northeast United States. Biological, cultural, environmental, and analytical factors are responsible for preservation biases of faunal remains from this region (Dirrigl 1991). Not until the importance of collecting taphonomic data at the recovery of faunal specimens is recognized by archaeologists, will interpretations of zooarchaeological assemblages become more meaningful. Archaeological Research Specialists recognized this importance of gathering taphonomic data and invited me to take part in the Phase II testing after they began recovering faunal remains. Too often, archaeological groups remove, clean, package, and send faunal specimens to analysts after excavation is completed with a request for a species list for a report. Rarely are zooarchaeologists consulted at the planning stages and throughout the excavation. For these reasons, much of the taphonomic information vital to interpreting human subsistence behavior is lost.

Reitz et al. (1987) correctly emphasize the need for excavators to become aware of the importance of gathering and providing taphonomic data to zooarchaeologists. ideally, excavators of sites should provide zooarchaeologists with maps, a copy of the grant or contract proposal detailing the excavation method and strategy, and information on abbreviations or numbering codes used to identify proveniences. Data relating to the volume of soil excavated, soil acidity levels, environmental descriptions, and the temporal and cultural association of the faunal remains are also important. When excavators develop strategies to gather taphonomic data and zooarchaeologists are consulted from the planning stage to the completion of site reports, better research and relationships will result.

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Evidence of Paleo-Indian and Early Archaic Occupation in Washington County, New York

Roger L. Ashton, Van Epps-Hartley Chapter, NYSAA

The surface discoveries of a fluted point, a side - scraper ,and a Dalton-like point and their possible relationships are discussed. The geologic history of the find locales and the environmental setting of early occupations are described, and formal and metric attributes of the artifacts are presented.

Introduction

In east-central Washington County, New York, a small stream, the Flax Mill, junctures with the Batten Kill some seven miles from the Vermont border. Near this smaller stream the author discovered two artifacts relating to the Paleo-Indian tradition and a third possibly of Early Archaic origin.

Geology and Geography

The Batten Kill (Figure l) is a large, swiftly flowing trout stream that drains part of the Taconic and Green Mountains on the New York-Vermont border. It flows in a southerly direction through these mountains, then swings in a westerly course flowing through a rich alluvial valley in New York State to its confluence with the Hudson River just north of Schuylerville.

The Flax Mill, 18 km (11 mi) east of the Hudson, is a much smaller and slower moving stream primarily from the drainage of two kettle lakes, Hedges Lake and Clarks Pond. Several small feeder streams along with outlets of sediment laden, shallow, reedy swamps add to its volume. The previously mentioned two bodies of water originated from the melting of stranded blocks of ice left by the active glacier about 13,600-12,600 B.P. (De Simone 1985; DeSimone and La Fleur 1985). Some 48 km (30 mi) north of this area, Champlain ice "scooted" out of the Champlain Lowland, allowing the sea to invade this lowland by approximately 12,000 B.P. Pollen began to accumulate in these sediments shortly thereafter, so it seems likely that the Flax Mill area was vegetated certainly by 11,000 B.P., perhaps several hundred years before that date (David J. DeSimone, personal communication 1993).

Situated south of Hedges Lake and Clarks Pond are three more kettle bodies of water. They comprise Dead Pond, which seeps into Schoolhouse Pond whose outlet in turn flows into Lake Lauderdale. The outlet of Lake Lauderdale forms the Owl Kill stream which flows in a 16-km (10-mi) southerly

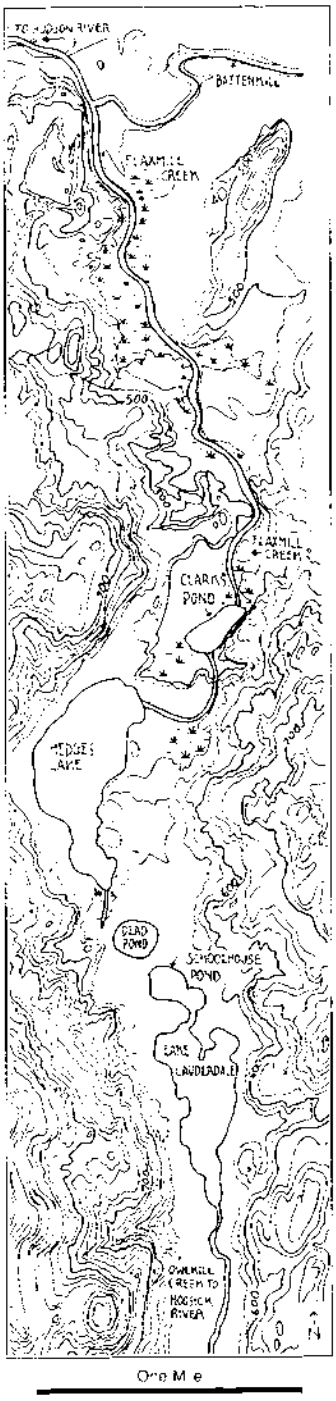

Figure 1. Flax Mill Creek juncture with the Batten Kill near the New York-Vermont Border.

direction and joins the Hoosic River just north of Eagle Bridge, New York.

By 11,000 years B.P. (radiocarbon years) (Gramly and Funk 1990:6), most of the Northeast was ice-free and could have been entered by Paleo-Indians and settled. This date fits in nicely with DeSimone's suggested date for vegetation of the Flax Mill drainage. The abovementioned lakes, stream, and swamps must have provided an abundance of fish and wildlife that greeted the very first inhabitants that trekked into these environs.

Descriptions of Artifacts

In July of 1977, the author discovered a fluted point (Figure 2) in a freshly plowed field 1159 m (3800 ft) from the Batten Kill and 305 m (1000 ft) from the Flax Mill creek. This field is located on a valley floor consisting of some 60 ha (150 acres). The soil on which the point was resting is classified in the Oakville Series, a water- and wind-sorted sand similar to other sandy soil types formed on glacial outwash plains (Winkley 1972: 40-41). This soil consists of a fine grayish-brown sandy loam plow zone that has a depth of 23-28 cm (9 to 11 in). Below this a 60-90 cm (2-3 ft) thick yellowish sandy subsoil appears and gradually grades into a gravelly, stony substratum. Due to the extreme depth of the furrow, the plow's moldboard deposited the fluted point in a horizontal position on the present plowed surface. It lay in a completely reversed position from its original resting place. There is no question of the artifact's primary location as it was clearly visible 7.6 cm (3 in) into the yellowish subsoil. The soil had never before been plowed to that depth. Thorough testing of the area revealed no other occupational signs. Four years later in the same exact locale, I found on the surface a shallow side-notched, deeply weathered spear point similar in some respects to the fluted point. In 1979, I found a Paleo-Indian style side-scraper 823 m (2700 ft) from the first find site and 274 m (900 ft) from the Flax Mill stream. The artifact was discovered on a Wallington soil type surface, a poorly drained, medium-textured soil with a slowly permeable fragipan formed in glacial lakes (Winkley 1972:52-53). This find was made on what would have been an island within a glacial pond.

A few points of Late Archaic affiliation along with an occasional isolated chip or fire-cracked stone have turned up in other fields bordering the Flax Mill. Two Late Archaic sites, Lauder (a River Phase site [Ashton 1990] and Kenyon (a Laurentian site), are located within a distance of 6 km (4 mi). Three fire-cracked stones were noted 55 m (180 ft) south of the fluted point location. Thorough shovel testing in this area disclosed nothing.

The fluted point and side-scraper were manufactured from a glossy, fine-grained gunmetal tinted Normanskill chert

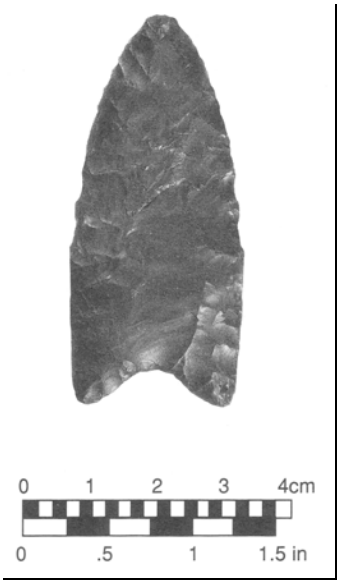

Figure 2. Fluted point from the Batten Kill area. Photograph courtesy New York State Museum.

with a slight pale gray mottling. The same colored chert is also revealed by a fresh break on the deeply weathered shallow side-notched point. Redstone Mountain, 6 km (4 mi) to the west, might have been a source for this material. Also the massive mid-Hudson quarries at Flint Mine Hill, in Greene County, might have been the source (William A. Ritchie and Robert E. Funk, personal communication 1977).

The lanceolate-shaped fluted point is 61 mm in length and has a resharpened cutting edge of 34 mm (Table 1). Grinding on the lower lateral edges then extends 27 mm to the base. A small distal fracture occurs at the tip. On one face, removal of a channel flake struck from the base left a fluting scar 29 mm in length. This was struck before the basal concavity was finished and rubbed. Fluting was accomplished, before basal finishing and rubbing, on the reverse face with the removal of a small channel flake of 14 mm, possibly only for basal thinning. The thickness of this point ranges from 5 to 7 mm. As with many fluted points, the same meticulous pressure flaking and the choice of a first-class material resulted in a superb product. A marked resemblance to this point is seen in a photograph of a fluted point from Lake Champlain, Vermont (Haviland 1981:34). While the material used in manufacture of the latter point was different, there are formal similarities. The general shape, rubbed lower lateral edges, measurements, and a shallow concave base are compatible.

Shallow base concavities are common in the Hudson-Lake Champlain areas. Pictures of fluted points from Debert, Nova

Table 1. Metric Attributes of Fluted and Dalton-like Points.

	Fluted Point	Dalton-like Point
Length (mm)	61[a]	63
Max. width (mm)	28	29[b]
Max. thickness (mm)	7	6
Length of lateral edge grinding (mm)	27	-
Length of largest flute (mm)	29	—
Max. width of largest flute (mm)	12	—
Length of smaller flute (mm)	14	—
Max. width of smaller flute (mm)	7	—
Depth of base of basal concavity (mm)	6	—
Width at base (mm)	26	27[b]
Weight (g)	12.5	10.1[c]

[a] Point was resharpened to present length-perhaps after original tip was broken.

[b] Estimated (corner notch missing).

[c] Missing part is ⅛ to ¼ of point volume. Total weight estimated at 115% of actual weight.

Scotia (MacDonald 1968 1985:177-181) and the Vail Site (Gramly 1982:101-107) show a much deeper basal concavity. Three Paleo-Indian projectile points were found on the William R. Putnam property near Saratoga Lake, New York. This site is 34 km (21 mi) west of the Flax Mill. Two of the points are indisputably Paleo-Indian. One shows similarities to trianguloid points from the Reagan Site, a late Paleo-Indian site in Vermont (Funk and Walsh 1988:1-4; Ritchie 1953:249-258). Few similarities exist between the Putnam and Flax Mill artifacts. Even different cherts were used. However, one Putnam pentagonoid lanceolate fluted point does have measurements and grinding on lower lateral edges that are similar to those of the Flax Mill fluted point.

Both faces of the shallow side-notched, Dalton-like point (Figure 3) I found (identified by Robert E. Funk, personal communication 1991) have delicately pressure-flaked edges. The longest cutting edge extends 52 mm from tip to a ground shallow corner notch 11 mm in length that borders a small basal car (Table 1). Pressure flaking extends around this shallow corner notch and ear on one face only. Grinding is visible on the concave base in spite of a fracture in that area. Basal thinning was accomplished by the removal of very thin 8- and 11-mm flakes on each face. An imperfection is present in the chert on both surfaces running the entire length of the point. It is likely that strain from use or during its manufacture caused a 10-mm break that followed this flaw, destroying part of the base, edge, and one ear. Damage from modern tillage equipment extended this fracture another 11 mm.

Figure 3. Flax Mill Dalton point. Photograph by William J. O'Donnell.

The double-spurred retouched-flake side-scraper's length is 73 mm, and it has a variable thickness from 4 to 14 mm (Figure 4). There are two pressure-flaked cutting or scraping edges of 41 and 50 mm in length. Each spur extends 12 mm beyond the cutting edge. No evidence of pressure flaking exists on these utilized projections. The material used for this artifact is the same as used in the above points. This 50g scraper is typical Paleo-Indian, showing all the attributes of their unifacial manufacture.

Interpretations

I initially treated the fluted point as an isolated find. This theory was challenged a few years later with the finding of the spurred side-scraper farther up stream. The Paleo-Indian's presence was therefore established in two locales within 823 m (2700 ft). Due east 91 m (300 ft) from this locus is a kame 1494 m (4900 ft) in length with a width of 274 m (900 ft). A gravelly sandy loam Hoosic soil deposit is present here (Winkley 1972:32-33). The kame rises 19 m (62 ft) in elevation from the valley floor and provides a view of many square miles in all directions. This kame could have been used as a vantage point to observe game movements in the valley below. There are no natural topographic bottlenecks from which to ambush migrating or grazing animals in the area. This does not preclude an animal being struck elsewhere and carrying a point some distance embedded in its vitals before expiring. Perhaps the find spot was in proximity to frequently used or seasonal

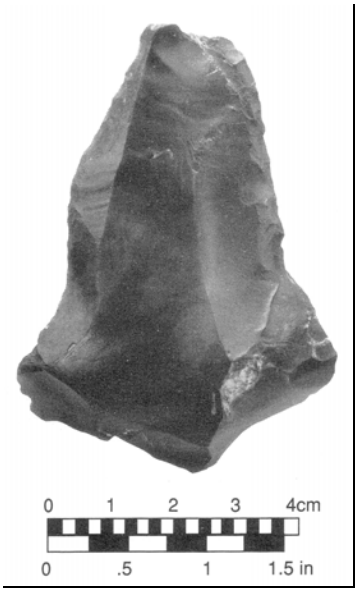

Figure 4. Double-spurred flake scraper. Photograph by William J. O'Donnell.

migration routes used by caribou or other game animals. The Paleo-Indian's unexpected presence in back country locales such as the Flax Mill valley may have been dictated by the need to seek more acquiescent game. Long continued hunting pressure along the Paleo-Indian's earliest entry routes such as the nearby Hudson River may have depleted the animal populations, leaving the remainder skittish and time consuming to stalk and kill.

The Flax Mill Dalton-like point is most similar to the Greenbrier Dalton point type frequently found in Alabama and Tennessee (Dragoo 199:142-43). In New York, the near est reported find of a Dalton point is 48 km (30 mi) north in the vicinity of the southern tip of Lake Champlain, Whitehall, New York (Jack Holland, personal communication 1992). The rare northeast Dalton point may represent a widespread Early Archaic tradition that developed from Paleo-Indian culture. Since a Dalton-like complex has not been conclusively established for the Northeast, Indian populations may have been relatively small at this time. (Funk 1991:9).

A corrected date of 9115 B.P. (Beta-32366, ETH-5671) has been obtained from Olive Branch, a Dalton site on the Mississippi River in Alexander County, Illinois. It is expected that even older dates than this may occur as Dalton points at Olive Branch were recovered 1.0 m (3.3 ft) below the charcoal sample area (Gramly and Funk 1988:32). Radiocarbon dates associated with Dalton elements from Early Archaic rock shelters in Kentucky range from about 9000-8000 B.P. These occupations apparently followed Paleo-Indian in that area (Rolingson and Schwartz 1966:158). Dates ranging from 8739 to 7660 B.P. were obtained at the Turkey Swamp Site in New Jersey, a puzzling single-component site that has produced artifacts reminiscent of the Dalton complex (Cavallo 1981:1-18). Unfortunately, these dates are regarded as too young by several writers including the excavator, John Cavallo (Funk 1991:59). Dragoo's time chart presents Dalton dates between 7500- 8000 B.C. (Dragoo 1991:32). Fluted points are somewhat older than Daltons. Thirteen charcoal samples from the Debert Paleo-Indian Site in Nova Scotia averaged 10,600 B.P. ± 47 for this occupation (MacDonald 1968 1985:53). The Vail Site, a Paleo-Indian-Indian encampment in Maine, provided two dates of 11, 120 ± 180 B.P. and 10,300 ± 90 B.P. (Gramly 1982:60). An apparent association of woodland caribou and a fluted point occurred at the Dutchess Quarry Cave No. 1 in Orange County, New York. The caribou bones were radiocarbon dated 10,580 B.C. ± 370 years (1-4137) (Funk et al. 1969:1-4, 7-22).

The double-spurred scraper and fluted point are both of the Paleo-Indian tradition, although not necessarily products of the same occupation. The finding of the Dalton-like point on the surface only 60 cm (2 ft) from the fluted point presents an enigma. This point is not an aberrant Late Archaic type. Its formal and metric attributes point in one direction-Dalton. Considering the radiocarbon chronology, archaeologists are in agreement that the very late Paleo-Indian tradition in the eastern United States developed into the Dalton tradition. Was the finding of the two points in the same locus a coincidence, with the Dalton point being abandoned later than the fluted point? Their contemporaneity is suggested by back country isolation, some morphological similarities, and the utilization of identical chert as raw material.

Conclusions

The main purpose of this paper is to report the finding of Paleo-Indian artifacts in east-central Washington County. The three artifacts described above merely suggest Paleo Indian and initial early Archaic presence. A Paleo-Dalton overlap may have occurred here as suggested by the appearance of the two points within the same field less than 1.0 m (3.3 ft) apart. Archaeologists in the Northeast would be pleased to find deeply stratified, neatly layered transitional Paleo-Early Archaic sites to answer questions about chronology and associations, a prospect that is extremely slim. For various reasons, we may never have this unequivocal proof. The systematic study and reporting of all surface Paleo-Indian finds, no matter how scattered and meager, are very important. They constitute an important class of data that can provide significant information on early postglacial settlement patterns in conjunction with the more spectacular Paleo-Indian habitation sites.

Acknowledgments

I wish to thank Dr. Robert E. Funk for his personal help, expertise, and constructive criticism. Additional thanks to Dr. David DeSimone of Williams College for his excellent information on the glacial geology of southern Washington County, New York.

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An Intact Prehistoric Ceramic Pot from Cumberland Bay, Lake Champlain

Dennis M. Lewis, Clinton Community College

A complete prehistoric ceramic pot was recovered in 1979 from the bottom of Lake Champlain about midway between Cumberland Head and Crab Island. The pot is approximately 24 cm (9 1/2 in) in diameter and 29 cm (11 5/8) in) in height. It is classified typologically as Durfee Underlined and is believed to be closely related to ceramics from the Roebuck Site.

On August 5, 1979, a complete prehistoric ceramic pot (Figure 1) was discovered on the silt-covered bottom of Lake Champlain by Gary Allen, a member of the Lake Champlain Archeological Association. It was found at a depth of 12-15 m (40-50 ft) about half way between Crab Island and a point near the tip of Cumberland Head. Other members of the team included William Leege, Ronald Allen, and Craig Allen. It is probable that the pot was lost overboard from a prehistoric vessel that was crossing Cumberland Bay. There are, in fact, numerous prehistoric camp sites along the north shore of Cumberland Bay.

The globular pot is complete except for an old V-shaped chip in the rim and another small chip that broke from the rim and was lost when the diver found the pot. There are several other small chips from the rim that are hardly noticeable. The rim is divided into six separate panels but has a rounded form. The panels are castellated and average 5 cm (2 in) at either end and about 4.5 cm (1 3/4 in) at the center. The decoration, consisting of chevrons, is incised. Each panel has double horizontal lines, with no decoration between them, at the upper and lower edges. The horizontal lines of each panel are terminated by vertical lines which extend down from the rim and edge the border between panels and which do not seem to be a part of the chevron decoration.

The pot measures about 24 cm (9 1/2 in) in diameter on the rim and is 20 cm (11 5/8 in) in height. The circumference of the rim is 73 cm (28 7/8 in), the neck circumference is 64 cm (25 5/16 in), and the circumference of the body at its widest point is 82 cm (32 3/16 in). The side walls of the pot are about 6 mm (1/4 in) thick. The clay has several little bright flakes of mica or quartzite in it, and the interior of the pot is black. The exterior of the body of the pot in places appears to be fabric impressed or marked by a large cord-wrapped paddle.

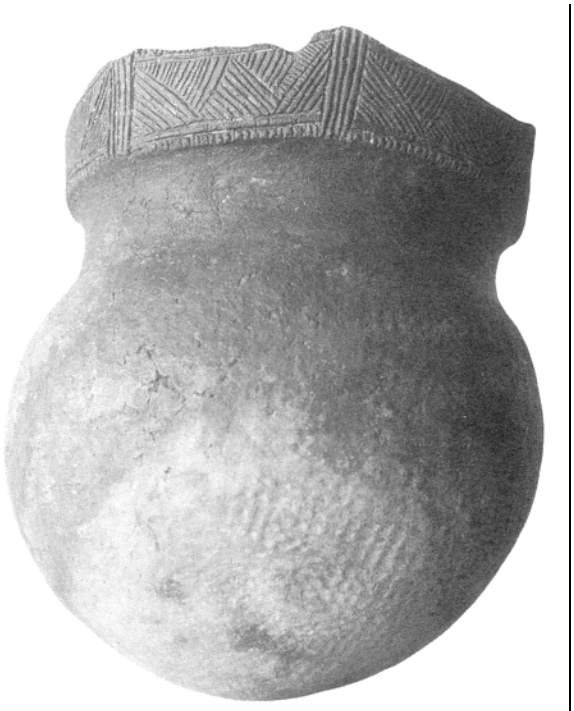

Figure 1. Durfee Underlined pot raised from Cumberland Bay, Lake Champlain, New York, 1979. Height 29 cm (11 5/8 in); circumference of body 82 cm (32 3/16 in).

The pot appears to be of the Durfee Underlined type. In learning of this pot in June 1980, William A. Ritchie commented that it was closely related to pottery from the Roebuck Site, which is located in eastern Ontario along the St. Lawrence drainage. The pot is in the custody of the Clinton County Historical Association Museum, 48 Court Street, Plattsburgh, New York.

Acknowledgment

This article is based on letters from Dennis Lewis to R. Arthur Johnson dated August 16, 1979 and February 9, 1982.

Summary of the Results of Research at the Archaic Dogan Point Site, Westchester Co., New York

Cheryl Claassen, Department of Anthropology, Appalachian State University

This paper summarizes the papers presented at the Hudson Valley Archaeological Conference held March 4, 1994, in Albany, about the Archaic shell matrix site known as Dogan Point. Summarized here are the geological information, biological information, radiocarbon dates, and corroborative observations on the antiquity of this site, the oldest shell matrix site on the Atlantic Coast.

The archaeological site known as Dogan Point is situated in Westchester County's George's Island Park, near the town of Montrose, upon the east bank of the Hudson River and approximately 48 km (30 mi) north of Manhattan. At this point in the river can be found marine resources and daily tidal variation. An unknown proportion of the site consists of a large area of oyster shell up to 120 cm (4 ft) deep in its southern end. Radiocarbon dates indicate that the shell accumulated 6000 to 4400 and 2500 to 2200 years ago, but projectile points indicate utilization of the place 7000 to 2500 years ago and again from 1500 to 500 years ago.

The site has been excavated in three separate projects . In 1963, Louis Brennan excavated at Dogan Knoll, the eastern edge of the bluff top, and from 1968 to 1972, he worked in the heart of the shell deposit removing at least 140 sq m (1500 sq ft) of deposits. I directed work east and west of Brennan's trenches from 1987 to 1993 (Claassen 1994a), disturbing 56 sq m (603 sq ft). The earlier work proceeded with 5-ft squares and half-inch mesh screens. The more recent work used 24 columns. 35 cm square, and 28 units from 1 to 4 sq m in size (Figure 1). The 2 12 column levels were water-screened through stacked 1/2-in, 1/4-in and 1/16-in mesh screens.

There are at least four components and possibly five at the site. The oldest component, probably pre-shell, is indicated by Middle Archaic projectile points such as Neville. The main shell period, dated by 15 radiocarbon dates as 6000 to 4400 years old, is Late Archaic in age, Corroborated by numerous projectile points. The bulk of the finds probably derive from this occupation. The purpose of the shell accumulation is unknown and unassumed. A Transitional Archaic Period is evident. Eleven Levanna points indicate a later shell component as do all the charcoal radiocarbon dates unassociated with pottery. Finally, there are historic artifacts over the thinner shell deposits. This paper will summarize the presumed Middle and Late Archaic geomorphology; lithology; bone and shell tools; invertebrates; vertebrates; wood charcoal; and radiocarbon dates for the site.

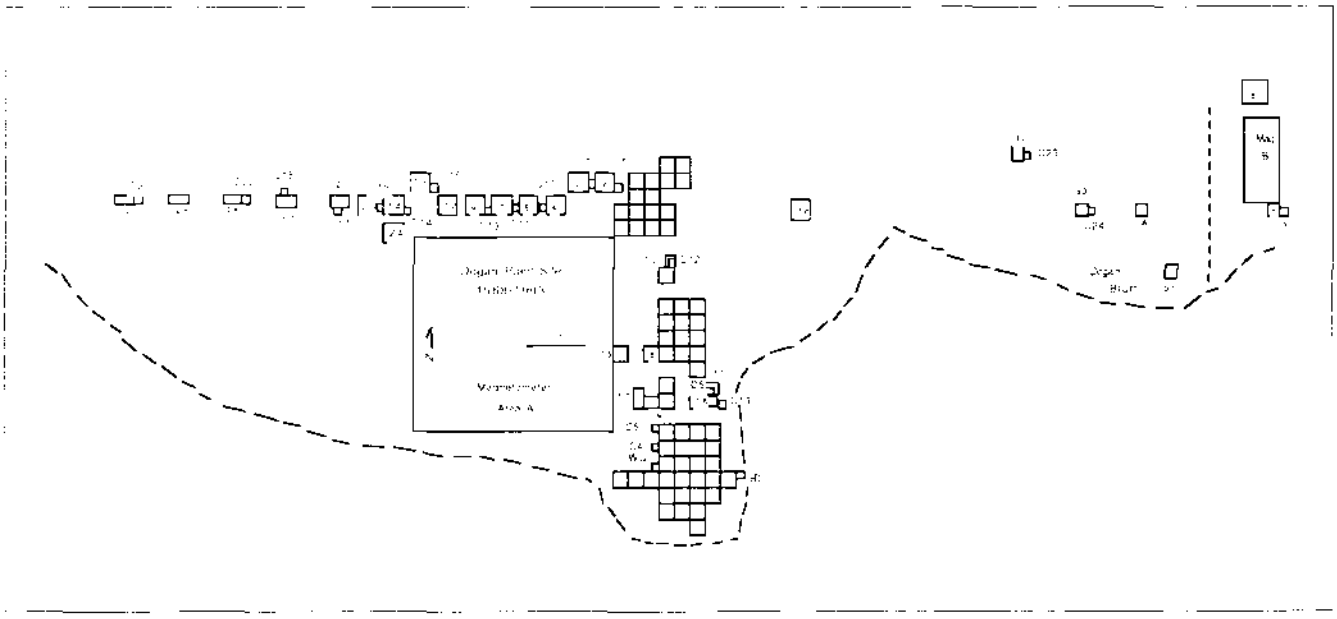

Figure 1. Dogan Point site map.

Geological Information

Geomorphology

The Dogan Point Site is one of at least 12 Middle to Late Holocene shell-matrix sites known on the banks of the Hudson River and situated on a till modified landform of Late Wisconsin age. The site is situated in two, rather than one, environments-the marine and the riverine, complicating our understanding of its geomorphology. The active geomorphic and sedimentary processes were inlet sedimentation, a variety of riverine processes, colluvial processes on the slope of the site, and exfoliation of the headland accelerated by wave activity and rising sea level. The bedrock is pyroxenite and diorite of Middle-Upper Ordovician age, covered by ice contact sands of Late Wisconsin age. Above that in some places can be found pockets of relatively larger less fragmented oyster shells of Middle to Late Holocene age capped by a smaller oyster stratum in humic anthrosols, all covered with contemporary humic earthworm-worked soils (Schuldenrein 1994).

Montrose Point, the larger landform of which Dogan Point is a part, was probably once a cliffed headland, with spit and quieter estuarine area at the base of the point (Figure 2). Based on the submarine topography, the shoreline was 45 m (148 ft) west of the site at 2500 years ago, 200 m (656 ft) west at 5500 B.P., and 500 m (1640 ft) west at 7000 B.P. (Figure 3). 8500 to 5500 years ago, during the Hypsithermal, sedimentation prevailed over sea-level rise. The drier condition would have favored the dominance of the marine environment over the riverine one, while the opposite has been true since the hemlock decline, or the end of the Hypsithermal. The balance between sea-level rise and stream activity has been the key variable in the geomorphological history.

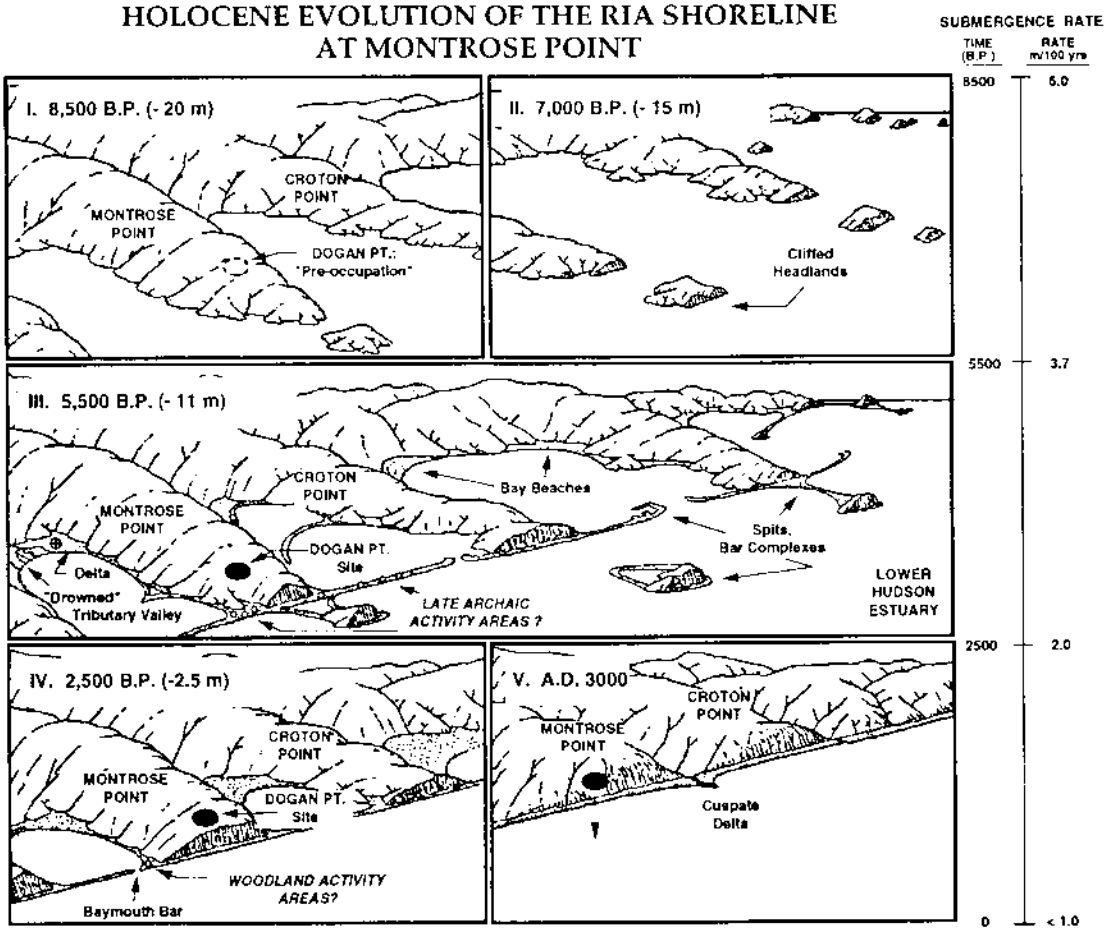

Figure 2. Cliffed headlands reconstruction for Dogan Point. (Modeled partially from Strahler, 1973)

Lithology

The stone resources were abundant both at the point and in the general area. Large numbers of unmodified cobbles were encountered in excavation, and most of them lack conchoidal fracture properties. The lack of glacial striations on these stones indicates that these cobbles and pebbles, which were moved into place by glaciers, were subsequently reworked by steep gradient streams from where they were gathered up by humans and transported to the site. A small number of cobbles showed end pecking, notching, grooving, abrasions on their sides, pit formation in opposite faces, and grinding surfaces. Two bannerstones were recovered as were two schist discs.

Stone-tool production and maintenance were obvious in the flakes recovered. Four hundred twenty-three flakes were recovered in the recent excavation. Over half of these (165) retained cortex while only 8 had bipolar damage. Fifty-nine percent of the flakes recovered from columns were caught in the 1/16-in screen. Heat spalling was rare. Flake tools were abundant in Brennan's excavation area and rare in the recent excavation. Flake tools were unifacial, bifacial, unilateral, and bilateral.

Most of the materials used (i.e., cherts, quartz, quartzite, argillite, argillitic red slates, feldspar) could have been collected in the immediate environs of Montrose Point. Quarried materials came from Warren Co., New Jersey; in New York from the Big Spring quarry, Crooked Swamp; from the Delaware watershed; from Bar Harbor Maine; from the New York City area (LaPorta 1994).

Seven end-scrapers and one side-scraper examined for microwear polishes indicate a use primarily for dry hide

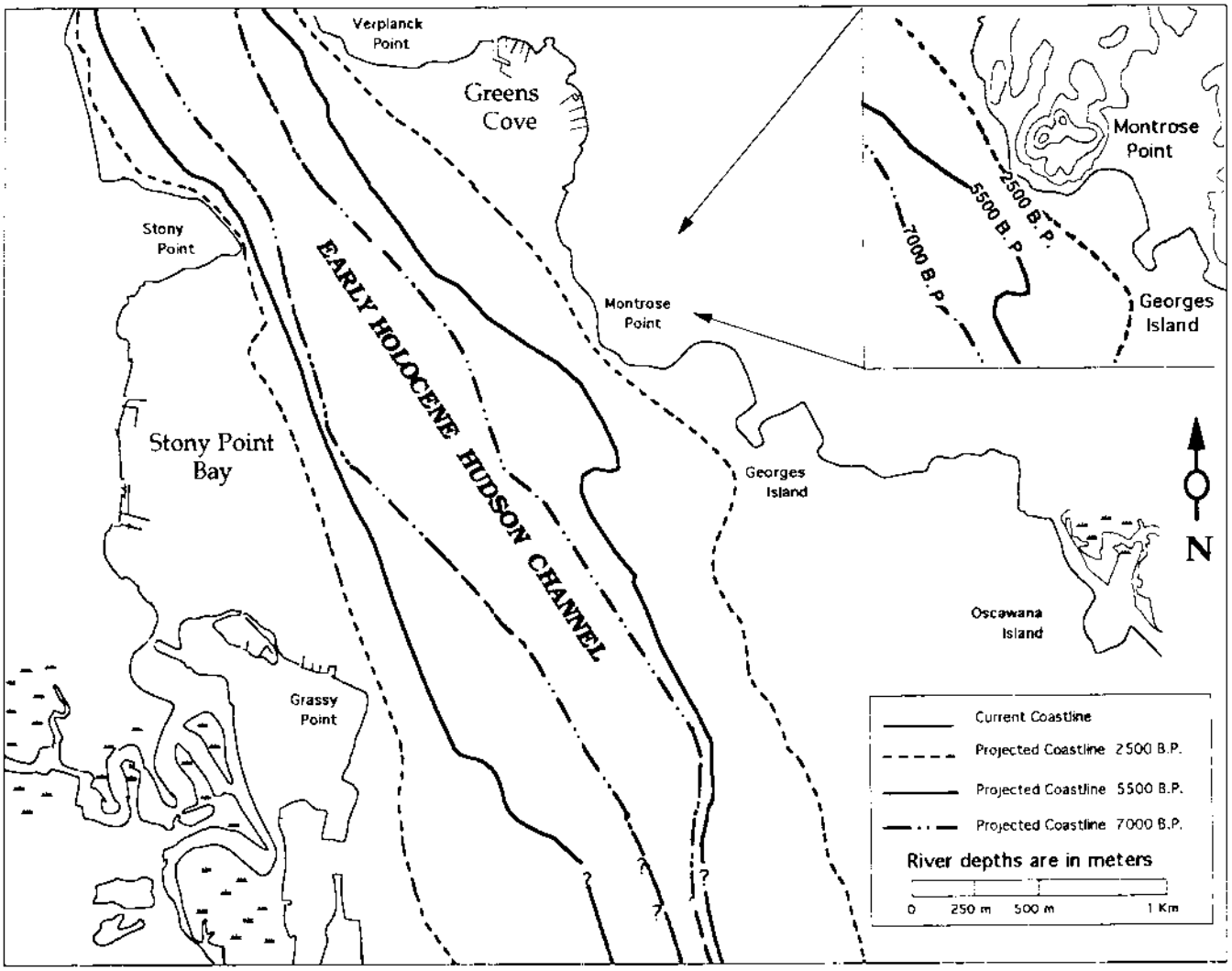

Figure 3. Sea-level position at Dogan Point.

working. Only two indicate use on fresh hides. Three of these scrapers were made on recycled projectile points, rotated 180 degrees. Polishes on the Archaic triangular points indicate a probable use only in piercing, while the Woodland triangles evidenced dual functions of piercing and scraping. Three drills were inspected, and all had been used to drill antler or bone, most likely antler. The Middle and Late Archaic stemmed points had various uses in piercing, butchery, bone/antler grooving, and planing after intentional snapping. All tools examined had been hafted (Kimball 1994).

One hundred forty-two whole projectile points and parts are known from Dogan Point (Table 1), and 86 of these could be located for reexamination (by Robert Funk) in 1993. Most of the points excavated by Brennan from the southern area of the site, Camp Site 1, and during his first two years of field work, could not be relocated. Of the 86 points reexamined, there were two Middle Archaic points including one Neville, 39 Late Archaic points including 9 Brewertons, 12 transitional Archaic points including three Susquehanna Broads, two Middle Woodland points, and 17 Late Woodland points, dominated by 11 Levannas. The other points were of indeterminate age. Table 2 provides measurements of some of these points. The Late Archaic component clearly evidences a Laurentian tool tradition but lacks ground slate objects, copper, and barbed bone points.

Biological Information

The shell deposits vary in thickness from over48 in (122 cm) in the southern tip of the point to shell free in the middle to 66 cm (26 in) in the northern area. In the most recent excavation program, sediments from 212 column levels, each 5 cm thick, were passed through stacked 1/2-in, 1/4-in, and 1/16-in mesh screens. The contents of the two larger screens were sorted and various analyses performed on the constituents. Occasionally, the 116-in material was also sorted into component parts. It was always sorted through for flakes, bones, and some types of invertebrates (crabs, odostomes, slugs, *Mya arenaria*, Dwarf Surf Clam).

Artifacts

Artifacts made on biological materials were surprisingly rare at Dogan Point. Bone and antler pieces were entered as artifacts in the Brennan catalogue but were not relocated. Bone artifacts from the recent excavation were two: a scratched tapering bone piece and a ground turtle scute. Three antler tines were recovered, but none had obvious usewear or modification. A single possible oyster shell artifact was found (Figure 4). Two bear canines were recorded by Brennan's crew but apparently were not drilled.

Figure 4. Possible shell artifact.

Invertebrates

Crassostrea virginica, or the Eastern Oyster, is the dominant bivalved shellfish species in shell-matrix sites of the Lower Hudson River (Table 3). Visually, the oyster constitutes 100% of the matrix in the southern part of the Dogan Point Site, while quantitatively it constitutes much less of the total weight of the column sample. For example, in Column 4 on the western side of the deposit, shell in general comprises 74% of the weight of all constituents including dirt, 95.69% excluding dirt, and 99.91 % of the weight of shelled species.

The salinity requirements for the species thought to best represent the immediate environment of Dogan Point suggest a salinity of 18-22 ppt 5500 years ago. The relative quantity of small and large *Cliona* sponge bore holes in the oyster shells indicate an aquatic habitat where the salinity was occasionally below 15 ppt and was above 20 ppt for one-quarter to one-half of the year. The customary place to harvest the oysters found in Dogan Point was mixed muddy sand.

Brennan made much of the large oysters he saw in several of the lower Hudson valley oyster sites and the so called "giant oyster" deposit was the main attraction to Dogan Point for Brennan. Using a mean umbo height of 1.22 cm, 71 proveniences were designated as "GO" although these shells are actually on the small side. There are few differences between the GO and SO shell levels in terms of bore holes, clustering, or height-length ratios. There is less fragmentation of shells in giant oyster deposits (index is the weight of 1/2-in screen shell divided by 1/4-in screen shell). Their more frequent invasion by sponges making large bore holes gives credence to Brennan's idea that the giant oysters had been collected from water of higher salinity than the later oysters lived in. The giant oyster levels were also marked by higher quantities of barnacles, much

Table 1. Projectile Points from Dogan Point, New York.

Cat.No	Location	Depth (in)	Comment
Brennan Points			
15	4N3W	4	stemmed
19	4N1W	4	base
20	4N3W	5	base
21	4N2W	6	tip
27	4N4W	0.3	shouldered blade
29	4N2W	4	Twombly[b]
30	4N1W	1	Normanskill[b]
31	4N2W	6	broad stem
32	4N3W	10	tip
38	4N3W	25	Beekman
39	4N3W	22	stemmed
43	5N4W	8	tip
44	5N4W	16	triangle
49	4N1W	4	tip
53	5N4W	14	Taconic[b]
60	4N1W	15	triangle
61	4N4W	13	blade
65	4N5W	5	Taconic[b]
67	4N6W	11	Normanskill[b]
69	4N5W	6	tip
71	4N4W	30	base
75	4N6W	18	triangle
78	3N2W	5	blade
79	3N2W	16	Twombly[b]
80	3N1W	14	Madison
81	3N2W	10	Taconic[b]
84	1N2W	4	side-notched
86	3N1W	15	Taconic[b]
88	4N6W	5	Taconic[b]
96	4N6W	27	Beekman[b]
111	6N2W	10	side-notched
112	6N2W	12	side-notched
113	6N2W	6	tip
116	6N1W	11	side-notched
138	3N3W	10	side-notched
143	3N3W	13	stemless
145	3N4W	12	tip
149	3N3W	13	tip
151	3N4W	12	Taconic[b]
155	3N3W	14	Taconic[b]
158	3N4W	24	stemmed
159	3N4W	22	Perkiomen
163	2N4W	2	triangle
164	2N4W	12	eared triangle
168	2N4W	19	triangle
169	2N3W	9	broad stem
172	7N4W	23	side-notched
178	2N2W	0	side-notched
183	13N4W	6	Brewerton eared notched
184	13N4W	6	untyped triangle
190	13N4W	12	corner-notched
204	13N4W	6	Late Archaic?
206	13N4W	2	corner-notched
212	12N4W	3	Big Sandy[b]
219	12N4W	screen	untyped Late Archaic
224	14N4W	6	Jack's Reef
225	14N4W	12	Late Archaic spear
226	13N3W	4	tip
230	14N3W	12	tip
249	12N4W	13	small broad stem
261	12N4W	10	Levanna
263	13N3W	14	Levanna/Madison
264	13N3W	14	Beekman?
276	14N3W	6	corner-notched base
286	12N2W	8	Brewerton side-notched
303	13N2W	1	Archaic?
304	13N2W	3	Levanna-like
307	20N4W	2	Beekman
310	13N2W	4	base
322	14N3W	28	Vosburg or Brewerton
329	12N2W	3	Late Archaic?
332	9N2W	31	Brewerton side-notched
336	14N3W	29	Middle or Late Archaic
337	14N3W	29	fishtail like?
338	14N3W	29	Late Archaic
339	7N4W	24	Neville base
340	15N4W	4	Levanna-like?

more Soft-shell Clam (*Mya arenaria*), slightly more mussel (*Guekensia demissa*), more flakes of smaller size. and more bone than the small oyster levels averaged. Looking at the mean umbo height values and the list of GO levels, it is clear that "giant oysters" are found discontinuously through Columns 4, 5, 13. 14, 16, and 19, separated by small oyster layers. Furthermore. the mean umbo height is occasionally not at its highest at the bottom of a column (Claassen 1994b).

In spite of the fact that some individuals have produced "seasonality" of oyster shells from New York sites, and even Dogan Point, their results are categorically rejected because the procedure used violates known tenets of molluscan development and ecology. Seasonality interpretations can only be meaningful when directed at groups of shells, never when individual shells are interpreted as has been the case (see Claassen 1990 for a critique of Northeastern shell seasonality studies).

Table 1. (continued)

Cat.No	Location	Depth (in)	Comment
Brennan Points *(continued)*			
348	14N2W	24	small stemmed
349	14N2W	39	side-notched
358	15N4W	2	Levanna
357	10N2W	21	triangle
363	12N1W	8	blade
366	22N4W	18	Archaic triangle?
370	17N4W	8	broad stem
371	24N4W		Brewerton-like
372	24N4W		Levanna-like
373	15N2W	6	Levanna
374	17N4W	10	thin side-notched
377	17N4W	14	Susquehanna Broad
378	21N4W	3	tip
381	24N3W	4	*contracting stem*
384	21N4W		small contracting stem
388	24N3W	backdirt	Late Archaic?
390	23N4W	7	triangle
393	23N4W	0	Levanna
396	22N6W	3	Beekman
402	22N6W	23	Vosburg
404	22N6W	23	Vosburg
407	21N6W	20	Vosburg
417	22N6W	26	Levanna
430	21N6W	26	stemmed
433	22N6W	25	blade
436	23N5W	10	Middle Archaic?
443	camp 1	0	side-notched
446	21N7W	20	Otter Creek
463	23N6W	10	triangle
466		0	Perkiomen
467		0	contracting stem
Dogan Knoll Points (Brennan)			
1			Snook Kill-like
2			Susquehanna broad
5			Susquehanna tradition knife
6			Brewerton side-notched?
8			Susquehanna broad?
16			Otter Creek
18			Middle Woodland?
25			Late Archaic
28			Normanskill -Late Archaic
36			Broad stem
44			Susquehanna broad
45			Lamoka??
Claassen Points			
306	23N6W	Fea . 2	Vosburg
307		0 in	Sylvan Lake
357	Square 1	Lev. 8	Stark
376a	Square 3	Lev. 1	Levanna[f]
376b	Square 3	Lev. 1	Taconic stemmed[f]
425a	Square 1	Lev.11	Drybrook fishtail
425b	Square 1	Lev. 11	
772	Square12	Lev. 2	Levanna-like
783a	Trench 2	cleaning	Late Archaic
783b	Trench 2	cleaning	Wading River
784	Square 13	Lev. 1	Levanna?
785a	Square 13	Lev. 2	Late Woodland?
785b	Square 13	Lev. 2	*Brewerton eared notched*
789	Square 11	Lev. 9	Brewerton side-notched
792	Square 13	Lev. 3	Otter Creek
797b	Square 14	Lev. 4	Neville
815	Square 16	Lev. 10	Brewerton eared notched
817	Square 18	Lev. 1	Jacks Reef Pentagonal
1201	Square 11	GO	Brewerton side-notched[f]
1202	Square 24	Lev. 1	Hunters Brook triangle[f]
1205	Square 20	Lev. 1	Orient Fishtail[f]
9999-1	4N5W	18cm	Brewerton[f]

Sources: Brennan's DP catalogue, and actual specimens from MALEA and Claassen project.

[b] Projectile point identified by Brennan. [f] Projectile point identified by Fiedel. All other identifications by Robert Funk.

Vertebrates

Recovered from both historic and prehistoric contexts were 2787 bones (Table 4). Fish bones numbered 220, accounting for 8% of the vertebrate remains. Their recovery unquestionably is due to the persistent use of 1/16th-in hardware cloth and the sorting of that material. Fish present include American Eel, White Perch, Striped Bass, Black Seabass, cod, and Oyster Toadfish. All these species would have been available in the river at the site, except perhaps the Black Seabass, which prefers higher salinities. Bones from toads and Spring Salamanders, Snapping Turtle, Eastern Box Turtle, and Northern Diamondback Terrapin, nonpoisonous snake, duck, sparrow, Domestic Chicken and Wild Turkey were recovered. Over half the bones came from at least 18 species of mammals: White-tailed Deer, squirrels, Raccoon, Black Bear, Opossum, Striped

Table 2. Projectile Point Metrics.

	Point Type	Mean len	Mean bld wt	Mean stem ht	Mean bld ht	Mean stm wt	Mean pt thk	Range len	Range bld wt	Range stm ht	Range bld ht	Range stm wt	Range pt thk	n
1.	Archaic triangle	27.4	22.4	—	28.9	—	4.5	21.3-35.7	20-d0	//	24.3-25.7	//	4.2-5.6	3
2.	Brewerton Ear-notched	36.7	18.1	9.8	32.9	17.6	5.4	27.1-46.2	15.9-22.2	7.5-12.1	24.9-40.9	14.5-23.7	4.2-6.9	3
3.	Brewerton Side-notched	37.6	23.6	7.3	28.4	22.1	7.1	30.4-41.7	20.1-28.1	6.8-7.6	20.8-33.2	17.7-29.6	5.7-8.4	4
4.	Levanna	29.1	23.6	—	28.7	- -	5.0	21.5-38.9	19.5-28.1	//	21.5-36.4	//	3.6-7.0	9
5.	Madison	31.8	19.3	—		--	4.2	31.8	19.3	//	//	//	4.2	1
6.	Neville	54.1	28.5	9.0	44.5	12.4	6.1	54.1	28.5	9.0	44.5	12.4	6.1	1
7.	Normanskill	42.5	19.2	8.3	34.2	15.8	6.6	42.5	19.2	8.3	34.2	15.8	6.6	1
8.	Otter Creek	45.6	25.5	12.1	34.9	10.8	6.5	36.6-54.6	20.5-30.6	11.5-12.7	29.2-40.5	3.3-24.2	5.5-7.0	3
9.	Perkiomen	43.2	38.4	12.5	31.7	13.9	7.8	43.2	38.4	12.5	31.7	13.9	7.8	1
10.	Snook Kill	--	31.0	14.4	—	14.8	7.0	//	31.0	14.4	//	14.8	7.0	1
11.	Susquehanna Broad	45.1	20.6	12.2	33.1	18.3	6.2	37.7-52.5	17.7-23.5	11.8-12.5	29.5-36.7	16.6-21.1	4.7-7.5	3
12.	Sylvan Side-notched	-	18.8	10.1	18.5	15.8	4.8	//	18.8	10.1	18.5	15.0	4.0	1
13.	Vosburg	36.3	23.6	6.4	30.5	19.0	5.6	33.3-41.5	22.7-28.1	5.9-6.6	28.3-36.4	20.9-21.3	4.1-6.4	4

All measurements are in mm. //: broken

Table 3. Invertebrates Recovered from 1987-1993 Dogan Point Excavations.

	# of Column Proveniences
Non-Molluscs	
Balanus sp., barnacle	
Callinectes sapidus, Blue Crab	25
Testacella sp., slug	16
Conopeum sp., bryozoa	
Molluscs—Marine	
Crassostrea virginica, Virginia Oyster	186
Geukensia demissa, Atlantic Ribbed Mussel	106
Boonea impressa, Impressed Odostome	45
Mulinia lateralis, Dwarf Surf Clam	21
Mya arenaria, Soft-shell Clam	76
Hynassa obsoleta, Eastern Mud Whelk	8
Melampus bidentatus, Coffee Melampus	3
Mercenaria mercenaria, Hard-Shell Clam	1
Busycon sp., whelk	1
Marine *(continued)*	
Bubble shell	3
Polinices duplicatus, Moon Snail	0
Molluscs—Terrestrial, Aquatic	
Hawaiia minuscula	
Retinella indentata	
Retinella indicata	
Anguispira alternata	
Gastrocopta armifera	
Stenotrema hirsutum	
Discus cronkhitei catskillensis	
Pupillinae	
Helicodiscus parallelus	
Mesodon thyroidus	
Zonitoides arboreus	
Strobilopsidae labyrinthica	

Table 4. Number of Identified Specimens per Vertebrate Taxon at Dogan Point (Whyte 1994)

Taxon	NISP
Fishes	220
Anguilla rostrata, American Eel	1
Opsanus tau, Oyster Toadfish	1
Gadidae, cod	1
Morone americana, White Perch	9
Morone saxatilis, Striped Bass	2
Morone sp., White Perch/Striped Bass	2
Centropristis striata, Black Seabass	1
Perciformes, perch-like fish	23
Osteichthyes, bony fish	180
Amphibians	5
Gyrinophilus sp., Spring Salamander	2
Bufo sp., toad	1
Anura, toad/frog	2
Turtles	33
Chelydra serpentian, Snapping Turtle	1
Terrapene carolina, Eastern Box Turtle	13
Malaclemys terrapin, Diamondback Terrapin	1
Emydidae, box/water turtle	15
Chelonia sp., turtle	3
Snakes:	3
Colubridae, non-poisonous snake	1
Serpentes, snake	2
Birds:	66
Anas sp., marsh duck	1
Anatidae, goose/duck	4
Meleagris gallopavo, Wild Turkey	4
Gallus gallus, Domestic Chicken	2
Fringillidae, sparrow	1
Indet. medium bird (crow-size)	3
Indet. large bird (larger than crow)	46
Indet. bird	5

Taxon	NISP
Mammals	1244
Didelphis virginiana, Opossum	1
Blarina brevicauda, Shorttail Shrew	1
Scalopus aquaticus, Eastern Mole	2
Ursus americanus, Black Bear	3
Procyon lotor, Raccoon	6
Mephitis mephitis, Striped Skunk	1
Mustelidae, mustelid	1
Canidae, dog/wolf	1
Marmota monax, Woodchuck	1
Tamias striatus, Eastern Chipmunk	2
Sciurus carolinensis, Eastern Gray Squirrel	20
Sciurus niger, Eastern Fox Squirrel	3
Sciurus sp., Gray/Fox Squirrel	3
Sciuridae, squirrel	2
Castor canadensis, Beaver	1
Rattus norvegicus, Norway Rat	2
Microtus pennsylvanicus, Meadow Vole	1
Rodentia, rodent	6
Sus scrofa, Domestic Pig	1
Odocoileus virginianus, White-tailed Deer	159
Cervidae, deer/elk	4
Bos taurus, Domestic Cattle	8
Bovidae, cattle	3
Indet. small mammal (smaller than Raccoon)	14
Indet. medium mammal (Raccoon-size)	3
Indet. large mammal (larger than Raccoon)	616
Indet. mammal	436
Indeterminate vertebrate	1159
Total vertebrate remains:	2787

Skunk, Woodchuck, Eastern Chipmunk, Beaver, cattle, pig, shrews, moles, rats, and voles. Deer bone fragments, 159 in number, far outnumber those of other taxa, while over half the mammal species are represented by only one or two bones. More than half the vertebrate remains come from the "giant oyster" deposits (Whyte 1994).

Seasonal indicators are deer antlers attached to the frontal bone, mandibles, and alveoli of approximately six- and eighteen-month-old deer, and the presence of the anadromous Striped Bass, both indicative of late fall through spring site use. Contradicting this conclusion is the absence of Sturgeon and other anadromous species (Whyte 1994).

Had 1/16-in mesh not been used, "84 percent fewer fish remains would have been recovered, and 60 percent of the fish taxa and several other vertebrate taxa would *not* have been represented in the recovered assemblage. Had... only ½ in mesh screens been... [used], no fish remains would have been recovered, and less than half of the vertebrate taxa would have been represented" (Whyte 1994).

Evidence of burning was not unusual and was found

equally across classes and elements, indicating accidental burning. Butchery marks were essentially absent on wild animal bones, and rodent or carnivore marks were uncommon. An unexplained rust-colored stain was found on a number of bones from throughout the shell deposit (Whyte 1994). The greatly fragmented bone and shell appear to be due to aboriginal activities or due to the act of excavating, not to post depositional activities on the site. If the collection of oyster was for immediate consumption as food, then it clearly overshadowed the dietary contribution of vertebrates.

Wood Charcoal

Charcoal was rare in the portion of the site most recently excavated and was usually scattered in the upper levels, suggesting an Historic Period burn. Unfortunately, most of the charcoal pieces were too small, too mineralized, or too few for identification even to the family level. Herein may lie an explanation for the persistently young radiocarbon dates on charcoal from this site. This degraded condition was the case disproportionately in the lower levels, again biasing the sample pool toward more modern or completely modem specimens. All samples submitted from lower than 40 cm were unidentifiable.

Chestnut was found in a clearly historic deposit (Square 1 Col. 7 Level 3). From the upper 20 cm of the recently excavated squares, a general level of topsoil/shell mix containing historic and prehistoric artifacts, came charred samples of Eastern Hemlock, White Pine, Red Oak, Red Maple, Eastern Hophornbeam, American Hornbeam, cherry, and Tamarack, and uncarbonized pieces of cherry, hickory nut shell, maple, and Northern White Cedar. From 20 to 30 cm deep, the shell deposit proper in the northwestern area of the site, came spruce, White Pine, and partially carbonized Eastern Hemlock. From 30 to 40 cm came uncarbonized bark and oak (Gary Crites, personal communication 1993). Surprising was the absence of American Beech.

Table 5. Dogan Point Radiocarbon Ages (Little 1994)

	Raw Age B.P. or (estimate)	$^{13}C/^{12}C$	[Lab #]	Conventional ^{13}C-corrected[1]	Cal. B.P. dR=-95 ± 45	Cal. B.P. dR=200 ± 75
Shell						
1.	6950 ± 100	(-4.3)	[L-1381]	7281 ± 100	7919 (7794) 7689	7639 (7516) 7419
2.	5650 ± 200	(-4.3)	[L-1036E]	5981 ± 200	6729 (6501) 6289	6409 (6197) 5939
3.	5580 ± 80	-5.1	[B-23161]	5900 ± 80	6517 (6411) 6305	6249 (6110) 5959
4.	5470 ± 70	-4.43	[B-70122]	5810 ± 70	6406 (6306) 6260	6149 (5979) 5899
5.	5382 ± 180	-4.2	[GX-13666]	5715 ± 180	6409 (6249) 5989	6149 (5906) 5679
6.	5155 ± 120	(-4.3)	[GX-1918]	5486 ± 120	6149 (5949) 5859	5839 (5642) 5493
7.	5130 ± 80	-4.2	[B-51326]	5470 ± 80	6063 (5937) 5880	5739 (5630) 5549
8.	5120 ± 45	(-4.3)	[Pitt-713]	5451 ± 45	5979 (5926) 5885	5709 (5615) 5549
9.	5095 ± 130	(-4.3)	[GX-2324]	5426 ± 130	6069 (5910) 5739	5729 (5589) 5439
10.	5010 ± 100	(-4.3)	[QC-101-1]	5341 ± 100	5929 (5848) 5699	5629 (5487) 5319
12.	4860 ± 70	-3.7	[B-51325]	5210 ± 70	5740 (5654) 5586	5459 (5318) 5259
13.	4820 ± 70	-3.8	[B-70123]	5170 ± 70	5718 (5627) 5562	5311 (5261) 5083
10b.	4765 ± 115	(-4.3)	[QC-101-2]	5096 ± 115	5659 (5567) 5429	5380 (5247) 4989
15.	4560 ± 80	(-4.3)	[QC-105-1]	4891 ± 80	5440 (5304) 5245	5039 (4874) 4810
13b.	4475 ± 100	(-4.3)	[QC-105-2]	4806 ± 100	5319 (5251) 5029	4969 (4828) 4655
16.	2500 ± 100	(-4.3)	[QC-103]	2831 ± 100	2779 (2718) 2569	2449 (2315) 2149
17.	2200 ± 60	-5.3	[B-72819]	2520 ± 70		
Non-shell						
18.	2965 ± 70	antler	[B-36219]	2965 ± 70		3261 (3203-3167) 3012
19.	735 ± 30	charcoal	[Pitt-679]	735 ± 30		687 (679) 672
20.	700 ± 120	charcoal	[QC-112]	700 ± 120		720 (671) 555
21.	310 ± 65	charcoal	[QC-104]	310 ± 65		473 (422-317) 297

[1] The estimated ^{13}C-correction for shell ages is 1625 ± ‰ (‰= ‰ 318 to 341 ^{13}C years.

Radiocarbon Dates

Twenty-one radiocarbon dates have been run on Dogan Point samples (Figure 5, Table 5). Seventeen dates were derived from single oyster valves, three were from charcoal, and one came from antler collagen.

Collagen

Dating collagen is not without its problems. Preeminent among these for the Dogan Point situation is that the usable life of collagen is only about 5000 years (Tom Stafford, personal communication 1990). Given that this site has been demonstrated to be older, the one antler employed was an inappropriate choice for dating.

Brennan had the collagen content of bone from South Hillside midden site, an unreported site, measured. The sample was divided into two groups, based on color: a dark group and a light, nearly white group.

> With the collagen content of fresh bone running to about 25 percent of bone weight, the collagen in the dark bone was assayed at 5.4 percent and that in the light bone at 4.8 percent. Some other factor than loss of collagen therefore must account for the blanching of some bone as compared with others, since the difference in collagen content is slight, but the results show that our archaeological bone had lost 80 percent of its collagen [Brennan 1981:50).

Charcoal

Although there were at least six hearths and one fire-reddened area identified by Brennan and one from Square 1 Levels 8-9 in the most recent work, charcoal of sufficient quantity for dating by conventional means was rarely encountered. Charcoal not associated with hearths was abundant in the upper 20 cm of squares excavated in the northwestern portion of the site. Coal was also found in these levels.

In three cases charcoal was submitted for dating with raw dates ranging from 735 ± 30 rcy to 310 ± 65 rcy. Only the 735 ± 30 date is potentially acceptable. It came from a large clump of burned wood retrieved at a depth of 107 cm buried by 82 cm of slope wash. This hearth also yielded a projectile point typed as a Rossville (according to Stuart Fiedel, Ed Curtin, Russel Handsman) or a Stark (in the opinion of Robert Funk). From lower in the square came a point designated by Funk as a Drybrook fishtail. Both the remaining charcoal dates are unacceptable given the types of projectile points found in their

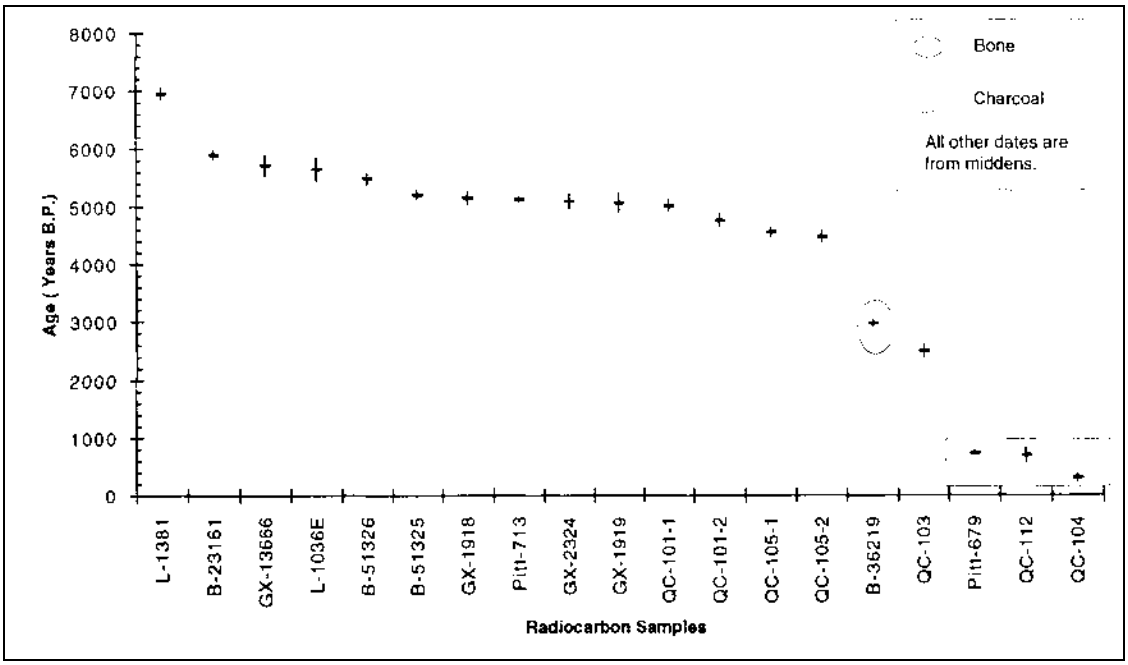

Figure 5. Dogan Point raw radiocarbon dates.

vicinity, found at the site in general, and for the depth of these hearths. Much of the charcoal submitted for species identification was unidentifiable due to mineralization, further suggesting that the charcoal from this site is unsuitable for typical archaeological analyses.

Oyster Shell

Seventeen raw oyster shell dates clearly place the shell accumulation at Dogan Point from 6000 to 4400 years ago and possibly as early as 7000 years ago (Table 5). Six Archaic dates have ^{13}C corrections averaging -4.3 o/oo which can be used to age the other dates by approximately ± 330 years to derive conventional ^{14}C dates. One may then want to calibrate these dates to reflect a reservoir age correction which must consider the specific growth locality. Elizabeth Little (1994) has explored a reservoir age correction for the Dogan Point dates and the Hudson River. Comparing the conventional dates to the associated artifacts, a delta R of between -200 and ± 500 radiocarbon years is suggested. For a delta R between -200 and ± 200 ^{14}C years, the earliest possible evidence for shellfish use on the lower Hudson was 7260-6600 years before present (Little 1994).

There is no means by which one can support an argument that all the 6000-to-5000-year-old shell dates from Dogan Point are systematically 1000 to 2000 years old (Harold Krueger, personal communication 1992). If the culprit were relic shells harvested with live shells, then all shells dated just happened to be relic shells. The old carbon problem, or reservoir effect, has been shown to be quite small. Leaching of calcium carbonate surely affects these shells, but the effect is to make the dates younger than true, not older. The impact of the delta ^{13}C correction when applied to Brennan's raw dates is to make the ages older. Samples have come from 15 cm below the surface to as deep as 100 cm below the surface and from several parcels of the midden. There are charcoal dates from Wicker's Creek and Croton Point #2 (5900 ± 200 rcy) that also fall into this time period. Paired charcoal and shell dates 4500 to 5000 years old are in agreement from the Piping Rock, Croton Point, and Twombly Landing sites (Brennan 1974:Table 1). With the recovery of a Neville point, there are now artifacts older than the dates.

Other Age Indicators

There are several aspects of the Dogan Point materials and stratigraphy aside from the Middle and Late Archaic projectile points and Late Archaic radiocarbon dates that suggest this site is quite old. These are the formation of an argillic horizon in the site's sedimentology, a mature soil profile, and the lack of bone.

A mature soil profile is one that "coarses upward, fines downward." Column 5, taken from the west wall opposite what was probably Brennan's square 10N4W, represented such a soil profile. With no exception, each successively lower level of the 12 levels excavated was composed of finer materials than the level above it. No historic or prehistoric human or animal digging had disturbed this spot in the site. While every sedimentologist asked was loath to quantify the amount of time required for such a textural distribution, all agreed that it is a long process. A shell from the small oyster horizon in Level 3 (10-15 cm bs) resulted in a raw date of 5470 ± 70. A humic acid date from Level 12, the deepest shell-matrix level, is pending.

Argillic horizons, or clay bulges, form as the soils continue to mature, indicative of even greater age. Argillic horizons are visible in all the columns. Saunders et al. (1992) have used the presence of argillic horizons to substantiate the Late Archaic age of earthen mounds in Louisiana with a bulk carbon-in-soil radiocarbon date of 5345 ± 235 B.P.

Bone is not safe in shell-matrix sites and evidences greater decay with increasing depositional time. Nichol and Wild (1984:47)calculated a half-life for the most robust bones of the snapper at 500 years in shell-matrix sites and argued that for a 10,000-year-old site, there would be one premaxilla extant for every 20,000 deposited. The paucity of fish bone in Dogan Point can be taken as evidence of great antiquity of the site. The fact that so many species at Dogan Point are represented by a single bone fragment and, consequently, a low frequency of matching elements, also suggests great age while not excluding sampling bias.

Future Work

While the standard archaeological analyses are completed for Dogan Point and await publication, several types of analysis are scheduled for the near future. Deer bone will be tested for the fluoride content in an effort to study site disturbance. Oysters will undergo oxygen isotope analysis for information about the aquatic habitat and chemical analysis for additional habitat information. A core of the offshore sediments needs to be extracted. Dogan Point and other shell-matrix sites in the Haverstraw Bay area of the lower Hudson River are unique in the eastern United States. They alone can provide us with a view of the aquatic adaptation of humans in the Middle and Late Archaic periods. As such, they deserve renewed professional attention and community protection.

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Was Cro-Magnon Man in the Palisades?

Herbert C. Kraft, Inc. Orange County Chapter, Seton Hall University Museum

This article describes the discovery in Palisades, New York, of a petroglyph bearing images clearly derived from the famous cave paintings of Lascaux in the Dordogne region of France. How did these images wind up on a diabase boulder in southeastern New York State? Are they, for real? Why would someone with obvious artistic skill go through the considerable trouble of engraving human and animal images on a hard rock in so remote a place? And why had no one taken notice of them until now?

Background Information

The Upper Paleolithic era, from about 35,000 to 10,000 years ago in Western Europe, was a time of great technological and artistic achievement. A fully modern, Homo sapiens sapiens type of people called the Cro-Magnon had displaced the indigenous Neandertal. They introduced tools made from long, narrow blades, the use of the atlatl or spear thrower, a burin that permitted greater use of bone and antler, and a multi-dimensional art. These Upper Paleolithic peoples continued to occupy caves, where caves were available, and continued to live off the land as hunter/gatherers much as the Neandertal people had done before them. But their cave art was new, and it was stunning. Artists of considerable skill employed various techniques of representational and abstract painting, engraving, and sculpture to make human, animal, geometric, and enigmatic figures, and they used graduated tones of light and dark to produce the effect of rounding or modeling, a technique later artists of the Italian Renaissance would call *chiaroscuro*. Such art first appeared during the Aurignacian Period some 34,000 to 30,000 years ago. The finest cave art, however, is attributed to the Magdalenean Period dating from about 18,000 to 12,000 years ago at Lascaux, Faunt de Gaume, and Les Combarelles among other caves in or near Les Eyzies in southern France, and at Altamira in the Cantabrian Mountains in northern Spain.

The Palisades Petroglyph

What has all this to do with the Palisades on the western side of the Hudson River? Well, let us start at the beginning. I had just arrived at the University one morning in early October when a message on my telephone answering machine requested me to telephone a Mrs. Alice Gerard concerning the recent observation of a petroglyph at Snedens Landing in the hamlet of Palisades, New York (Figure 1). I returned the call with a degree of anticipation and was soon engaged in pleasant conversation with Mrs. Gerard concerning a large boulder situated near a neighbor's driveway. The property had changed ownership several times, and while improvements had been made to the house and surroundings, nobody seems to have paid particular attention to the rock-it was simply a part of the landscape. One rainy day, Stella, the seven-year old daughter of the current property owner, noticed that the surface of the rock had been ornamented with the head of a reindeer and certain other incised figures. The wetness seemed to accentuate the carvings.

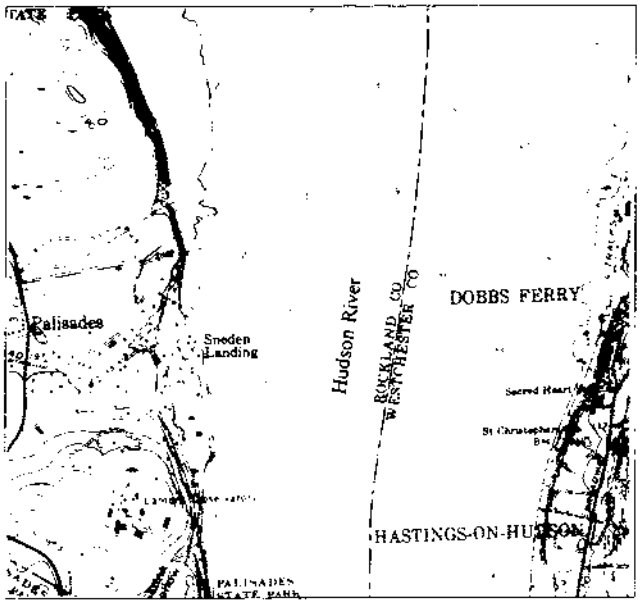

Figure 1 Detail of the USGS map (Nyack Quadrangle) showing the location of Sneden[s] Landing.

Mrs. Gerard went on to identify the etchings on the petroglyph: the deer's head, a horse with horns, a bird-like human figure, and others. Doubtless sensing my growing skepticism, Mrs. Gerard endeavored to allay my suspicions by informing me that she was familiar with petroglyphs, having studied anthropology with Drs. Frank C. Hibben and Paul

Figure 2. The Palisades petroglyph. The figures have been lightly chalked in to enhance their visibility.

Reiter at the University of New Mexico. She freely admitted that the figures on this particular petroglyph were unusual, but suggested that 1 really ought to examine them at first-hand. I knew, of course, that horses were unlikely to be depicted on prehistoric petroglyphs in this area. Moreover, the outline drawings she described were different from those I had been accustomed to seeing, although Edward J. Lenik (199l) had recorded some rather unusual historic examples. Perhaps, these were of that genre. Besides, Mrs. Gerard was pleasantly persuasive, and so I agreed to make the trip.

And why not? It was the beginning of fall and the leaves were just starting to turn colorful. What a delightful time to get away from the office and enjoy a leisurely ride in the country. I drove north on the Palisades Interstate Parkway into Rockland County and on to the hamlet of Palisades nestled on the cliffs overlooking the Hudson River. Mrs. Gerard met me, and together we walked down Corbett Lane to Snedens Landing where the petroglyph was situated. The stone, composed of Palisades diabase, measured roughly 122 cm (48 in) in height, 127 cm (50 in) in length, and about 60 cm (2 ft) in thickness. The outline pictures, engraved 6 mm (0.25 in) into the face of the stone, were skillfully executed, and the images were unmistakable: an antlered deer head; a horse with the suggestion of two horns protruding from its head; a bird-headed man with erect penis seemingly in the act of falling backwards arms outstretched and fingers extended; another standing figure similar in form but smaller, his left arm brandishing a spear or harpoon; two additional spears or harpoons, or possibly atlatls, near the deer's head, and below, a bird perched on, or attached to, a shaft (Figure 2).

Figure 3. The deer's heads from the cave at Lascaux.

Figure 4. The homed horse (known as the "unicorn") from the cave at Lascaux.

I knew that I had seen these figures many times before in book illustrations and also when I had visited the French cave of Lascaux earlier last year, and so my mind quickly identified the prehistoric archetypes (Figures 3, 4, 5). But how did these reproductions of the Lascaux pictographs get to Palisades, New York?

As early as 1590, the Jesuit, Jose de Acosta guessed that a land bridge in high latitudes formerly connected the North American and European continents, and that small bands of hunters first entered the Americas over this route (Acosta 1590). In 1879, the famous French prehistorian, Gabrielle de Mortillet, Professor at the Ecole d'Anthropologie in Paris and second in command at the French National Museum at Saint Germaine-de-Laye, reiterated this possibility when he wrote, in the *Bulletin de la Societe d'Anthropologie de Paris* concerning another North American discovery, the so-called "Trenton Gravel Implements" (Abbott 1881:471-520). These "rude implements," discovered by Dr. Charles Conrad Abbott at his "Three Beaches" homestead adjacent to the Delaware River below Trenton, New Jersey, appeared to be similar in form to certain *coup de poings* or hand axes from the Somme River gravels in France. However, the opinions Messr. de Mortillet expressed at that time concerning the occurrence of such tools on both sides of the Atlantic Ocean might as easily have been applied to the Palisades petroglyph:

> It is interesting to see that the same epoch has produced similar industries in such different countries. This makes it more probable, that there was formerly a great bridge between America and Europe. The similarity of a great number of animals and of plants common to the two countries shows the existence of this communication.... Perhaps this communication may have taken place in the northern part of the ocean, in the latitude of Newfoundland [Mortillet in Abbott: 1881:490-491].

Unfortunately, Monsieur de Mortillet did not inform us concerning the appearance of this prehistoric "bridge," or how Paleolithic humans might have crossed the vast expanse of Atlantic Ocean to Newfoundland. Or, as has been suggested by one of my colleagues: "Might the influence have gone in the other direction?" Might some remote ancestor of the Lenape Indians have used this bridge, or might he/she have paddled a dugout canoe across the Atlantic Ocean and up the Dordogne River to influence the Paleolithic art of Western Europe? Have we perhaps been crediting the Upper Paleolithic peoples of that region with an artistic skill that originated here in Lenapehoking, the "land of the Lenape?"

I am not serious, of course. Today we no longer accept such facile conclusions concerning Paleolithic man's appearance in the New World. There is certainly no evidence that Cro-Magnon people had seagoing canoes, let alone ships, and the same is true of the autochthonous Lenape. The "Trenton Gravel Implements" have also been dismissed as being of far more recent, probably Middle Woodland, times (Kraft 1986:25-28, 1993; Meltzer 1993:45-48). How then did the petroglyphs get here?

Lascaux Cave

Lascaux, one of the more recently discovered Upper Paleolithic caves, was found by four boys in 1940. The paintings on the walls and ceiling of this grotto have been called "the Sistine Chapel" of Paleolithic art. Animals in contrasting colors (red iron oxide and black manganese dioxide) are exceptionally well drawn; some are beautifully animated, and some approach life-size, conditions that are unusual in cave art. Following its opening to the general public, the site was visited by thousands of tourists daily. Their breath and resulting increase in moisture, together with the incandescent illumination required to view the paintings, caused the

Figure 5. The bird-headed figure; spear, harpoon, or atlatl figure; and bird effigy on a staff from the cave at Lascaux.

rapid growth of the alga, *Palmellococcus.* This blight, *"la maladie verte,"* forced the closing of the cave in 1961. However, exquisite color photographs of the Lascaux painting were widely published and may be found in almost any book about Upper Paleolithic art and culture. Recently, too, the French government undertook to build, near the actual cave, a replica of the principal chambers of Lascaux complete in every speleological and artistic detail so that visitors might once again experience this marvel of prehistoric accomplishment. Exact replicas of the painted deer heads from Lascaux (Figure 3), and the bulls of Altamira are now also to be seen in the new Hall of Human Biology and Evolution at the American Museum of Natural History in New York City.

Conclusion

A number of facts concerning the Palisades petroglyph have come to light primarily through the efforts of Alice Gerard and her mother, Alice Munro Haagensen, who authored a history of the hamlet titled, *Palisades and Snedens Landing* (Haagensen 1986). It would appear that a sculptress named Jane Wasey, who once lived on Corbett Lane, did some carving on stones located in different parts of Snedens Landing. She was a good friend of a Miss Sharkey who formerly owned the property on which the petroglyph is located. Unfortunately, the aged Miss Sharkey, does not remember anything about the petroglyph, and Jane Wasey moved away in the late 1970s and has since died.

Might we assume that Jane Wasey visited Lascaux cave sometime in the 1940s or -50s? Or might she have seen photographs of the cave paintings that so impressed her that she undertook to reproduce them in two dimensional outline on this boulder at Snedens Landing? The horse with its projecting horns reminds one of the "unicorn" at Lascaux (Figure 4), the human figure, here 61 cm (24 in) long from top of head to soles of feet, is positioned, on the petroglyph, in front of a deer's head, whereas the Lascaux rendering shows the same figure in front of a disemboweled bull bison (cf. Figures 2, 5). The position of the larger man, tilted at a c. 45° angle as if falling over backwards, is the same as that of Lascaux, except that the bull has been replaced by a deer's head. The smaller standing human figure is added. Both are represented with a bird's head, as at Lascaux, possibly indicating a clan or totemic spirit. The bird on the staff, possibly a clan designation or standard, is also similar. Whether the line engraved on the Palisades petroglyph were at one time painted

to make them stand out, as is the case in French cave art, must now remain a matter of conjecture.

Concerning the Palisades petroglyph, it is my judgment that Ms. Wasey, if indeed she was the sculptress, was simply adding beauty and interest to the neighborhood and, so far as we know, she received no pay for doing this. It was a labor of love. The Palisades petroglyph has no archaeological value; there is no question of forgery or impropriety, and the arrangement of the figures is not the same. But it is of interest, and now, at least, it is documented should anyone rediscover this curiosity at some future time.

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Minutes of the 77th Annual Meeting
New York State Archaeological Association

Comfort Inn, "The Point," Niagara Falls, New York

Combined Business and General Meeting

Meeting called to order on April 23, 1994, by President Robert J. Gorall. Roll call: Twelve chapters present with two absent. Roll call committee chairpersons: Nine present, two absent, one vacant chair.

Report of the Officers

Secretary

The minutes from the 1992 Annual Meeting were read, and a motion was made by Barbara DeAngelo and seconded by Dr. Alex Neill to accept the minutes with the appropriate corrections noted.

President

Due to the untimely death of the Secretary, John McCashion, the President appointed Muriel E. Gorall as interim Secretary until the next election takes place in 1994. The Van Epps Hartley Chapter will host the New York State ESAF Annual Meeting in the fall of 1994. Donald Rumrill and Richard Wakeman have agreed to serve on the NYSAA Constitution Committee, and William Engelbrecht of the Frederick Houghton Chapter has agreed to serve on the Nominating Committee for 1994. The vacancy of the Librarian has been filled. Gordon DeAngelo has agreed to take over that post and has already made inquiries about the permanent home for the NYSAA Library. A special committee, which had been appointed by the President, has turned in its recommendations.

Vice President

No report.

Treasurer

The Treasurer's Report was given, and a motion was made and seconded to accept the Treasurer's Report as read. The motion was accepted, and the Treasurer's Report was entered into the records.

Report of the Treasurer, April 20, 1993

Adirondack Trust Co.

4/20/92	
CD #37220016112	$6,723.20
MMDA #7922385	4,088.90
NOW #1945406	2,532.12
Cash Receipts 1992-1993	
Dues	$6,783.75
Publication Sales	803.64
Interest NOW Account #2945406	26.32
Transfer from MMDA #7922385	1,000.00
TOTAL	$8,613.71
TOTAL RECEIPTS	$ 8,613.71
Balanced Checking Account (4/20/92)	2,532.12
Total	$11,145.83
Disbursements (1992-1993)	-8,949.89
Balance	$2,195.94
Checking Account Charge	-31.00
Returned Check	-6.00
BALANCE	$2,158.94

4/20/93		
CD #37220016112		$7,191.68
(Interest 92-93)	460.48	
MMDA #7922385*		3,193.92
(Interest 4/30/92-3/31/93)	105.02	
NOW #2945406		2,158.94
(Interest 4/30/92-3/31/93)	26.32	
TOTAL ASSETS		$12,544.54
Disbursements 1992-1993		
Secretarial Expenses		$ 647.38
Archaeological Services		550.71
Bethlehem Printing Company (forms)		193.10
Miscellaneous (flowers)		101.65
The Bulletin No. 103 (Printing)		2,852.47
The Bulletin No. 104 (Copyediting/Layout)		1,020.00
The Bulletin No. 104 (Printing)		2,922.35
Postage, *The Bulletin* Nos. 103 and 104		662.23
TOTAL		$8,949.89

*Less $1,000 transferred to NOW account

Committee Reports

The committee reports were given, and copies are to be turned over to the Secretary for the Association's records.

Awards

Peter Pratt reported that the committee had met and the awards have been chosen and will be awarded at the Saturday night banquet. Peter Pratt would like to remind all chapters to mail their awards nominations to him no later than March 1.

Constitution

Richard Wakeman investigated the legality of changing the constitution in regard to the dollar amount for dues. He stated that his findings indicate that this procedure is legal. A motion was made by Fran Halley and seconded by Fred Stevens to accept the motion as read with the change noted. It was voted upon and accepted by the membership present.

ESAF

The President stated that he had a letter from the ESAF Chair, Dr. Roger W. Moeller. He stated that due to personal reasons he was resigning as the ESAF representative for NYSAA. He has also given up the bulk mailing of The Bulletin for the NYSAA. The bulk mailing will be taken over by the Secretary, Muriel Goral l. The President asked that the Secretary read the final report sent by Dr. Moeller. Dr. Moeller reported that the 1992 Eastern States Archaeological Federation Meeting was held in Pittsburgh, Pennsylvania. AENA publications Nos. 20 and 21 will be mailed in January and March 1993. The next Annual Meeting would be held in Bangor, Maine, October 28-30, 1993. Individuals wishing to present papers were advised to contact James Petersen, Archaeology Research Center, University of Maine at Farmington, Farmington, ME 04938.

The President said he had been notified that a special offer exists for NYSAA members whereby the NYSAA will receive four dollars for every ESAF membership paid through the Association.

Bulletin

Editor Charles F. Hayes III reported *The Bulletin* issues Nos. 103-104 (Spring and Fall 1992) were published and issues Nos. 105-106 are currently being assembled and should be out in the summer and fall of 1993.

NYAC/NYSAA

Dolores Elliott asked that the NYSAA exchange reports with NYAC, and a report will be sent from NYSAA. Dolores reported that NYAC is working on many projects including Archaeology Week and will send a report when available.

Nominating

No report on elections until 1994.

Legislative

Paul R. Huey gave a thorough report on Federal and State legislation. If one wishes a copy of the report please contact the NYSAA Secretary.

Program

Andrea Zubricky reported that there was a full agenda for the upcoming program.

Publications

No report.

Librarian

Gordon DeAngelo has been looking into placing the NYSAA Library at Syracuse University with the understanding that it be entered directly into the laboratory of Syracuse Universi ty on a long- term basis. There was considerable discussion on the extent of the library and just what the NYSAA Library contains with respect to duplicate copies and the availability of the library to interested parties. There would also be a need to sort and stamp the publications retained for the library with an identification. A question of whether any duplicates would be available to members of the association was asked and would all of this create a need for a librarian'.' It was suggested that a pro fessional librarian be hired to place the library on a computer and would then be kept updated when necessary. Hopefully these suggestions, when implemented, would get the library back into circulation. Gordon will report back to the President with further information as it becomes available.

Special Awards Review Committee

Chairperson of the committee, Ellie McDowell-Loudan gave the Awards Committee Report as follows.

Special Awards Procedure

la. That the Awards Committee consist of the President of each chapter and one designated member to be selected from and by the chapter's members. Voting on the awards shall be by the Awards Committee members who are present at the annual NYSAA meeting. There will be no proxies or alternate votes accepted. Letters of recommendation for awards from each chapter should be sent to the Awards Committee Chair by February 1 so that the information can be distributed to Awards Committee membership by March 1 (in advance of the Annual Meeting).

If the Awards Committee member cannot be present at the Annual Meeting, he/she may send a letter of

recommendation about award nominations to the Awards Committee Chair. This letter, or these letters, must be read at the Annual Meeting of the Awards Committee, whether chapter representatives are present or not. A recommendation letter is not a vote.

lb. That the chair of the Awards Committee shall be appointed by the President of the NYSAA and must be a Fellow of the NYSAA.

1c. That a copy of these recommendations shall be sent to the current Awards Committee Chair, Peter Pratt.

These changes were recommended as a means for ensuring simplicity and fairness, providing a way of involving a greater number of NYSAA members in awards decisions automatically, and allowing more time for reflection by the Awards Committee.

Annual awards will be granted to members of the NYSAA (except under unusual circumstances) in the following manner:

Basic Procedure for All Awards

The President of the NYSAA, or chapter officers will submit the name of the individual to be recognized to the Awards Committee Chair in writing by February 1 of the current fiscal year. No nominations will be accepted after this date. The Awards Committee Chairperson will distribute copies of nomination materials to all members of the Awards Committee by March 1. The Awards Committee Chair will present the name of the individuals nominated to the Awards Committee for review and decision-making at the NYSAA Annual Meeting.

If the Awards Committee member cannot be present at the Annual Meeting, he/she may send a letter of recommendation about award nominations to the Awards Committee Chair. This letter, or these letters, must be read at the Annual Meeting of the Awards Committee, whether chapter representatives are present or not. A recommendation letter is not a vote.

Proposed Ranked Order of Awards

Arthur C. Parker Award: This award will be granted in recognition of major contributions to the objectives (Article 2) of the constitution of the New York State Archaeological Association.

1. This does not include a medal as suggested by John McCashion, due to lack of funds.

2. This may not be awarded each year.

3. This may be awarded to a non-member, i.e., a developer who has been active in the development of archaeological (or other) preservation legislation, or a non-member who has produced an important publication related to New York State archaeological concerns.

Achievement Award: This award will be granted in recognition of a single major contribution to the field of anthropology/archeology covered by the objectives of the Association. Such an achievement would comprise an original piece of work of distinguished caliber available in print.

Fellow Award: The basis for this recognition will be the publication as a senior or sole author of a noteworthy report in a monograph or widely circulated journal such as *The Bulletin*. The criterion that the research be an outstanding contribution to the knowledge of the anthropology/archaeology of New York State will be rigorously applied.

Certificate of Merit: This recognition will be awarded for work done in New York State anthropology/archeology, demonstrated by authorship of shorter reports, junior authorship, authorship of special appendices, or reviews in archaeological or other publications. This certificate may also be granted for significant field work.

Meritorious Service Award: This award will recognize persons who have contributed in some significant manner to the Association or its chapters not directly related to research. This class may include officers, editors, librarians, or any other whose service is worthy of recognition.

The President thanked Ellie for the report and asked the members present for comments concerning this report.

Peter Pratt stated that he was asked to present the feelings of the Awards Committee consisting of the Fellows of the Association. He then stated that as a whole the Fellows were pleased to say after looking at the respective categories in terms of the Achievement, Fellow, Certificate of Merit, and Meritorious Service Awards, even though there are some minor changes, they are essentially the same as they have been for many years and, therefore, there is no problem. They do feel, however, that the Arthur C. Parker award should be eliminated. Peter gave several reasons and read letters. The Awards Committee does feel that it would like to have the opportunity to review the Special Awards Committee's recommendations and also go over the Awards Committee's past procedures and feel that they could compromise so as to satisfy the Association's wishes. Peter felt that the suggestion of having the award recommendations mailed in and arriving no later than February 1 was particularly favored by the Awards Chairman and Committee.

Others gave their views on the issue, and after further discussion Dolores Elliott made a motion that the Awards Committee consisting of the Fellows get together to review the recommendations of the Special Awards Review Committee, to take into consideration others' views on this issue, and to arrive at a workable solution as to how the awards would be decided upon in the future. This solution would then be presented to the association at the next business meeting in April 1994.

The motion was seconded, the President asked for a vote on the motion as proposed, and it was voted into the records.

A suggestion was made by Fran McCashion that when the Awards Committee finished with their review on the above motion, a copy of both the Special Awards Review Committee's recommendations and the Awards Committees proposals be sent to all presidents and secretaries of each chapter in the Association.

Richard Wakeman brought forth a proposal that the dues of the Association be increased by one-third, and after a vote in the affirmative, the new NYSAA dues shares beginning in 1994 are as follows: Life $100, Institutional $20, Sustaining $30, Individual $12, Husband and Wife $14, Student $8, and Junior $4.

The Orange County Chapter offered to host the 1994 Annual Meeting at Sparrowbush, New York. The offer was accepted unanimously.

There was no more business, and the 1993 Annual Meeting of the New York State Archaeological Association was adjourned.

Muriel E. Gorall, Secretary

Program
77th Annual Meeting
New York State Archaeological Association

April 23, 24, 25, 1993
Comfort Inn, "The Pointe," Niagara Falls, New York
Host: Frederick M. Houghton Chapter

This conference is dedicated to the memory of John McCashion, NYSAA Secretary.

Friday April 23, 1993

12:00 pm	NYSAA Registration
1:00 pm	NYAC Board Meeting
2:00 pm	NYAC Business Meeting
3:00 pm	Tour of Archaeology Laboratory, Old Fort Niagara
7:00 pm	NYSAA Awards Committee Meeting
7:30 pm	NYSAA Executive Board and General Membership Meeting

Saturday April 24, 1993

8:00 am	Welcome Andrea Z.ubricky, President F.M. Houghton Chapter Robert Gorall, President NYSAA

Iroquoian Session
Chair: Robert Gorall. L.H. Morgan Chapter

9:00 am	*Recent Excavations at the Ripley Site, Chautauqua County, New York: Preliminary Results and Implications for Future Research* William Green, SUNY Albany
9:25 am	The *Hill Site - A Possible Ceramic Firing Station in Metropolitan Toronto* Mima Kapches, New World Archaeology, Royal Ontario Museum
9:50 am	*The Disappearance of the Jefferson County Iroquoians* William Engelbrecht, Buffalo State College
10:15 am	Coffee Break

Chair: William Engelbrecht, F.M. Houghton Chapter

10:40 am	*The Distribution of the L-Heart Finger Rings and the Origin of Their Valentine Heart Motif* Richard Hosbach, Chenango Chapter
11:05 am	*European Glass Trade Beads on the Niagara Frontier Region Sites* Kathryn Stark, SUNY Buffalo
11:30 am	*Inventory of Artifacts and Ecofacts from an Early Seventeenth Century Erie Midden, Erie County, New York* Michael Gramly, Great Lakes Artifacts Repository
12:00 noon	Lunch

General Session
Chair: Elaine Herold, SUNY Buffalo

1:30 pm	*Archaeological Data Recovery at the Waterfall Site (191-5-1) Coxsackie, New York* J. Sanderson Stevens, John Milner Associates, Inc.
1:55 pm	*Archaeological Survey of Cortland County, New York: 1992-1993* Ellis McDowell-Loudan, SUNY Cortland
2:20 pm	*Distant Voices in a Troubled Land: The Archaeology of the African Burial Ground in Lower Manhattan* Warren Barbour, SUNY Buffalo
2:45 pm	Coffee Break

Dutchess Quarry Cave Symposium
Chair: Karen Hartgen, Hartgen Associates

3:05 pm	*The Discovery of Dutchess Cave No. 1* George Walters, Incorporated Orange County Chapter
3:25 pm	*The Archaeology of Dutchess Quarry Caves Nos. 1 and 8* Robert Funk, Van Epps Hartley Chapter

3:45 pm	*Vertebrates from Dutchess Quarry Caves* David Steadman, New York State Museum
4:05 pm	Management Aspects of the Dutchess Quarry Sites Martha Costello, Dunn Engineering Company
4:25 pm	Recent Investigations at Dutchess Quarry J.W. Bouchard, Hartgen Archaeological Associates, Inc.
4:45 pm	The Application of Cognitive Models for Lithic Resource Exploitation: Folk Geology within the Wallkill River Valley Philip La Porta, City University of New York at Hunter College
5:30 pm	Museum Tour and Happy Hour - Cash Bar Native American Center for the Living Arts
6:45 pm	Welcome Andrea J. Zubricky, F.M. Houghton Chapter Invocation, Fr. John Lee, L.H. Morgan Chapter
7:00 pm	Dinner
8:00 pm	NYSAA President's Report
8:15 pm	NYSAA Awards
8:30 pm	*Boondoggles, Bafflements and Breakthroughs: Discovery and Adventure at the Hiscock Site* Richard S. Laub, Curator of Geology, Buffalo Museum of Science

Sunday April 25, 1993

General Session
Chair: Andrea J. Zubricky, F.M. Houghton Chapter

9:00 am	*Monuments to Indians and Pioneers of Early Times* Robert J. Gorall, L.H. Morgan Chapter
9:25 am	*The Myth of the Jesuit Ring: A Study of the IHS* Adrian Mandzy, York University
9:50 am	*The Highest Form of Flattery? Redware Production in Erie County* Maria O'Donovan, SUNY Binghamton
10:15 am	Coffee Break
10:40 am	*A Preliminary Report on Two Early Iroquoian Sites in Erie County* Nancy Reyner-Herter, SUNY Buffalo
10:55 am	Niagaraware: A Unique Indian Material Culture and Culture Region Jeffrey Gordon, Bowling Green State University
11:20 am	Closing Remarks
1:30-4:30	Niagara River Gorge Tour Guide: Keith J. Tinkler, Brock University

In Memorium

Kenneth E. Kidd (1906-1994)

On Saturday, February 26, 1994, Ken Kidd died in Peterborough in his 88th year. He leaves behind his wife Martha, whose energy sustained him through almost all his career. Ken joined the ROM staff in 1935, and for most of his time here, he was the embodiment of not only the Ethnology Department, but also the museum's archaeological program in Ontario. Ken's friendship with A.H. Anderson, first Archaeological Commissioner of British Honduras (now Belize), led to the beginning of the ROM's research there in 1961 under Dr. William Bullard's direction, and he was directly responsible for bringing David Pendergast on staff in 1964 to revive the program. In that same year Ken left the museum, after a great deal of agonizing, for a new and remarkably challenging career as the founding staff member of the Department of Anthropology at Trent. He remained at Trent until his retirement in 1972 as Professor Emeritus he received an ever-widening range of plaudits from Canada's archaeological community, from his university, and from the Federal government. What he found most rewarding of all, though, was his role as a legendary figure for generations of Trent anthropology students. Although in failing health for a number of years, Ken never lost his wry sense of humor, which he displayed in full form during the preparations for the celebration of his and Martha's fiftieth wedding anniversary last autumn. Few remain now at the ROM who remember Ken's years here, but his impact on the institution will endure far beyond the time when the last of his friends on staff has departed. His funeral took place on Wednesday, March 2, at St. John's Anglican Church, Cookstown, and a memorial service was held later in Peterborough. Donations to the Kenneth E. Kidd Fund, Department of Anthropology, Trent, or to St. John's Church, Cookstown, are welcomed.

David M. Pendergast
Royal Ontario Museum
Toronto, Canada

The New York State Archaeological Association is grateful to Dr. Mima Kapches and Dr. David M. Pendergast of the Royal Ontario Museum, Toronto, for submitting the above obituary.

Kenneth was a frequent visitor to New York State and willingly shared his extensive knowledge of glass trade beads with avocational and professional archaeologists. Kenneth and Martha Kidd were honored for their research in 1982 at the Glass Trade Bead conference held at the Rochester Museum & Science Center. Kenneth's paper entitled "Problems in Glass Trade Bead Research" was one of many contributions at this conference held to increase communication among archaeologists in the Northeast.

In addition to Kenneth's paper, reprints of the Kidds' color plates of glass trade-bead types were included in the conference proceedings in 1983, making this indispensable classification tool readily available for future glass trade-bead research.

New York State Archaeological Association members will miss Kenneth's presence and counsel, but will always recognize his major impact on the archaeology of the Northeast.

Charles F. Hayes III
Rochester Museum & Science Center
Editor, *The Bulletin*, NYSAA

The Achievement Award

Charles M. Knoll (1958)
Louis A. Brennan (1960)
William A. Ritchie (1962)
Donald M. Lenig (1963)
Thomas Grassmann O.F.M. (1970)
Paul L. Weinman (1971)
Robert E. Funk (1977) (1994)
Peter P. Pratt (1980)
Herbert C. Kraft (1989)

Fellows of the Association

Monte Bennett
James W. Bradley
Louis A. Brennan
William S. Cornwell
Dolores N. Elliott
William E. Engelbrecht
Lois M. Feister
Stuart J. Fiedel
Robert E. Funk
Thomas Grassmann O.F.M.
Alfred K. Guthe
Gilbert W. Hagerty
Charles F. Hayes III
Franklin J. Hesse
Richard E. Hosbach
Paul R. Huey
R. Arthur Johnson
Edward J. Kaeser
Herbert C. Kraft
Roy Latham
Lucianne Lavin
Donald M. Lenig
Edward J. Lenik
Julius Lopez
Richard L. McCarthy
James F. Pendergast
Peter P. Pratt
Robert Ricklis
William A. Ritchie
Bruce E. Rippeteau
Donald A. Rumrill
Bert Salwen
Lorraine P. Saunders
Harold Secor
Martha L. Sempowski
Dean R. Snow
Audrey J. Sublett
James A. Tuck
Stanley G. Vanderlaan
Paul L. Weinman
Thomas P. Weinman
Marian E. White
Theodore Whitney
Charles F. Wray
Gordon K. Wright

Certificate of Merit

Thomas Amorosi
Roger Ashton
Charles A. Bello
Monte Bennett
Daniel M. Barber
Malcolm Booth
James W. Bradley
Art Carver
Gordon De Angelo
Elizabeth M. Dumont
Lewis Dumont
William F. Ehlers
Dolores N. Elliott
Garry A. Elliot
John Ferguson
Joan H. Geismar
Brian L. Nagel
Stanford J. Gibson
Gwyneth Gillette
Robert J. Gorall
R. Michael Gramly
George R. Hamell
Elaine Herold
Franklin J. Hesse
Richard E. Hosbach
Paul R. Huey
Albert D. La France
Kingston Larner
Edward J. Lenik
William D. Lipe
John H. McCashion
Dawn McMahon
Jay McMahon
Marjorie K. Pratt
Peter P. Pratt
Louis Raymond
Barbara Sciully
Harold Secor
Annette Silver
Mead Stapler
David W. Steadman
Marilyn C. Stewart
Neal L. Trubowitz
Charles E. Vandrei
James P. Walsh
George R. Walters
Beth Wellman
Henry P. Wemple
Roberta Wingerson
Stanley H. Wisniewski