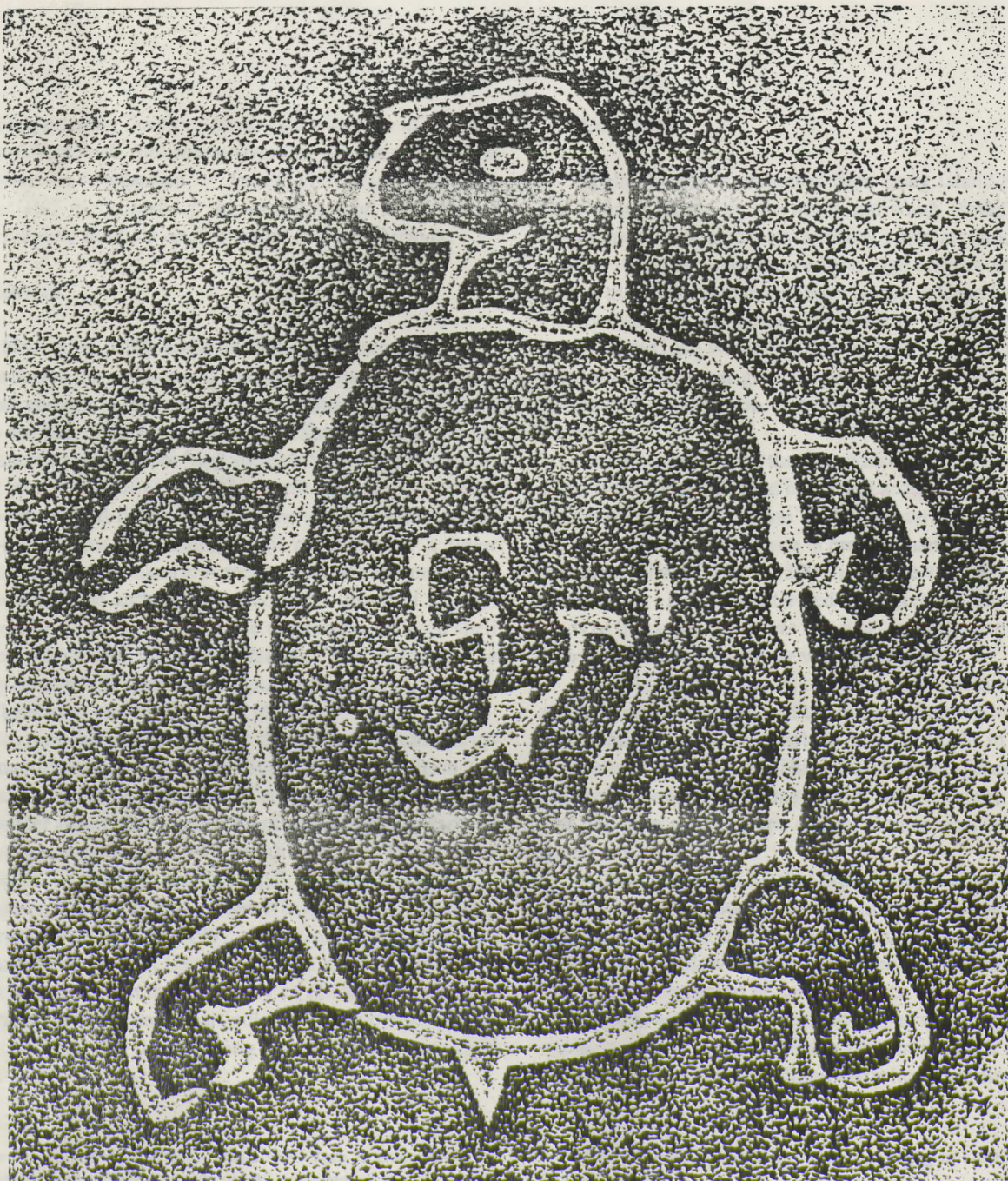


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A Preliminary Report Concerning a Unique Tangency of Susquehanna Tradition and Wading River Traits at a Buried Multi-Component Site on Shelter Island, New York

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A Susquehanna Tradition blade cache was found on Shelter Island, New York. Information from the site has contributed to a better understanding of American coastal settlement patterns and the nature of the expansion of broad-blade cultures during the Late and Terminal Archaic Periods.

Introduction

In November, 1985, while test pitting to determine the extent of a buried site on Shelter Island, New York, the writer was fortunate enough to discover a Susquehanna Tradition blade cache - the first of its kind reported for Shelter Island and for Long Island as well. From May through November of the following year, 48.8 sq m (525 sq ft) of earth was excavated at the site, and the results of that work are the subject of this report.

We hope that our findings will contribute to a fuller understanding of prehistoric Amerind coastal settlement patterns, which some archaeologists consider distorted through site-investigation bias favoring the excavation of large shell middens which are, on Shelter Island, "few compared to literally hundreds of small, special purpose camps" (Lightfoot, Kalin, Lindauer, and Wicks 1985:59-82).¹

Also, considering the current debate in northeastern archaeology over the nature of the Susquehanna Tradition and the mechanism for its expansion (Turnbaugh 1975), the blade cache under discussion should be of interest particularly to archaeologists concerned with the dispersal of broad-blade cultures during the Late and Terminal Archaic Periods.

Finally, this report adds to a small body of work (see Brush and Brush 1982; Latham 1957; Lightfoot 1986; Lightfoot, Kalin and Moore 1985; Lightfoot, Kalin, Lindauer, and Wicks 1985) concerned with the prehistory of Shelter Island where accelerated development, particularly along the shoreline, makes the need for documenting buried sites increasingly acute.

Site Location

Shelter Island is separated from Long Island Sound and the Atlantic Ocean by the north and south "forks" of Long Island, and it is situated midway along a glacial island archipelago that stretches along the northern edge of the North Atlantic coastal plain province from Staten Island to Cape Cod (Figure 1). Its morainal topography is the result of one or more advances of the Late Wisconsin glacier, and its present shoreline was formed by a post-glacial eustatic rise of sea level and the subsequent construction of beaches and dunes by wind and waves.²

Unnamed at present, the site under discussion is located on a low-lying tongue of land bordering a lagoon verged by tidal wetlands on Shelter Island's southwestern shoreline. Test pitting indicates that the site is predominantly a lithic scatter measuring about 243.8 m (800 ft) east-west by 38.1 m (125 ft) north-south. It is characterized by mixed deciduous woodlands of black oak (*Quercus velutina*) and mockernut hickory (*Carya tomentosa*) merging with salt marsh.

At its highest elevation, the site is only about 1.5 m (5 ft) above mean high water, and the lithic scatter we investigated here continues into the marsh to depths of 0.31 m (12 in) or more under the salt peat. This kind of submergence has been observed elsewhere on Long Island, and "the same phenomenon has been recorded for coastal Connecticut" (Brush and Brush 1982:106).³

Although most of Shelter Island came under varieties of agricultural cultivation by the late nineteenth century, the site seems not to have been farmed or built upon. There is no indication of a plow zone. Presumably the soil profile is the result of a progression of natural events.

Potable water from a freshwater pond several hundred feet northeast of the site is available presently, and a number of permanent and seasonally-filled kettle holes are close by. The

1. In reviewing site reports from coastal New York to characterize the published data base and determine the overall percentage of sites that can be classified as shell middens, Lightfoot calculates that only six lithic and/or ceramic scatters (6% of the total) have been described in the published literature considered in his review of 93 articles.

2. For an authoritative discussion of the geography of Shelter Island, see Englebright 1982.

3. "Our limited experience indicates that these sub-marsh deposits are not always of a midden nature, but sometimes consist of vast quantities of fire-cracked rocks and stone chipping debris" (Brush and Brush 1982:106 - quoting Ronald J. Wyatt 1980: letter to John Gittler).

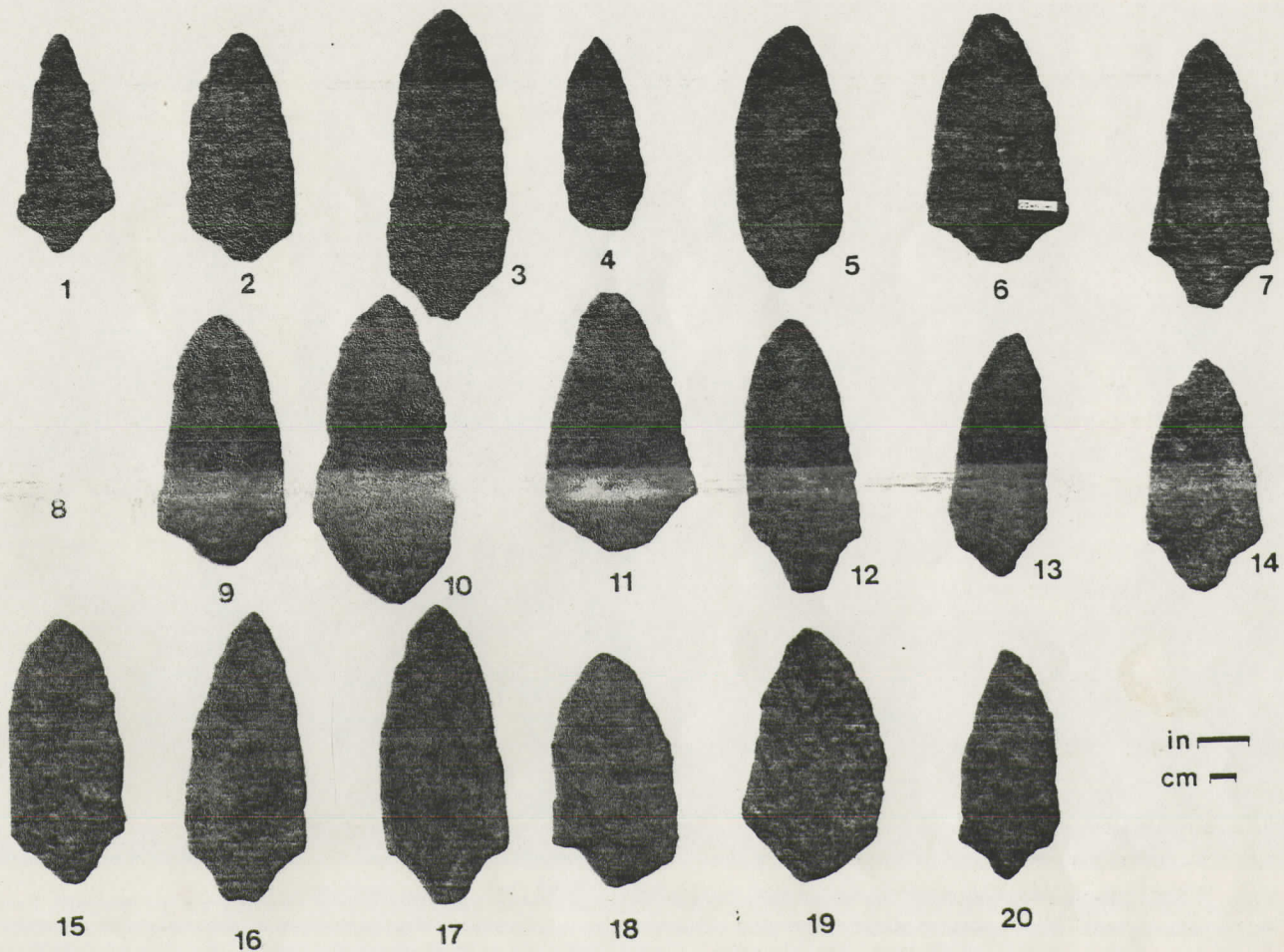


Figure 2. Susquehanna tradition cache blades from Shelter Island. Material: 1-20, basalt. Object 8 removed for study.

some of the Snook Kill artifacts illustrated in *The Archaeology of New York State* (Ritchie 1965:137). They resemble most closely of all the cache blades from the Nourse Collection at the Peabody Museum in Salem, Massachusetts, the significance of which was first noted in the *Massachusetts Archaeological Society Bulletin* (Hadlock 1948:73-74).⁷

At the request of Dr. Kent Lightfoot of the State University of New York, Stony Brook, Dr. Gilbert Hansen of the same university, Dr. Robert Kalin of Suffolk County Community College, and John Pfeiffer of Wesleyan University examined the one broken specimen in the collection (CC-85-8). In their opinion, the blade is made of basalt, which is exotic on Shelter Island and Long Island. It appears that all the cache blades are

made of the same mineral. Excavation would reveal eight additional fragments of patinated basalt, all within 1.5 m (5 ft) or less of the blade cache.⁸

Excavation

Two 91 cm (36 in) galvanized iron pipes were driven into the ground to serve as datum points, and a grid of 1.5 m (5 ft) squares was established along north-south and east-west base lines. The grid could then be located on a USGS topographic map.

After turning individual squares, excavation by arbitrary levels of approximately 1.3 cm (0.5 in) was executed by *rabo-*

7. An earlier article in the same publication describes the excavation in Andover, Massachusetts of "spearpoints" which resemble the Shelter Island blades (Hofman 1943:11-14).

8. A possible source of this mineral are the Triassic basalt outcroppings which run north/south for approximately 30 miles between Pompton Lakes and Bound Brook in Bergen, Essex, and Union Counties in western New Jersey. Western Pennsylvania and Southern Connecticut are other possible source locales.

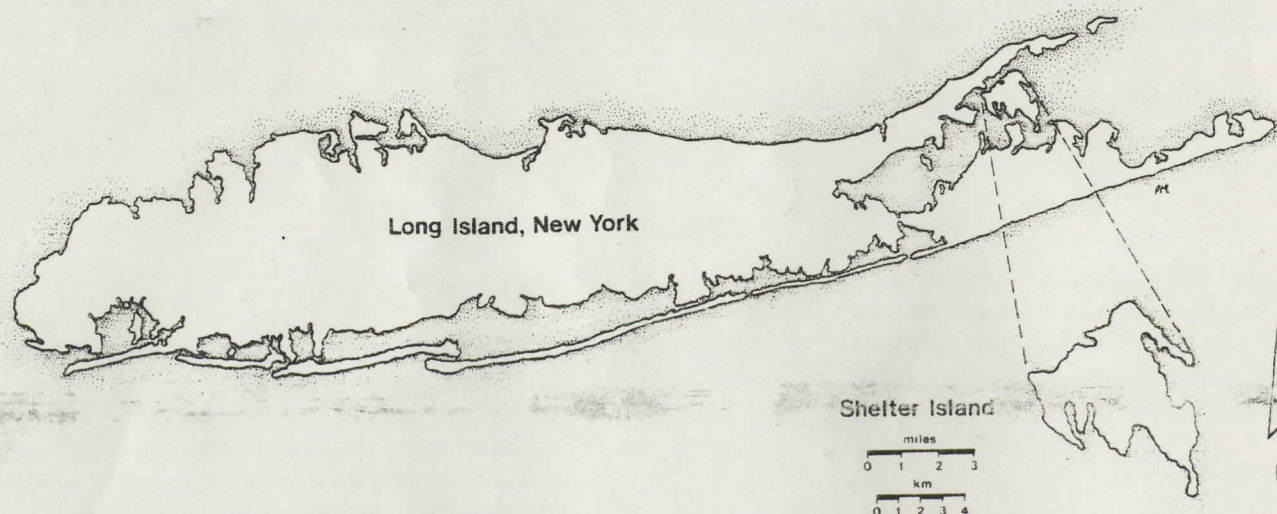


Figure 1. Shelter Island, New York.

site is located in a way that shields it from the prevailing winds, which generally blow from the northwest.

While steps may be taken to register the location of the site with New York State, the precise location is not specified here in keeping with the wishes of the owners. Their generous permission for the writer to excavate is gratefully acknowledged at this time, as is the cooperation they kindly extended as work progressed.

The Blade Cache

When the cache was unearthed, the topmost blade (CC-85-1) was only 14 cm (5.5 in) from the surface. The cache terminated 33 cm (13 in) from the surface and consisted of 20 blades stacked in a pile that had been deposited in a pit, although no indication of a pit was evident (see Figure 2). All the blades were stacked flat, horizontally, and several pointed in different directions.

The cache blades were recovered from a subsoil of tan sandy clay and all of them, except one specimen (CC-85-4), were heavily encrusted with a tough, non-soluble tan patina.⁴

4. Iron salts are a major presence in the soil and may account for the blades' encrustation. "The patinated surface of a stone, being more porous than the unaffected rock beneath it, will absorb iron salts and so become colored yellow" (Goodyear 1971:122).

5. This was the opinion of Dr. Roberta Lightfoot (personal communication 1986) about one blade, which she had the opportunity to examine but briefly.

Magnification reveals that the surfaces of some blades are speckled with minute grains of what might be hematite.⁵

Nineteen of the 20 cache blades are bifacially chipped preforms characterized by broad, shallow primary flaking scars. An exception is CC-84-4 (Figure 2:4), which is chipped unifacially.⁶

Although expressing understandable reluctance to "type" artifacts from photographs, Dr. Dena F. Dincauze of the University of Massachusetts at Amherst was kind enough to comment that "the bifaces almost certainly must belong to the Susquehanna Tradition." Three (Figure 2: specimens 6, 9, and 10) "resemble most closely the cache blades associated with Atlantic bifaces in New England." Four (Figure 2: specimens 7, 12, 16, and 17) "look like Atlantic bifaces a little farther along than the preforms" (Dincauze, personal communication 1986). These last four specimens exhibit pronounced contracting stems. In this regard they correspond closely to the designation, "Corner-removed, Type 7" in the system for the classification of stone implements in the northeast adopted by the Massachusetts Archaeological Society (Fowler 1963:2).

In addition, the blades are similar, morphologically, to

6. The unmodified anterior surface of this blade brings to mind the observation that the spalls from which Susquehanna Broadblades were made were natural frost-broken sheets of rock and that frequently "the blanks preserve a large part of one flat weathered surface of such a natural spall" (Witthoft 1953:8).

Table 1. Dimensions of Cached Shelter Island Blades

Specimen No.	Length		Basal Width		Max. Thickness	
	cm	in	cm	in	cm	in
CC-85-01	10.6	4.2	5.0	2.0	0.8	0.3
CC-85-02	11.4	4.5	6.0	2.4	1.1	0.4
CC-85-03	15.4	6.1	6.0	2.4	0.95	0.4
CC-85-04	9.5	3.8	4.0	1.6	1.3	0.5
CC-85-05	13.0	5.1	5.2	2.1	1.4	0.6
CC-85-06	12.7	5.0	7.0	2.8	1.4	0.6
CC-85-07	13.3	5.2	6.0	2.4	1.3	0.5
CC-85-08	12.0	4.8	5.0	2.0	1.1	0.4
CC-85-09	12.7	5.0	6.3	2.5	1.6	0.6
CC-85-10	13.0	5.1	7.6	3.0	1.6	0.6
CC-85-11	16.0	6.1	7.0	2.8	1.4	0.6
CC-85-12	14.0	5.5	5.7	2.2	1.3	0.5
CC-85-13	12.4	4.9	5.0	2.0	0.6	0.3
CC-85-14	11.7	4.6	5.7	2.2	0.6	0.3
CC-85-15	13.3	5.2	6.0	2.4	1.4	0.6
CC-85-16	14.6	5.8	6.2	2.4	0.95	0.4
CC-85-17	15.1	5.3	6.3	2.5	0.95	0.4
CC-85-18	11.7	4.6	6.3	2.5	1.7	0.7
CC-85-19	12.7	5.0	7.0	2.8	1.3	0.5
CC-85-20	11.6	4.6	5.0	2.0	1.1	0.4

tage. When features were encountered, excavation proceeded by vertical section. Humic material and excavated soil were screened and sifted through 0.25 in mesh before it was consigned to the spoilpile.

Balks measuring 15.2 cm (6 in) wide were maintained to observe stratification, and excavation was carried out until sterile soil was reached, after which the square was probed for a depth of 15.2-30.5 cm (6-12 in) further before work ceased. Unfortunately, only faint stratification as a result of human occupation was evidenced in the balks.

The natural stratification of the podzolic soil was simple and consisted of an AO zone of root mat and leaf accumulation 1.3-2.5 cm (0.5-1.0 in) deep; an A zone of black-brown sandy mobile humus 2.5-5.0 cm (1-2 in) deep; and a B zone of tan sandy clay continuing to an undetermined depth.

Heavy incursions of roots everywhere made excavation difficult. pH tests of site soil samples with Hellige Truog reagents yielded an average reading of 4.9 (strongly-very strongly acid), which is typical for Long Island and which would tend to account for our finding no osseous material at all. Many soil samples were taken for future study.

Small amounts of non-diagnostic artifactual materials such as quartz decortication flakes and small shatter fragments of quartz and quartzite were present in the A zone soil, as were random fragments of charcoal and a single broken specimen of

hard clam, *Venus mercenaria*.

However, the majority of artifactual materials appeared in B zone soil at a depth from the surface of 11.4-30.5 cm (4.5-12.0 in). This material can be characterized as a heavy lithic scatter comprised of fire-cracked rock; chipping debris, pebble cores, unworked pebbles, and artifacts of quartz and quartzite; plus small quantities of hematite, granite, schist, basalt, shale, and charcoal fragments.

The first square excavated was the one that had contained the blade cache, which was followed by the excavation of contiguous squares. Excavation went on for six months, about five hours per day, five days a week. At the end of this time 21 squares amounting to 48.8 sq m (525 sq ft) had been explored.

Features

Four distinct features were excavated and recorded. The first was the blade cache, designated as Feature 1. Three rock clusters - all within four ft of the cache, and designated as Features 2, 3, and 4 - were also studied.

In addition, four possible features were noted. Two were small concentrations of about six stones apiece, which were clustered tightly enough to stand out from the surrounding lithic scatter. Another was a concentration of fire-reddened quartz pebbles, which seemed to be boiling stones, but which

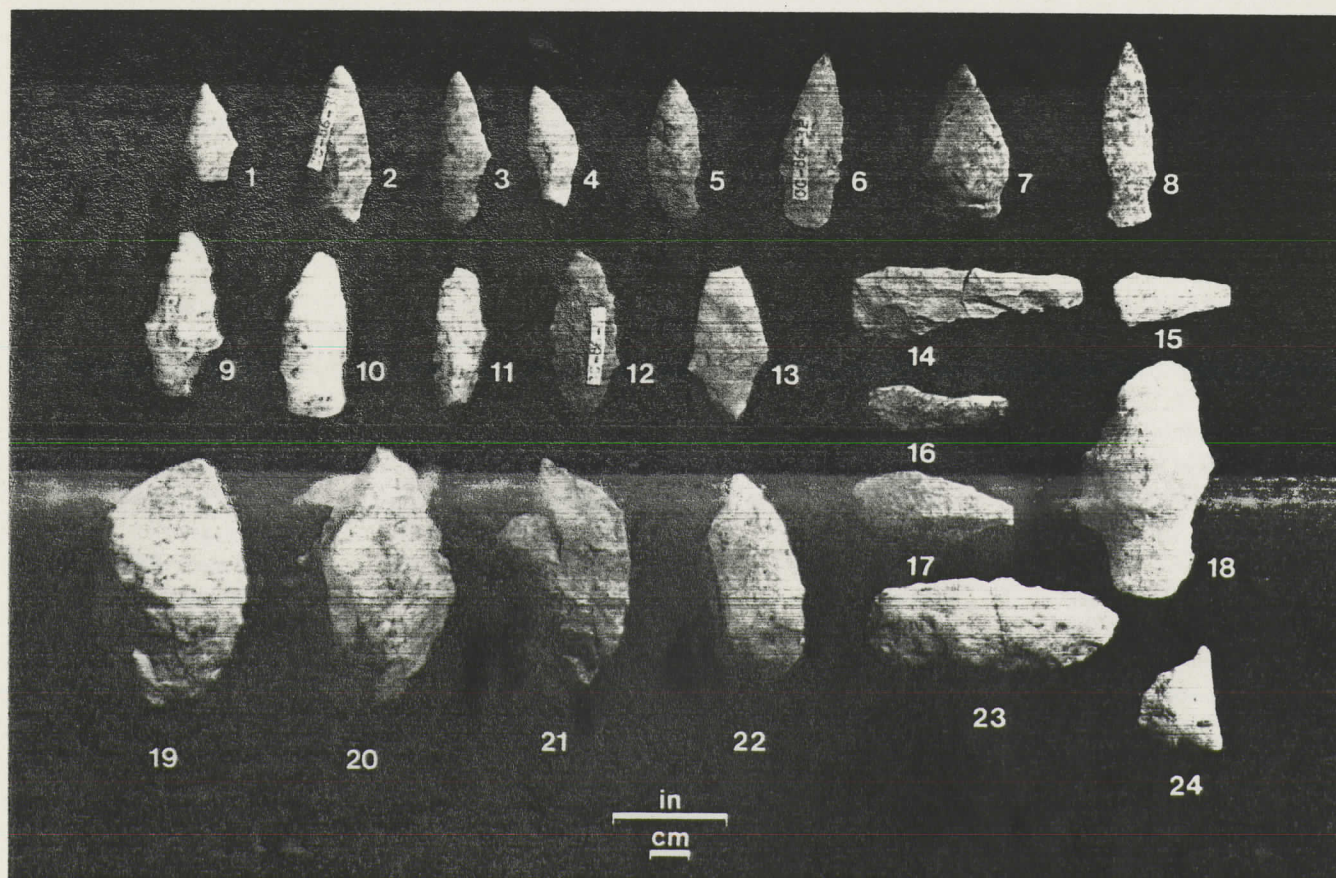


Figure 3. Diagnostic and non-diagnostic artifacts from Shelter Island Site. 1, 2, 3, 6 Wading River ("short" or "narrow stemmed") projectile points; 4, 5 knives, combination tools or Wading River projectile points; 7, 8 Orient Fishtail projectile points; 9, 10, 11, 12 problematic points; 13 Rossville projectile point; 14, 15, 16 drills; 17 drill or graver; 18 discarded point blank; 19, 20, 21 crescentic knives; 22 lanceolate knife; 23 biface blade knife; 24 biface blade fragment with possible graver spur. Material: all quartz, except: quartzite 7, 17; siltstone 14; basalt (?) 16.

could not be studied in situ due to an overburden of thick roots that were not disturbed. Near the southern perimeter of the dig, 14 cm (5.5 in) from the surface, a possible post mold was revealed - a dark oval stain, 10 cm (4 in) by 13 cm (5 in) across. It extended vertically for 43.2 cm (17 in) and tapered to a point. It was photographed in horizontal and vertical cross-section, and samples of it were preserved, but it is possible that this dark, humic deposit was produced by a tapering tap root that rotted where it had grown.

The top of Feature 2 occurred in B zone soil and was 17.8 cm (7 in) from the surface. The feature consisted of 98 quartz and quartzite pebble boiling stones, most of which were fire-reddened and were, on the average, about 6.4 cm (6.4 in) long. Three quartzite cobbles associated with this feature and contacting the boiling stones were located to the north. The feature also contained a number of heat-shatter fragments, as well as an amorphous ferruginous conglomerate, 15 cm (6 in) long. No charcoal was associated with this or any other feature.

The center of Feature 3 was located only 3 ft south of the blade cache, and the top of it was 14 cm (5.5 in) from the surface

in B zone soil. Feature 3 was a "platform hearth," a shallow circle of 67 stones that were, for the most part, 7 cm long (2.75 in) or smaller. Many were cracked by fire, and two connecting pieces were found in situ 20 cm (8 in) apart. The stones were arranged in a single layer and were not piled one atop another.

Three quartz decortication flakes lay on the surface of Feature 3, and several fragments of shattered rock were found beneath it, 21.6 cm (8.5 in) from the surface.

Feature 4 was a small pit of crumbly, fist-sized, mostly quartzite pebbles, about 35.6 cm (14 in) in diameter, located in B zone sandy clay 127 cm (50 in) southwest of the blade cache. It was 24 cm (9.5 in) below the surface. A broken Rossville point, which might have been intrusive, lay near the uppermost stones of this feature, as did four flakes of quartz and a single flake of exotic green siltstone.

Considerable debitage from lithic tool-making lay around this hearth. Fragments of quartz biface blades, hammerstones, an anvil stone, pebble cores, and quartz decortication flakes were recovered nearby.

Table 2. Shelter Island Site Trait Table.

Specimen	Square	Description	Material
CC-86-21	N10E0	Graver (?)	White quartz
CC-86-23	N10E0	Expanded base drill	Green siltstone
CC-86-32	N10E5	Wading River point	White quartz
CC-86-33	N15E5	Projectile point (problematic)	White quartz
CC-86-34	N15E5	Wading River point	White quartz
CC-86-35	N15E5	Wading River point	Crystal quartz
CC-86-38	N15E0	Wading River point	White quartz
CC-86-41	N10W0	Projectile point (problematic)	White quartz
CC-86-43	N10W0	Rossville point	White quartz
CC-86-44	N0E0	Wading River point	White quartz
CC-86-45	N0E0	Projectile point (problematic)	White quartz
CC-86-46	N0E0	Projectile point (problematic)	White quartz
CC-86-47	N0E0	Orient Fishtail point (variant)	Gray quartzite
CC-86-48	N0E5	(Problematic point or tool)	White quartz
CC-86-49	N5E10	Backed knife	White quartz
CC-86-51	S0E0	Rude crescent knife	White quartz
CC-86-53	S0W0	Drill or point fragment	Crystal quartz
CC-86-54	S0W0	Biface blade knife	White quartz
CC-86-55	S0W0	Orient Fishtail point	Crystal quartz
CC-86-57	S0E5	Drill or graver	White quartz
CC-86-60	Balk B0/B+1	Quartz pebble knife	White quartz
CC-86-63	Spoilpile	Expanded base drill	Basalt (?)

Artifacts

One-thousand three-hundred fifty-nine pieces of artifactual material were recovered and recorded. Most of this material was found between 13 and 25 cm (5 and 10 in) from the surface and consists of primary, secondary, and tertiary decoration flakes of white and crystal quartz. Quartz flakes were ubiquitous but tended to be concentrated in particular areas, especially near rock clusters, where scatter patterns from stone knapping were observable. These "workstations" are also characterized by collections of unworked quartz pebbles of various sizes, which were probably stores of raw material for making stone tools.

Hammerstones are the most common artifact and numbered 169 including problematics. They are made of quartz or quartzite and range in size from large pebbles to marble-size tools.

Thirteen quartz projectile points were photographed *in situ*, collected, and cataloged (Ritchie 1971). Six, including a small "birdpoint," correspond typologically to the Wading River point; two are varieties of Orient Fishtail points (Ritchie 1959:32); one is a Rossville point; and four are problematic. These problematic points share much in common with the Wading River variety, but they display distinctly serrated edges and are generally much cruder.

Four broken drills were recovered. The longest, made of exotic green siltstone, measures 6.1 cm (2.38 in) in length from its expanded base to a broken tip. Four additional flakes of this same mineral were found during excavation.

Six knives were also recovered. Four of them are thick artifacts made from bifacially-chipped quartz pebbles, and they display prominent excurvate cutting edges. Two may have been crafted intentionally for use in the left hand. A fifth knife, showing much of the original pebble cortex, is lanceolate in shape. Two connecting pieces which comprise a rectangular biface blade knife of white quartz were also found.

The artifact inventory also includes 26 white quartz biface blade fragments, one of which possesses a possible graver spur.

All the artifacts and the preponderance of debitage are of quartz or quartzite, the only exceptions being 2 drills, the 20 basalt cache blades, and 8 large flakes and fragments of cache blade basalt, the significance of which will be discussed in the following section.

Discussion

Although biface blade caches have been reported for Long Island (Kaplan and Mills 1976; Saville 1925) and are also known from public and private collections, no one to the

Table 2. Shelter Island Site Trait Table (continued)

Depth from Surface		Length		Basal Width		Max Thickness	
cm	in	cm	in	cm	in	cm	in
21.6	8.5	2.5	1.0	1.9	0.8	0.8	0.3
20.0	8.0	6.0	2.4	1.9	0.8	0.8	0.3
15.0	6.0	4.4	1.8	1.7	0.7	0.95	0.4
10.8	4.2	4.4	1.8	2.1	0.8	0.5	0.2
17.8	7.0	4.1	1.6	1.6	0.6	0.95	0.4
17.8	7.0	4.1	1.6	1.4	0.6	0.8	0.3
15.0	6.0	3.2	1.3	1.3	0.5	0.8	0.3
11.4	4.5	4.4	1.8	1.9	0.8	0.8	0.3
24.4	9.5	4.1	1.6	2.2	0.9	0.6	0.3
7.6	3.0	2.5	1.0	1.4	0.6	0.6	0.3
13.9	5.5	4.4	1.8	1.3	0.5	0.95	0.4
?	?	3.8	1.5	1.4	0.6	0.95	0.4
13.9	5.5	4.1	1.6	2.2	0.9	1.1	0.4
13.9	5.5	3.6	1.4	1.4	0.6	0.8	0.3
19.0	7.5	7.6	2.9	4.2	1.7	2.2	0.9
16.5	6.5	6.5	2.6	1.4	0.6	1.2	0.5
5.0	2.0	3.0	1.2	1.4	0.6	0.6	0.3
27.9	11.0	4.7	1.9	1.6	0.6	0.95	0.4
16.5	6.5	6.7	2.6	2.4	0.9	1.1	0.4
26.6	10.5	4.4	1.8	1.9	0.8	0.95	0.4
16.5	6.5	6.7	2.6	4.1	1.6	2.4	0.9
?	?	3.8	1.5	1.3	0.5	0.6	0.3

writer's knowledge has reported a cache of Susquehanna Tradition artifacts for either Shelter Island or Long Island. The situation is quite different in New England, however, where broad blades appear much more frequently (see Dincauze 1972; Hadlock 1948; Hofman 1943; Pfeiffer 1984).

Of particular importance in light of the Shelter Island cache blades is the Griffin Site in Old Lyme, Connecticut (Pfeiffer 1980). At least 170 Boats and Mansion Inn type blades were excavated at this cremation site, and radiometric dates of 3545 ± 160 B.P. and 3495 ± 150 B.P. have been obtained for it. Fifty pecked and ground axes of basalt were recovered at the Griffin Site, and its excavator has commented that the single Shelter Island blade he examined resembles some of the Griffin Site artifacts (Pfeiffer, personal communication, 1987). Other site parallels exist including the absence of shell, the absence of tools related to fishing, evidence of a brief period of occupation, and the use of non-local lithic materials. The two sites are only 27 air km (17 mi) apart, and one can readily imagine a riverine Susquehanna Tradition group making the trip across Long Island Sound via dugout boat.

Also included in the mosaic of broad-blade culture activity in the area is the Great Pond Site near Lake Montauk on Long Island's south fork (Ritchie 1965:138-139). Here, 35 air km (22 mi) due east of Shelter Island, two Susquehanna Tradition cremation burials containing Snook Kill-like projectile

point grave offerings were reported.

The Susquehanna cache blades from Shelter Island do not seem to have been deposited as the result of a single depositional event unrelated to other activities at the site. The cache location appears to have been chosen in relation to the nearby rock clusters, one of which, Feature 3, is a typical Susquehanna Tradition manifestation, and another of which, Feature 2, the mass of boiling stones, indicates a pre-ceramic temporal orientation. The basalt flakes recovered near the blades (but which do not connect with them) is tentative evidence of stone-knapping by those who deposited the blades. It remains to be seen if further excavation will indicate other activities at the Shelter Island Site that would establish more conclusively the visitors' identity.

There is also the larger question as to the nature of the site in general. Susquehanna features, non-diagnostic features, and the presence of a variety of projectile point types oblige us to call it a multi-component site. If these factors were used to identify the site temporally, we would have to span the millennium from 1700 to 700 B.C., which has been used to quantify the Terminal Archaic Period (Snow 1980:235).

However, it is evident that most of the material at the Shelter Island Site belongs to a single occupational level characterized by a floor of broken and fire-cracked rock with a sparse intermingling of local quartz artifacts. Although char-

coal fragments and soil samples collected from this level may be used to date the site in the future, for the present we must rely upon the debatable method of dating by type, which also points to the Terminal Archaic.⁹

Artifactual material suggests that the site served as a small, special-purpose camp, possibly a procurement station concerned with food-processing activities. Quartz toolmaking was carried out there, and the presence of projectile points and knives suggest hunting and butchering. The lithic scatter is another indication of food processing, but the only clue as to what that food might have been is the absence of shell and fishing equipment, which strengthens arguments in favor of hunting or nut-harvesting activities.

We tend to rule out the site as a residential base occupied by family units seasonally or year-round. As has been observed, "Such bases, in contrast to special purpose camps, should be characterized by much more diverse assemblages of artifacts, representing the material remains of many varied domestic, subsistence, and toolmaking chores" (Lightfoot, Kalin, Lindauer, and Wicks 1985:75).

Based upon the evidence obtained through excavation, it is difficult to argue that contact occurred between Susquehanna people who might have visited the site, and the local Indians who exploited resources there, although this certainly warrants further study. However, it may be suggested that the broad, preform blades might well have served as trade goods, and that their presence at the site bespeaks some sort of contact between the groups (see Custer 1984:98-99).¹⁰ If this could be established, it would tend to support the assumption that there was a benign coexistence between the small groups of Late Archaic peoples who crafted narrow-stemmed Wading River points, and the makers of broad blades as has often been proposed (Dincauze 1975:27; Funk 1984:135; Ritchie 1969:219).

The discoveries on Shelter Island are further clues about the movements and practices of broad blade-using people during the Terminal Archaic Period. The evidence on record for eastern Long Island and nearby southern Connecticut suggests that incursions by small groups of these wayfaring Amerinds were brief and perhaps hazardous, as evidenced by the size and number of burial sites as opposed to habitation sites in this region.

In the future, attempts will be made to identify the source of the cache blade basal and to associate it with artifacts from other sites. Also, selective excavation and further site sampling may be undertaken to help determine the boundaries of

a catchment range pertaining to the site under discussion, and to locate a base camp within that range.

Finally, this and future reports concerning the site will need to be correlated with the results of ongoing work on Fishers Island, Block Island, eastern Long Island, southern Connecticut, and elsewhere on Shelter Island. Such an effort should bring us closer to giving proper weight to conflicting models concerning the expansion of the Susquehanna Tradition.¹¹

Acknowledgments

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9. This assumption is based on the proximity of Susquehanna Tradition and Wading River artifacts plus the absence of steatite and ceramics. It is understood, however, that "The time span for the Wading River complex, *per se* is unknown" (Wyatt 1977:406).

10. If preforms like these with their corners removed and stems partially shaped were trade goods, the preliminary roughing out they underwent could serve as a "blueprint" for the new owner. Thus, Susquehanna Tradition peoples might have encouraged inadvertently or intentionally the persistence of their artifact "types" among other groups.

11. "Documentation of the replacement of the Squibnocket Complex by the Susquehanna Tradition ... [has] eluded prehistorians working in coastal Connecticut, New York, and Massachusetts; and on Long Island there appears to be a hiatus in the archaeological record until the appearance of the Orient Phase in the first millennium B.C." (Gramly 1977:20).

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glacial boulder located within the Ward Pound Ridge Reservation in Cross River, Westchester County, New York (Shoumatoff 1972), and a pecked human hand symbol on a bedrock outcrop near Jericho, Long Island, New York (Lenik 1976).

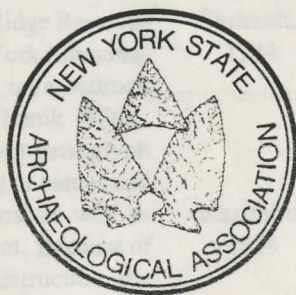
At the time of its discovery, the Bronx River petroglyph was covered with modern day graffiti consisting of names and symbols that had been made with marker pens, as well as scratch marks made with a sharp metal instrument. Because of a fear of continuing vandalism and possible destruction, the petroglyph rock has been removed from its original location. Efforts are currently underway to protect, preserve, and display this significant cultural artifact.

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