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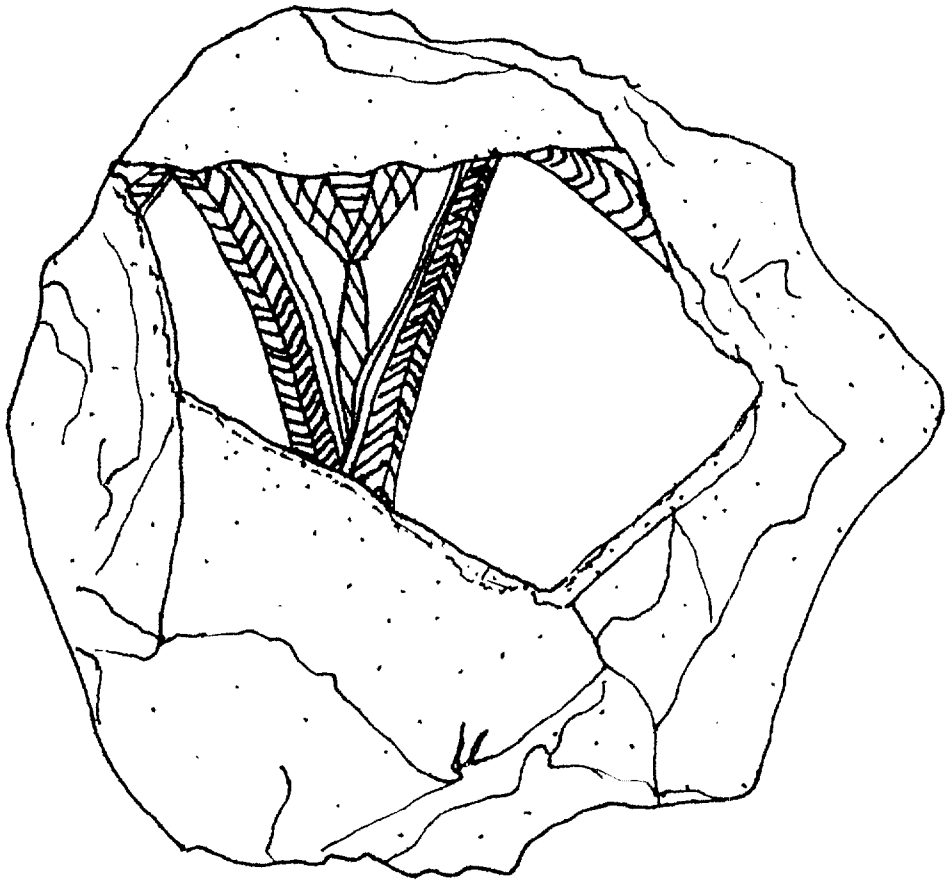

VOLUME 31:1
SPRING 1991

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MAINE ARCHAEOLOGICAL SOCIETY BULLETIN

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Jonathan Lowder's Truckhouse: An American Revolutionary War Trading Post on the Penobscot River

Charles H. Lagerbom

In 1987 and 1988 archaeological excavations were conducted in Veazie, Maine under the direction of Dr. Alaric Faulkner on a site popularly known as Fort Hill. The site, located at the head of tide on the north side (right bank headed downriver) of the Penobscot River across from Eddington Bend, is situated on a grassy plateau approximately 18 meters above sea level. The excavations produced a collection of artifacts and features identified as an American-sponsored truckhouse occupied for about two years during the American Revolutionary War. Historical documentation supports the existence of such a truckhouse run by a man named Jonathan Lowder during this period.

SITE HISTORY

The site's location, near the head of tide, has been a popular spot for many years. Long before the arrival of the Europeans, this stretch of land "provided generations of North American Indians with fresh water, ready access to salmon fishing, and a bypass route for their seasonal travels into the interior" (Faulkner 1988:5 and Eckstorm 1941:22-25). The popularity for this site did not diminish with the arrival of the Europeans: it was repeatedly chosen for its strategic and economic potential.

HISTORY

For many years, trade with the Penobscot River Indians had been conducted through Fort Pownall located thirty miles down river at present day Stockton Springs. Fort Pownall had been built in 1759 during the French and Indian War, although it had seen no military action. By the 1760s, its main function, besides providing security to white settlers in the area, was to maintain trade with the Penobscots.

During 1769, in response to numerous complaints and Indian unrest, the Massachusetts government reviewed its trade arrangements at Fort Pownall. Several Penobscot Indians had travelled to Boston to discuss trade relations with Governor Bernard. At one such meeting on July 26, 1769 the Indians broached the idea of a truckhouse further up the river from Fort Pownall (Fig. 1).

> We should be glad to have a small part of the trading house carried up the river as high as the falls. It would avoid much trouble which frequently arises betwixt our people and the English inhabitants, and it would free us from the difficulty of coming to the fort in the winter which is sometimes hazardous passing in Canoes (Baxter, XXIV:157).

A truckhouse was not established near the falls until April 1772, at which time Jedidiah Preble, Jr. was appointed truckmaster. By 1774, the truckhouse was in full operation and all official trade had moved there from Fort Pownall. This structure was

The Maine Archaeological Society Bulletin 31:1:1-14 (1991)

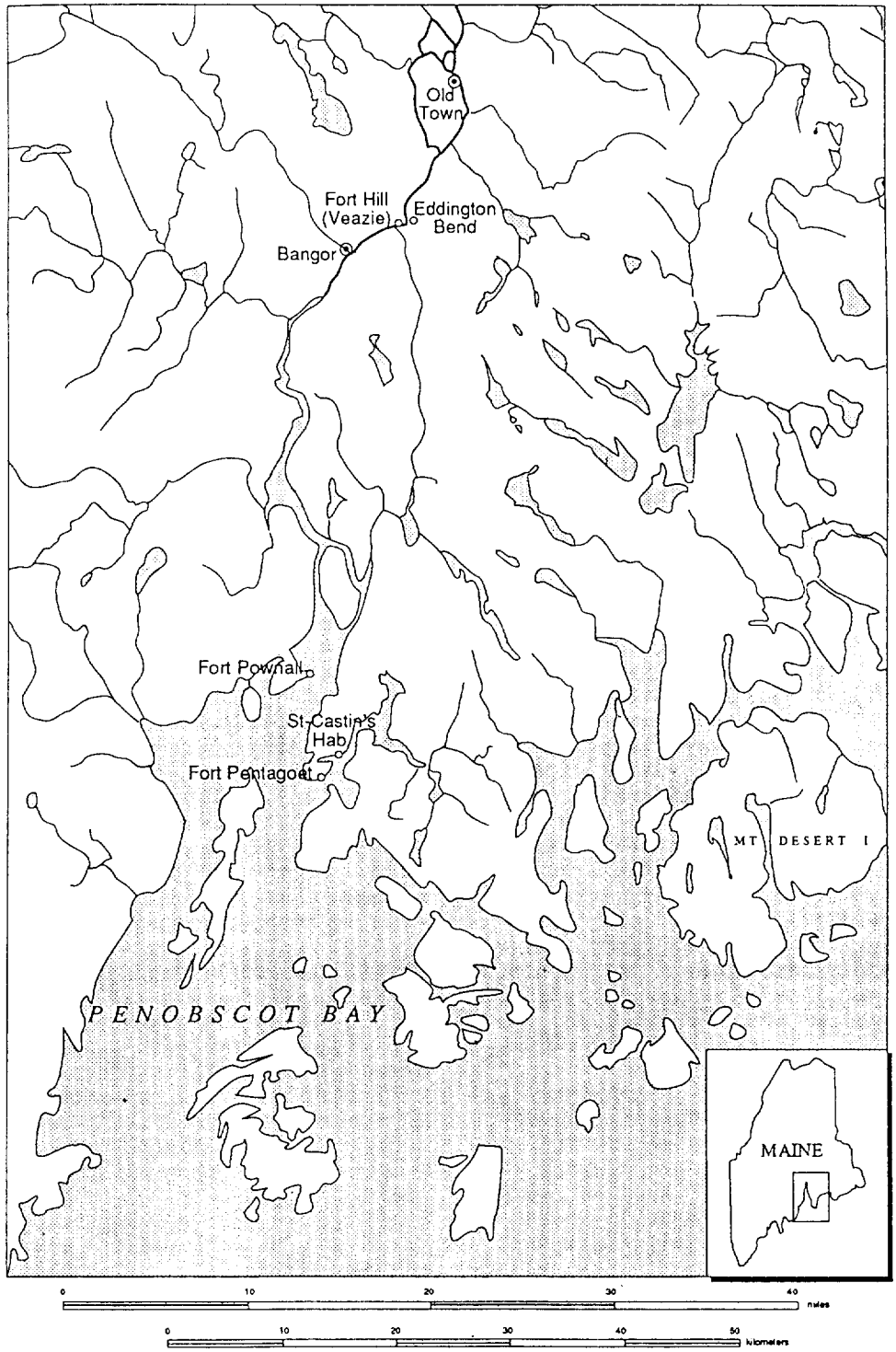

Figure 1. Penobscot Bay and River area with some place names mentioned in the text.

located on the Penjejawock Stream, about a half mile down river from where Jonathan Lowder would build his truckhouse. Preble operated as official truckmaster until 1775 at which time he was dismissed. The dismissal was largely due to Indian complaints that Jedidiah Preble, Jr. was a poor choice for truckmaster. The Penobscots did not like Preble's habit of remaining in bed until about 10 o'clock in the morning or the fact that he treated them with great indifference. They complained that Preble would go away for days at a time when the Indians came to trade, thus leaving them with time to get drunk and become disorderly (Anonymous, n.d., 144:336; Anonymous 1912 [1772-1773], XVIII:674; Olson 1984:67, 85; Godfrey 1882:521; and Anonymous 1870:39).

At this time the Penobscot Indians preferred to deal with a man named Jonathan Lowder, who had recently been a gunner at Fort Pownall. He had been in the Penobscot area since 1762 and had been on the payroll as a gunner at Fort Pownall until early 1774. After his service at the fort, he moved up river to the Penobscot Falls area (Lowder 1890-1891:296-298; Godfrey 1884:521; and Anonymous 1870:39). For almost a year, until Lowder's appointment in November of 1776, the Penobscot Indians had no official truckmaster. An interpreter named Andrew Gilman acted as an Indian agent, yet held limited powers. Since Preble had remained at his residence on the Penjejawock after being dismissed as truckmaster, the trade had to be moved to another location. The construction of Lowder's truckhouse was noted in a deposition or complaint signed by Jedidiah Preble, Jr. on August 7, 1777. In this complaint, Preble questioned the circumstances surrounding the establishment of a guard force on the Penobscot River, under the command of the recently promoted Lt. Andrew Gilman. The force consisted of twenty settlers and ten Indians. In Preble's deposition, he states that a few of the men were ordered to guard the stores but the

> remainder went about their own business, & never did any other duty for Three or Four months, except building a house for Colo. Lowder on his land, for a Truck house. No scouting parties were sent out, as was expected by the inhabitants (Baxter, XV:164; and Baxter, XVI:217-218).

Although rumors of scandal and fraud continually plagued him, Jonathan Lowder received supplies for the Penobscot Indians throughout 1778 and even as late as March 1779, in an effort by the Massachusetts government to retain the Penobscot's friendship or neutrality. Lowder's operation probably ceased when he learned of the British occupation of Castine in June of 1779. Possibly fearing reprisals from the British for his role as an enemy truckmaster, Lowder may have quickly abandoned the truckhouse and moved back to his previous residence closer to Mount Hope at the house of Silas Harthorn. The archaeological record indicates that the truckhouse building was abandoned for some time before its demolition (Baxter, XVI:202-203; Hunt 1973:108, 123).

For the people on the Penobscot River, the British occupation of Castine seriously affected their communications with the outside world. Many Penobscot Indians moved to Fort Halifax on the Kennebec to trade at a new truckhouse there under Josiah Brewer. This movement, in the winter of 1780-1781, was in response to the British occupation of their settlement. It may also have been at this time that Lowder's abandoned structure was burned to discourage re-establishing any contact with rebel factions. The people who had supported the American cause suddenly found themselves in the midst of an entrenched enemy (Faisby 1979). This status was more pronounced after the utter failure of the Penobscot Expedition. He states that some of the "Penobscot refugees left all their worldly belongings to trek through desolate woods to the Kennebec River in central Maine, begging for food as they went." Conditions were also difficult for white settlers who remained. They suddenly "found themselves conscripted to construct military posts for the redcoats, freely insulted by the Loy-

Figure 2. Truckhouse excavations underway.

alists, and almost totally lacking supplies" (Faisby 1979:104; Hunt 1973:173-174).

ARCHAEOLOGICAL FIELDWORK

During the summer of 1987, an archaeological crew investigated Fort Hill, the proposed site of the Veazie Sanitation District's Wastewater Treatment Facility for evidence of prehistoric and historic occupation. Field investigation of the site was conducted between May 25 and July 31, 1987 by a crew of 17 under the direction of Dr. Alaric Faulkner (Faulkner 1988:13, 70). Returning the following field season with a much smaller crew of eight students from the University of Maine, the team was once again under the direction of Dr. Faulkner. The six weeks of fieldwork for the second season were concentrated on the truckhouse site.

Figure 3. Truckhouse decorative andiron.

Field procedures were similar in both seasons of excavation. The metric system was used for all measurements. The survey datum was designated N150E100, with the E100 baseline tied to the baseline of a map prepared by Pliska and Day of Bangor, used for designing the sewage treatment facility. Base excavation units were 1m X 2m rectangles, with potential for expansion into 2m X 2m squares. The excavation units were arranged in a checkerboard pattern (Figure 1). All back dirt was dry screened through 1/4 inch steel mesh, with certain strata being dry screened through 1mm mesh window screening. Excavation proceeded by arbitrary levels except for visible stratigraphic breaks. Pits were excavated to sterile glacially deposited sediments. Meter square pits were further divided into quadrants for more precise artifact location (Lagerbom and Fenn 1989:1-2).

THE STRUCTURE

The truckhouse rested on wooden sills set directly onto the ground. The distribution of daub suggests a two room structure, possibly a simple two room "hall and parlor" plan with a central field stone chimney Although chimney rubble was found partially scattered around the structure, it was concentrated in the area of the west room. This evidence may indicate its collapse upon itself. Chimney rubble was found between a burn layer just under the plowzone and the burned roofing layer. Thus, it is likely that the structure burned and collapsed, and the chimney remained standing until it toppled into the cellar depression at a later date (Cummings 1964:xiv; Faulkner 1988:28; Kelly 1924:71).

With a hall and parlor type arrangement, the smaller east room (parlor) was probably used for special occasions such as conducting business, while the west room (hall) was used for domestic activities such as cooking and storage. Underneath the hall, a shallow earthen cellar was probably used to store non-perishable goods to be used in trade. This multi-purpose room arrangement and division of activity areas is not unique and reflects the close quarters of many colonial structures (Cummings 1964:xiv-xix; Deetz 1977:99-100; Armour and Widder 1978:11; Cranmer 1988:101; Heldman 1986:27; Halchin 1984:151; McNitt 1962:77).

Meager structural evidence and furnishings were recovered by the excavation, including tacks, a possible latch bar, possible pieces of strap hinges, washers, hooks, screws, and staples. Apparently these items were either very small and not worth the effort to extract, in such poor condition that they were not worthy of salvage, or were buried deeply within the rubble and therefore inaccessible. Otherwise, the structure was probably stripped and scavenged after having been abandoned, which would account for the lack of pintles, door handles, window lead, and other structural hardware. A cast iron andiron resembling a woman's head was recovered from the truckhouse remains in direct association with the hall fireplace (Figure 3). This purely decorative fixture may indicate the truckhouse owner's attempt to present his stature and economic prominence. The andiron, broken at the neck, was probably discarded when the place was abandoned and stripped. Its mate, if complete, was probably carried away by the owner or some scavenger. This particular andiron was rare for the period in its ornamentation (Fenn 1987:5, 14; Armour and Widder 1978:35, 36; Faulkner 1987:34; Roe 1921:63-64; Kauffman 1972:264).

ARTIFACTS

The artifacts from the excavations were divided into five major categories: trade, domestic, structural, prehistoric, and miscellaneous items. The structural category made up 23% of the total artifact assemblage. The prehistoric assemblage, 8% of the total artifact group, was sorted and stored at the University of Maine Historical Archaeology Laboratory where it is available for further study. The miscellaneous category, constituting 8% of the total artifact assemblage, contained 20*th* century post-occupation contamination, clay root casts and other data not directly associated with the truckhouse. About 14% of the total artifacts was associated with the truckhouse trade operation, including trade goods and shipping items, while 46% of the total was associated with the domestic aspect such as ceramics and personal belongings.

Glass beads, some of the most obvious artifacts associated with the Indian trade, first appear in Machias truckhouse accounts during May 1777. The majority of beads excavated at Lowder's trading post must have been shipped at approximately this same time. At Machias, they were listed as having been sold by strings and by weight. Glass beads had been an important Indian trade item since the arrival of the first Europeans. More importantly for this study, they provide a strong argument for the major activity conducted at the site (Mass. Archives 147:353,354; Quimby 1966:81-83).

Table 1. Beads recovered from the Fort Hill truck house. Second column is Kidd bead type. Fifth column is a count of specimens of that type.

1	IVa13	Donut	2-5mm	White	1593	opaque
2	IIa34-47	Donut	2-4mm	Blues	173	opaque/translucent
3	IIa7	Donut	2-3mm	Black	101	opaque
4	IIa	Donut	2-4mm	Clear	35	translucent
5	IIIb1	Tubular	3mm	Red/Black	10	red/black with white stripes, opaque
6	IIb12	Tubular	2-4mm	Black	14	black with white stripes, opaque
7	Ic3	Tubular	3mm	Red	3	faceted, translucent
8	If2	Donut	9.5mm	Ivory	1	faceted, opaque
9	IIg	Round	8mm	Black	13	8 white insets handpainted yellow lines
10	IIg	Round	8.5mm	White	1	blue and amber dots on 15 white insets
11	IIa46	Round	6.5mm	Turquoise	1	opaque
12	WIb4	Round	9mm	White	20	molded porcelainous
				TOTAL	1965	

Our excavations yielded 1,965 beads, of which the majority were drawn seed beads. Other types included millifiori beads, an ivory rosary bead and large molded porcelain specimens. Colors ranged from white to blues to black, with some hand painted millifiori beads exhibiting black, yellow and blue colors (Table 1). Substantial numbers were recovered from the northeast corner of the structure. Of the total recovered, over one thousand were concentrated in this corner indicating a possible storage location. About five hundred other specimens were also found in the southeast corner of the truckhouse. These significant concentrations also indicate that the beads were left behind after the truckhouse's abandonment (Faulkner 1988:44). If Lowder had been in a hurry to leave, which he may have been after the British occupied Castine in June 1779, then it is unlikely that glass beans and other trade trinkets would have been saved instead of more valuable personal items.

Some bead forms, recovered exclusively from within the structure, include polychrome striped beads. Fourteen black beads were found that have six white horizontal stripes and measure 2.0mm to 4.0mm. Ten identical red on black beads with five white stripes were recovered that show evidence of having been fire polished. Also, three red tubular translucent beads were found which measure 3.0mm. Another group recovered has been identified as millifiori beads. Thirteen black millifiori specimens with eight white insets and hand-painted yellow lines were recovered that measure 8.0mm in diameter. One white millifiori bead was found with blue and amber dots superimposed on fifteen white insets and measures 8.5 mm. Similar decorated items from Fort Michilimackinac have been described as having "randomly spaced, irregularly shaped glass dots composed of white dot on which green dot is superimposed" (Stone 1974:107).

The majority of beads found at the site are smaller than those discussed above and are referred to as seed beads. This type was used by Indians principally for embroidery. Seed beads from colonial sites in New England are predominantly white, black and various shades of blue. This is corroborated by the truckhouse assemblage, which is represented by high frequencies of whites, blacks and blues. The assemblage is made up of 1593 white beads, 101 black, and 173 vari-

ous shades of blue. The remaining 35 seed beads are clear and colorless. The white, black, blue, and clear seed beads from the excavations are doughnut shaped, drawn, and show evidence of having been fire polished. Some of the black monochrome opaque beads show evidence of having been dulled by fire. The blue monochrome beads include opaque and translucent specimens. Difficulty in spotting the small colorless clear beads during excavation may possibly account for their limited number in the assemblage.

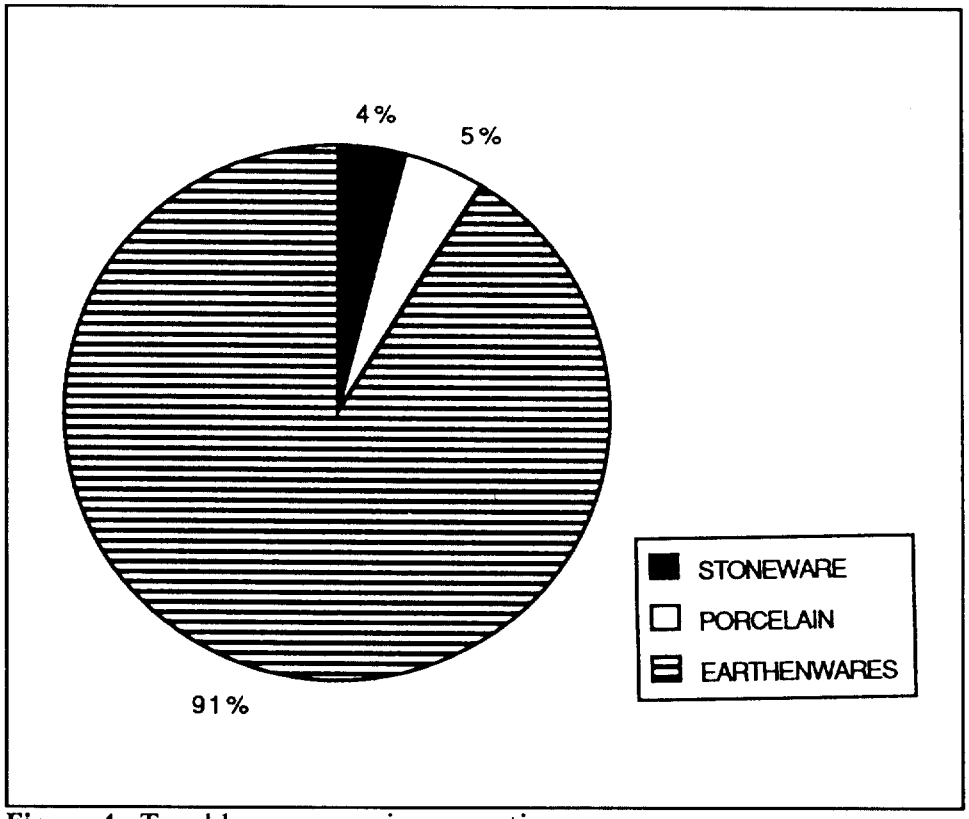

Figure 4. Truckhouse ceramic proportions.

Seed beads had been used in the fur trade by the English and French as well as the Dutch since the late 17*th* century. Even in Jonathan Lowder's time, trade beads were important to the Indians of the Northeast and an essential commodity of any trade operation. This is supported by the presence of similar white opaque beads found at Forts Stanwix, Michilimackinac, Laurens, and George, the fort erected by the British in Castine during their occupation in 1779 (Spector 1976:18; Stone 1974:88, 111-114; Faulkner 1988:44; Faulkner and Faulkner 1987:262-263; Hanson and Hsu 1975:97; Gramly 1978:38; and Francis 1988:7).

The ceramic assemblage contains the largest group of artifacts from the site. Approximately 4,320 pottery sherds were recovered which represent different types and numerous forms of ceramic wares. This assemblage was divided into earthenwares, stonewares and porcelain (Figure 4). Each ware was further divided into types based on form and decoration. Comparisons were made with military and civilian sites, since British military ceramics at the time were undistinguishable from their civilian counterparts (Sussman 1978:93). Many forms, especially the numerous tea wares transcended material boundaries and are represented by porcelain, white salt-glazed stoneware and creamware examples. The truckhouse ceramic assemblage has been placed in the domestic sub-assemblage, as opposed to the Indian trade sphere, since the only mention of possible ceramic vessels in the Machias Accounts is a reference to a "bason" of unspecified material. Pewter basins and porringers are specifically listed, which indi

cate that the Indians opted more often for vessels of materials other than ceramic.

The earthenware assemblage, the largest group of artifacts from the entire site, is represented by over 4,300 fragments, of the total ceramic assemblage. Five different ceramic types make up this category: redwares, creamwares, pearlwares, hardwhite and tin-enamelled wares, with redwares and creamwares accounting for the majority of the assemblage (Figure 5). Each ceramic type was segregated and then further divided by the variety of their forms and decorative techniques.

Creamware, the second most frequent earthenware type from the site other than redware, represents 21% of the earthenware assemblage. "True" cream-colored wares emerged during the 1760's and quickly became very popular. By the 1770's, they were quite fashionable in the colonies and even in demand on the colonial Maine frontier. Approximately eight hundred fragments were recovered, the majority of which were body sherds. Forms include plates, teacups, teapots, and bowls. Over two hundred fragments of creamware were concentrated in the southeast corner of the truckhouse. Another large concentration was midway down the field east of the building with the rest widely scattered around the site.

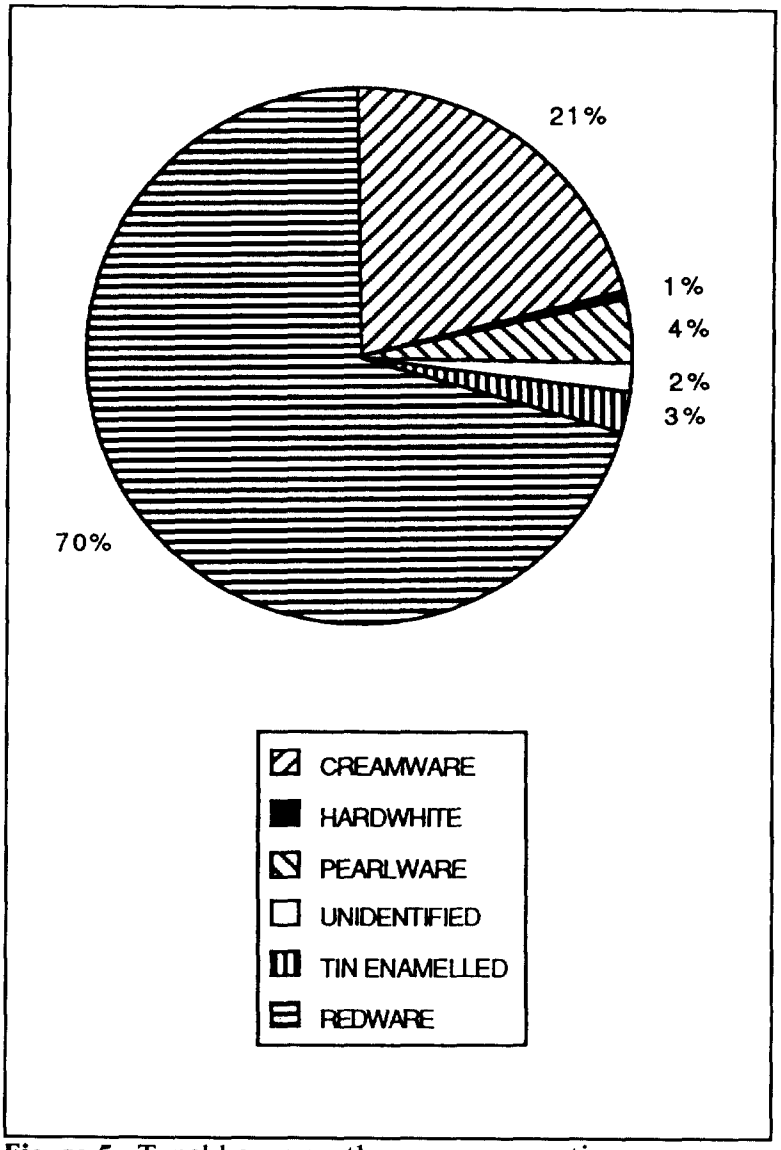

Figure 5. Truckhouse earthenware proportions.

Three different styles of press-molded creamware plates were identified. A feather-edge rim sherd was recovered that produced a measurable diameter of 12 cm. It is of the 'old' feather edge variety which dates between 1770 and 1785 and is similar to an example from Fort Stanwix found in a 1773 context. An octagonal shaped plate, much like stoneware examples, was identified which exhibited an embossed rim decoration of alternating crosses and diamonds. Still another plate was identified by one rim sherd which exhibited a wavy shaped edge probably of the royal pattern. Dated around 1770, it was made for a long time thereafter. The fourth style was a plain circular plate with no decorative edge represented by a single rim sherd (Noel Hume 1973:222, 225; Noel Hume 1969:124; Davies, et al. 1987:202-203; Gussett 1980:98; Faulkner, et al. 1978; 72; and Faulkner 1988:34, 36).

Other creamware fragments have been identified as forms and parts of tea or coffee sets. A straight spout, handle and molded flower knob was recovered which possibly came from the same pot. The round spout measures 8.5 cm long and has no decoration or incisions. The handle is a double intertwined example ending with ascanthus leaf ends. This type of handle has been associated with teapots exhibiting straight spouts. The flower knob, or convolvulus is a decorative floral design applied near the handle attachment and is associated with both the described handle and straight spout. This style has been attributed to a Leeds creamware factory with a median date of 1770 (Towner 1957:65, 69, 71; and Faulkner, et al. 1972:72).

In addition to the tea or coffee pot, a polychrome over-glaze enamelled creamware teacup was recovered which had a beaded exterior rim and a red line on the rim interior. This specimen measures 8 cm in diameter and has a painted floral motif decoration in red, green and brown. it is similar to examples from Fort Stanwix and a domestic site in Newcastle, Maine. This beaded rim, which came into use around 1775, is also apparent on other teaset forms. A possible sugar bowl, with this similar beaded design along the rim base and top, exhibits grooves for a lid or cover. A cup or small bowl also exhibits a beaded rim decoration, but in a double line along the rim. This may be unrelated to the other beaded examples or may be a subtle variation in the tea decoration.

The preponderance of teawares at the truckhouse is interesting in that at least four different teasets are represented in the ceramic assemblage. Porcelain teacups, white saltglaze stoneware teacups and teapots, scratch blue stoneware teacups and saucers, and creamware teacups and teapots indicate the importance of the tea ceremony on the frontier to maintain some form of status far from a power base. This daily ritual allowed frontier dwellers the opportunity to reenact a distinctive and highly valued ceremony reminiscent of 'more civilized areas.'

CONCLUSIONS

The archaeological evidence indicates a timber framed, hall-and-parlor type structure, complete with shallow cellar and glazed windows. It is likely that this structure was pre-cut, fitted and transported up the river to the site for final assembly. Such prefabrication of buildings was common at other contemporary sites, including Fort Pownall (Olson 1984:35). A prefabricated structure for a truckhouse transported to the site would have aided in construction time and ease. This would have been supplemented by the supply of mass produced material such as windows and cast iron roofing nails.

Within the truckhouse, specific concentrations of artifacts may indicate areas of activity. For example, most of the ceramics were found in the eastern half of the building. This suggests the location of the kitchen area within the structure and is supported by the distribution of cast iron kettle remains, eating utensils and glassware remains. In addition, trade goods were probably stored there as well. In the halls of such structures, there "were many and varied utensils used in the preparation and consumption of food... and quite commonly some tools and light farm equipment" (Cummings 1964).

Comparatively speaking, the west room contained few Indian trade or domestic items and was probably reserved for business and special activities. In the parlor of such structures, was located "the best furniture; here important company was entertained and dined" (Cummings 1964:xv, xvii). The fact that only this room exhibited plaster would have made it an insulated and attractive room within which to possibly impress a visitor.

What emerges from the analysis of the domestic and trade artifacts is an insight into the living and trading conditions of the occupants of a frontier truckhouse. Cooking, eating and general domestic chores were probably done in the east room amid the bulk of Indian trade goods, possibly including reworking used gunflints by the fire. The west room was probably reserved for

working on the truckhouse accounts or entertaining visiting dignitaries such as Penobscot Chief Orono or Colonel John Allan from Machias. Space would have been at a premium.

Jonathan Lowder's truckhouse was built in late 1776 or early 1777, abandoned sometime after June 1779, and eventually burned after standing vacant. This Revolutionary War structure was erected by a force of Rangers under the command of Lt. Andrew Gilman, and operated as a trading post for about two years under the supervision of Colonel Jonathan Lowder. In addition to its role in the fight for American independence, this structure and its history represents a little-known phase of early Bangor settlement and development.

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4500 YEARS ON THE LOWER ANDROSCOGGIN: ARCHAEOLOGICAL INVESTIGATION OF THE ROSIE-MUGFORD SITE COMPLEX

Steven L. Cox and Deborah B. Wilson

INTRODUCTION

The Rosie (15.231) and Mugford (15.233) sites are situated along the Androscoggin River in the town of Topsham. Located adjacent to each other, they are deeply stratified sites that together preserve a remarkably detailed 4,500 year record of human occupation in the region. Both sites were discovered and initially tested in 1989 during the course of a comprehensive archaeological survey of Topsham funded by the Maine Historic Preservation Commission through their Certified Local Government program (Wilson *et. al.* 1989). This program provides federal prehistoric, historic and architectural survey grants to municipalities that meet state historic preservation criteria in land use planning and management. In 1990 we returned to the two sites, again with CLG funding, for more intensive testing. This article represents a preliminary report on the results of the 1990 investigations.

From the beginning of the survey in 1988 we felt that the Topsham area was a key one in understanding Maine prehistory. Topsham has a rich history and prehistory, as evidenced by numerous known archaeological sites in the town and five recently registered historic districts. This is hardly surprising, for the town is situated between several major waterways that connect the coast with the interior of Maine. Prehistoric peoples as well as European settlers utilized rivers as transportation corridors and as a source for many resources.

In specific, Topsham is bounded on its southern and western margins by the Androscoggin River. The headwaters of the Androscoggin are found in the Rangely area of western Maine, an area of high elevation terrain punctuated by small streams which empty into numerous lakes. The Androscoggin traverses south-central Maine in a meandering course and terminates in tidal Merrymeeting Bay. On its course to Merrymeeting Bay, the Androscoggin cuts across numerous bedrock strike ridges resulting in a generally shallow channel punctuated by numerous knickpoints. Knickpoints are breaks in the smooth down-gradient flow of a river, generally a bedrock protrusion or trend, that provide a base level for the section of river just upstream. Today the waters of the Androscoggin are tidal below the Central Maine Power Company dam in Topsham.

Merrymeeting Bay, a large marine estuary, borders Topsham to the east. Five rivers, the Abagadasett, Androscoggin, Cathant, Kennebec and Muddy, flow into this bay, and one of these, the Kennebec, flows out to join the Gulf of Maine some 15 miles distant. The Cathance and Muddy Rivers originate in Topsham and today are sluggish, small order streams. The Kennebec River, on

The Maine Archaeological Society Bulletin 31:1:15-40 (1991)

the other hand, is one of Maine's largest rivers. It flows south from Moosehead Lake in north-central Maine and, after being joined by several other rivers, flows through Merrymeeting Bay to empty into the Gulf of Maine at Small Point. In contrast to the Androscoggin, the lower Kennebec flows through a relatively deep, straight channel with few knickpoints. The Chops, located below Merrymeeting Bay on the Kennebec, is thought to be the major knickpoint separating the upstream fluvial systems from tidal influence until its flooding by rising marine waters about 5,400 years ago. Subsequent to this flooding, tidal conditions prevailed in Merrymeeting Bay and the lower reaches of the Kennebec, Androscoggin and the smaller rivers in the area.

The water bodies that bound Topsham on three sides constitute a rich resource base for human inhabitants of the area. Anadromous fish including salmon, sturgeon, and eel are numerous in the rivers and in Merrymeeting Bay during certain seasons. Merrymeeting Bay is a stopover for waterfowl during spring and fall migrations, for feed fish are plentiful in its waters and stands of wild rice border its shores. Small and large mammals, including white-tailed deer, moose, beaver and otter, abound on land.

In addition to its natural and cultural richness, the Topsham area is of interest archaeologically because at a number of times in the past it appears to have been at or near a cultural boundary. In accounts of his trips along the Maine coast in the first decade of the seventeenth century Champlain described the Kennebec-Androscoggin region as the boundary between the agricultural Armouchiquois to the west and the hunter-gathering Etchemin to the east. The Kennebec also formed the western boundary of the Moorehead phase, or Red Paint people of around 4,000 years ago, and it is perhaps no accident therefore that Topsham contains possibly the richest concentration of sites of the succeeding Susquehanna culture known from the state. If, as we suspect, the appearance of Susquehanna represents the migration of new peoples into Maine, one might expect the existence of a major staging area just to the west of the eastern boundary of the Moorehead culture.

SITE DESCRIPTION

The Rosie and Mugford sites are located on the northern bank of the Androscoggin, just downstream from the outlet of a narrows between an unnamed island and the north bank. The sites are adjacent, with Mugford lying downstream from Rosie and separated from it by bedrock outcrops and a complex series of fossil and active backchannels. The sites are located on a sandy depositional river terrace, about 3.3 meters above the normal high tide in the river at Rosie and 2.5 meters at Mugford. This terrace is fronted over much of the site area by a lower (ca. 1.5 m.) active flood terrace of recent origin. Both sites are bounded on their inland (north) side by marshy backchannels, behind which the land rises steeply in a till-based slope to a sand plain, a late Pleistocene delta formation, about 20 meters above the river. The land has been cleared recently, and most of the site area consists of open grassy fields, with predominantly pine woods around the peripheries.

The Rosie site (Figure 1) is approximately 250 meters long and 80 meters wide. The Mugford site (Figure 2) is located about 50 meters downstream from the eastern end of Rosie, and is approximately 200 meters long, with a maximum width of about 40 meters. In turn, Mugford lies about 200 meters upstream from the Hunter Farm site (15.110), previously investigated by Arthur Spiess (1984). The Hunter Farm site is located on two river terraces at 3.5 and 8 meters above the river. In contrast to the Rosie-Mugford depositional terrace system, these terraces are erosional in origin and probably substantially predate formation of the Rosie-Mugford terrace. Vertical stratification of cultural material is absent, and most of the recovered material was from a plowzone. Cultural material from both terraces appears to be predominantly Late Archaic in date, and includes both small stemmed point and Brewerton-related artifacts. A fourth site,

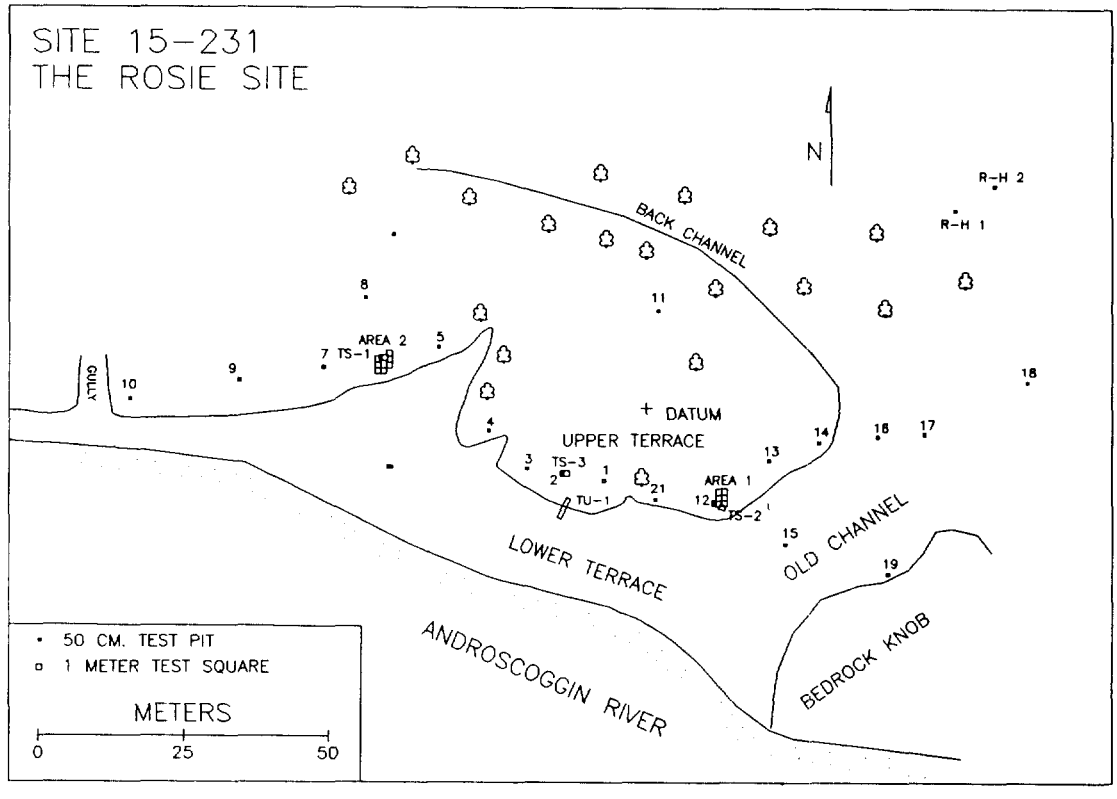

Figure 1. Testpit and test unit location at the Rosie site.

15.232, was discovered during the 1989 survey on a narrow erosional terrace remnant above the Mugford site. It appears to be essentially an upstream extension of the Hunter Farm 3.5 meter terrace, and probably is similar culturally.

The oldest cultural component so far identified at Rosie-Mugford dates ca. 4,500-4,000 B.P., and although we cannot entirely rule out a somewhat older component existing in an untested portion of the site or below the current water table, it is likely that the terrace itself is not substantially older. Unlike the Hunter Farm terraces which are erosional terraces formed by river downcutting, probably in the early Holocene, the Rosie-Mugford terrace system is a depositional terrace which probably started aggrading with rising base levels sometime after the flooding of the Chops and the onset of tidal conditions by ca. 5,000 years ago.

Site sediments at both Mugford and Rosie consist of fine to medium sand. A number of lines of evidence indicate that the amount and rate of deposition have varied over each site's area. At Rosie, archaeological testing revealed that cultural material of a given age occurred deeper at the upstream (western) end of the site, and that the stratigraphic sequence at the downstream end of the site was relatively compressed. At Mugford, this trend was reversed, with cultural material of a given age occurring deeper at the downstream end of the site than at the upstream end. In general, the soil profile tends to become more compressed the closer one gets to the bedrock knobs between the two sites.

A second line of evidence relates to the presence or absence of distinct buried soil

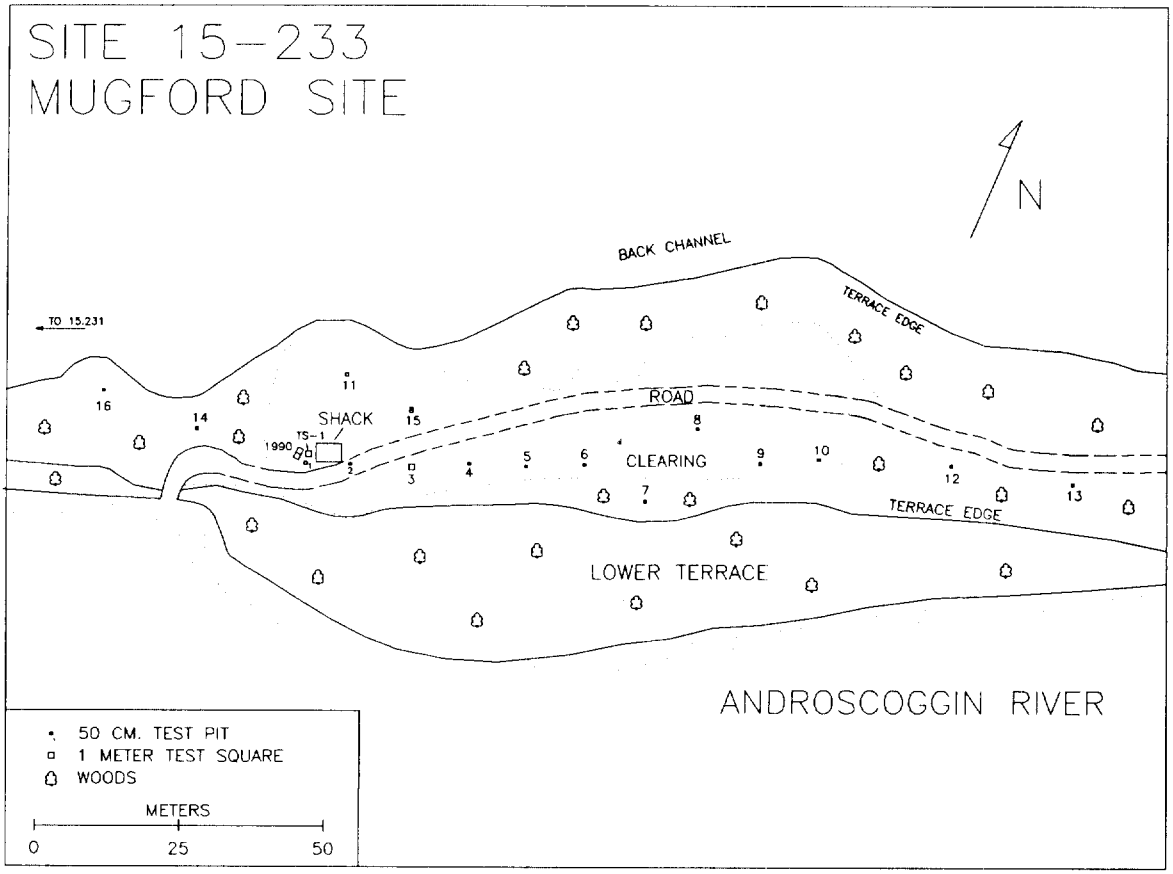

Figure 2. Testpit and test unit locations at the Mugford site.

horizons in various areas, particularly at the Rosie site. In order for an organic (A) horizon to be preserved within a soil column, it must be buried relatively quickly by at least a few centimeters of sediment during a depositional flood event. If deposition occurs very slowly and steadily, at a rate of perhaps a few grains a year, the organic horizon will simply migrate upward, accumulating organics at the surface and oxidizing them at the base, leaving no buried A horizons. At Rosie, we encountered multiple buried soil horizons at the upstream end of the site, but relatively few such horizons at the downstream end. At Mugford this difference was much less apparent, with all tested areas of the site exhibiting distinct buried soil horizons.

Both lines of evidence suggest differential deposition over the area of the two sites. We can identify two possible mechanisms to explain this phenomenon. First, the upstream portions of the Rosie site are directly opposite the outlet of the narrows upstream from the site, and presumably as the current exits the narrows and slows it will tend to dump a portion of its sediment load, with greater deposition occurring immediately adjacent to the outlet of the narrows. Downstream at Mugford this mechanism probably does not apply directly, but there may well be an river eddy from the bedrock outcrops between the two sites which promotes greater deposition on the downstream end of the site.

A second mechanism relates to the depth of bedrock underlying the terrace. As we have noted, in both sites the stratigraphic sequence is relatively compressed near the central bedrock knobs. As one might expect, a depositing system will tend to fill in bedrock lows faster to ultimately create a level surface, and seismic data collected by project geologist Tom Lowell in 1990 provides some support for a positive correlation between bedrock depth and the depth of overlying cultural layers.

We have stressed the differential rate of deposition over the two sites because it has obvious implications both for the degree of vertical separation of cultural components and, in practical terms, for the antiquity of the lowest cultural layer above the water table in various areas of the site. Based on the results of the initial 1989 tests and our geological models, we anticipated that excavations near the bedrock outcrops at the eastern end of the Rosie site would provide the best chance for recovering Archaic materials, while the western end of Rosie and much of the Mugford site would provide the best stratigraphic separation of more recent cultural components, but in these areas older components might either be absent or lie too deep to be reached due to the water table. In this respect the results of the 1990 excavations confirmed our expectations.

ARCHAEOLOGICAL INVESTIGATIONS

Initial testing of the Rosie site in 1989 included 24 test units: eighteen 50 cm. shovel test pits, three 1x0.5 m. test pits, two 1 m. square test squares, and one 4.25x0.75 m. geological test trench at the front of the terrace. Cultural material was present in all but four of the test units (TP-5, 10, 15, and 18). Stratified alluvial deposits were encountered over the entire site, and many of the tests produced cultural material from multiple levels, extending as deep as 2.4 meters below the surface in the western part of the site. Cultural material diagnostic of Late Archaic (small stemmed point and Susquehanna), early Ceramic and middle Ceramic was recovered.

At Mugford in 1989 we excavated fourteen 50 cm. test pits, one 1x0.5 m. test pit, and two 1 meter squares, again encountering stratified alluvial deposits and several cultural layers extending to more than two meters below the surface. Most of the diagnostic cultural material consisted of middle Ceramic pottery, although a triangular point (Figure 3:D) closely resembling the Brewerton Eared-Triangle type was found relatively high up in the soil column in one of the test pits. We suspect it was redeposited, perhaps from flood scoured sediments around the bedrock knoll upstream.

The 1989 tests were scattered over the two sites primarily in an effort to define the site limits and investigate stratigraphic and cultural variability over the site areas. In the 1990 field season we elected to conduct a limited number of area excavations, opening up larger areas so we could better trace stratigraphic detail and obtain a larger and more coherent sample of cultural material from each of the strata. Two such areas were opened at the Rosie site and one at Mugford.

Excavation units were one meter squares, designated by the location of their SW corner on the site grid. Excavation proceeded by 10 cm. levels within the square, except that level 1 always consisted of the entire plowzone, regardless of thickness. Although excavation by natural levels is generally preferable, we decided to employ arbitrary 10 cm. levels in the 1990 excavations because of our relative unfamiliarity with the stratigraphy at the beginning of excavations and the difficulties encountered in tracing some of the strata through the entire excavation block. Artifacts and features were mapped with point provenience on both horizontal and vertical square plans, and their associated natural stratum noted. Other cultural material such as flakes, undecorated pottery and calcined bone was collected by 50 cm. quadrant within each 10 cm. level. All excavation backdirt was screened through 1/4" mesh screen. Excavation results, including natural and cultural stratigraphy, are described in detail below. We are indebted to James Petersen for his assistance in cer-

amic analysis and description, and to Robert Lewis of the Maine State Museum for identification and analysis of faunal remains from the sites.

Parallel to the archaeological investigations, project geologist Tom Lowell conducted geological studies on the site in both 1989 and 1990. His studies included landform mapping, seismic profiling (primarily to determine bedrock depth over the site area), magnetic susceptibility tests on soil profiles, and stratigraphic description. In addition, during 1990 Dan Belknap of the University of Maine took several vibracore samples from the backchannel behind the Mugford site and from the main Androscoggin channel just off the Mugford site. Hopefully when these cores and other geologic information from the area are analyzed, they will provide us with a more detailed picture of the formation and development of the Mugford-Rosie terrace system and perhaps also with a more precise date for the onset of tidal conditions in the area.

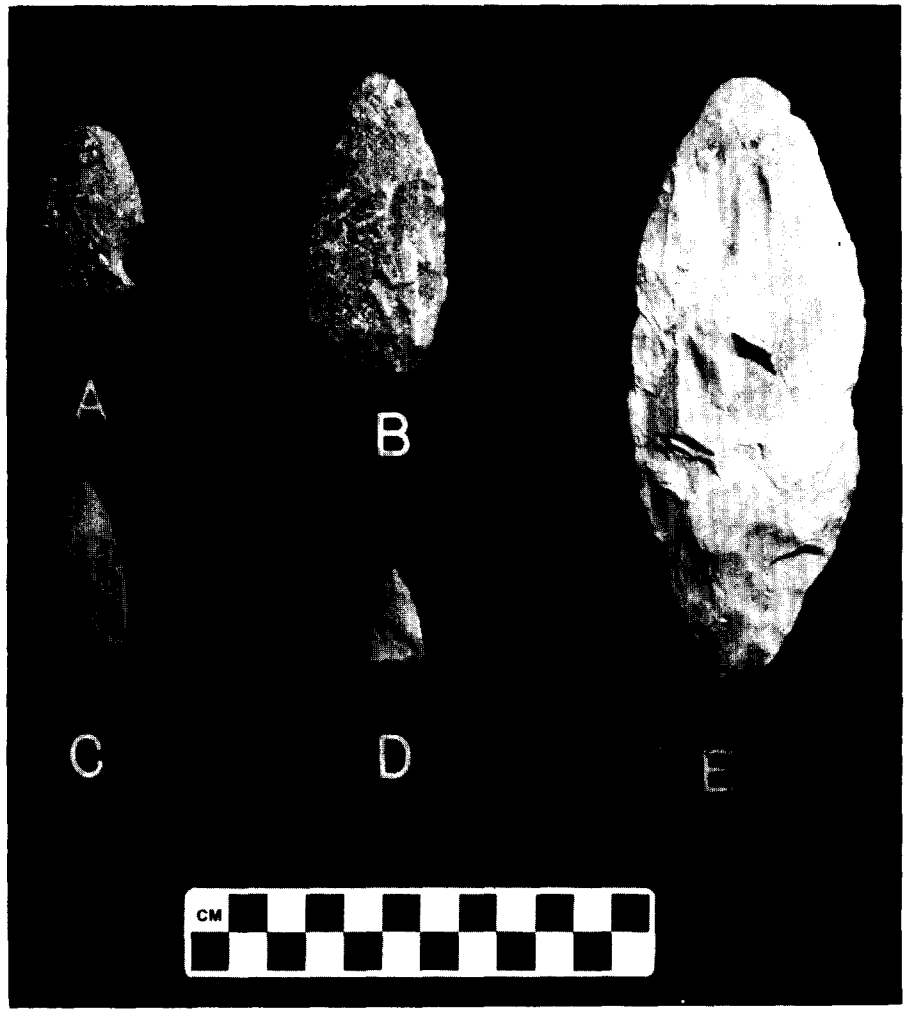

Figure 3. Artifacts from the 1989 and 1990 excavations at both the Rosie and Mugford sites.

Working with Lowell, we have developed what we term a "stratigraphic package" (SP) as our basic unit of stratigraphic analysis and description. A stratigraphic package, numbered consecutively from the surface downward, may be defined as a stable land surface with its associated subsoil. Normally a single stratigraphic package would include: 1) an A horizon (the dark gray to black organic horizon originally lying at the ground surface); 2) an E horizon (a pale gray leached zone under the A - rarely present at Rosie-Mugford); 3) a B horizon (a reddish-brown zone of mineral accumulation), and 4) a C horizon of unmodified parent sediments.

Not every stratigraphic package has every horizon present due to factors such as erosion, thickness, the duration of surface

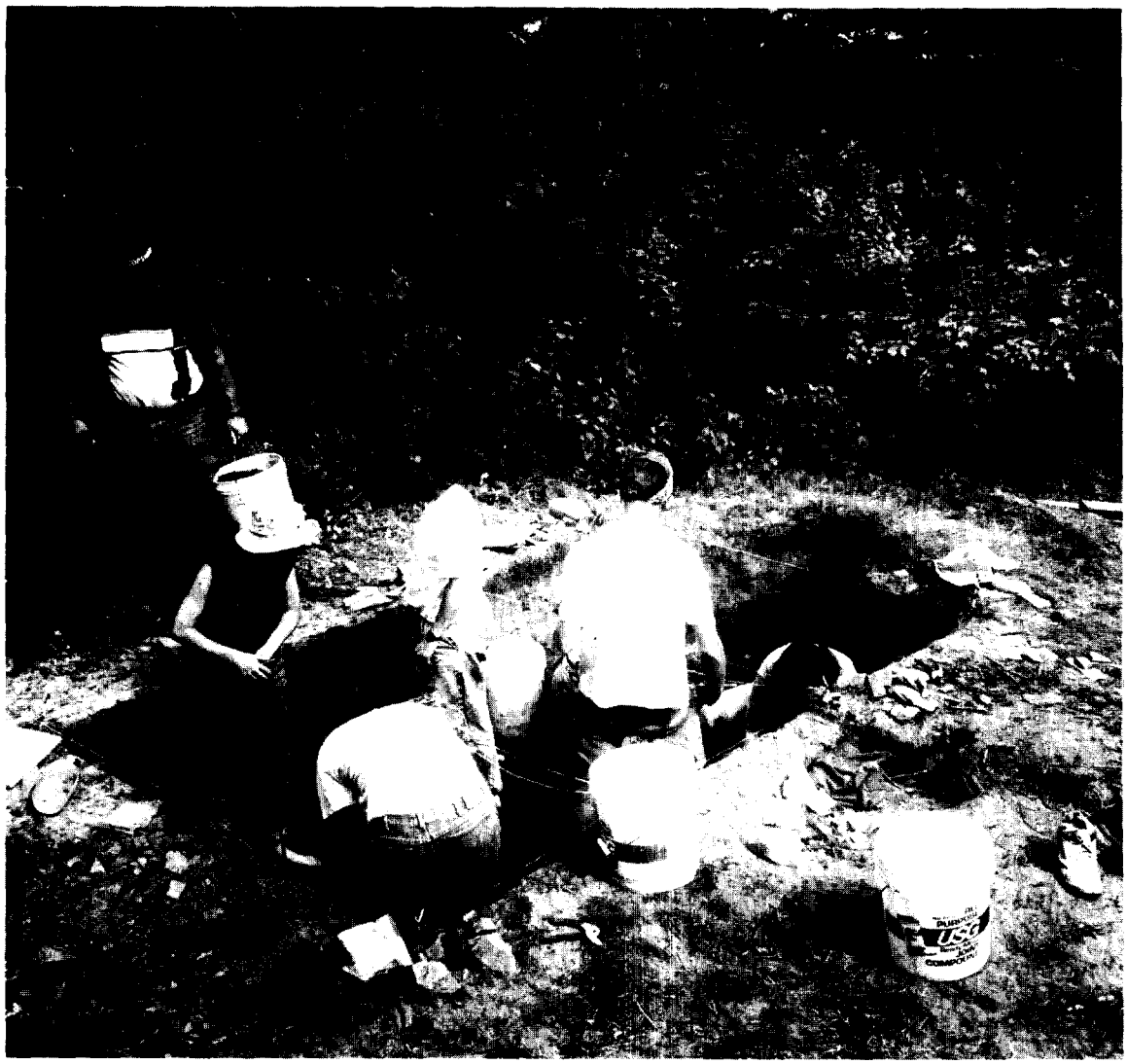

Figure 4. Rosie Area 1 under excavation, looking southeastward.

exposure and variations in chemical weathering processes. However, most areas of Rosie and Mugford have a clear series of whole or partial stratigraphic packages extending downward from the surface, each representing a period of stable soil development after a depositional episode, and most of these stratigraphic packages contain a prehistoric cultural component.

Although we can make rough correlations using geological and archaeological data, we cannot precisely correlate stratigraphic packages between excavation areas without linking them with trenches or closely spaced excavations to enable the stratigraphy to be traced, a task far beyond our time and fiscal limitations. Therefore, each excavation area is treated individually in the descriptions below, with a tentative overview correlation reserved for the concluding section.

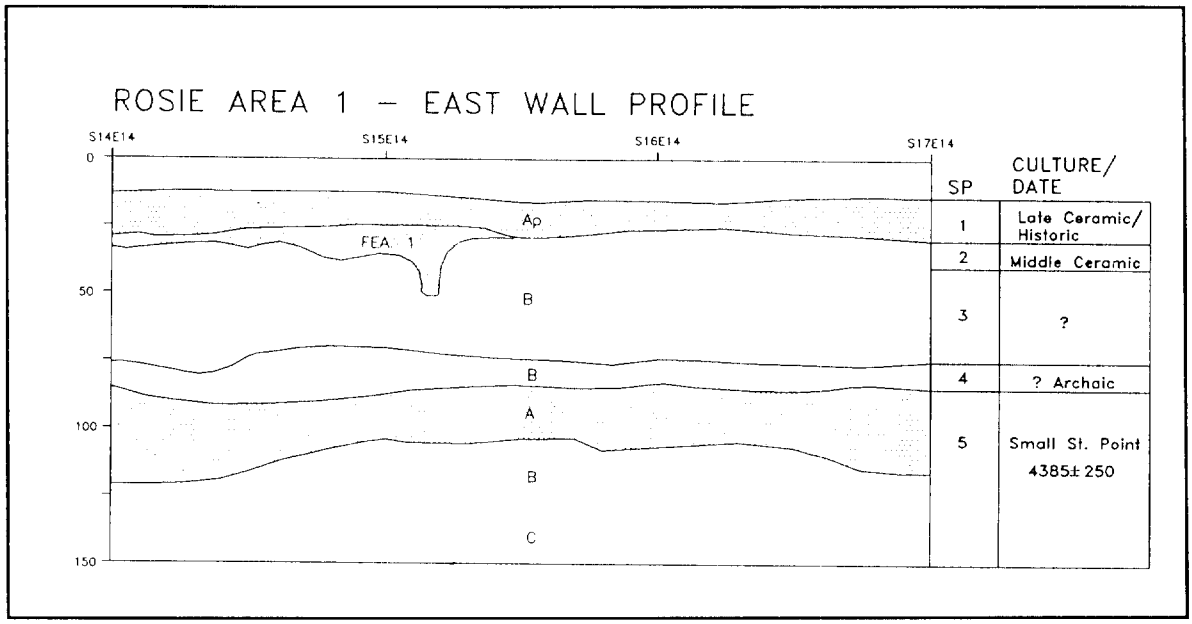

Figure 5. Rosie Area 1, east wall profile from S14 to S17.

ROSIE AREA 1

This excavation area is located near the eastern end of the site, overlooking an old flood channel separating the 3.3 meter terrace from the bedrock knob to the east. We excavated six 1 meter squares (S15-17E12, S15-17E13) in a 2x3 meter block located immediately north of 1989's test square 2 and east of test pit 12 (Figure 4).

The primary purpose of this excavation was to investigate the Archaic occupation of the site. In the 1989 tests of this area no pottery had been found more than 50-60 cm. below the surface, and below this level we had recovered a probable Susquehanna expanding stem point, a grooved slate fragment and a fragment of a pecking stone. Additionally, a depression in the channel immediately adjacent to Area 1, probably excavated by swirling flood waters, had produced a quartz small stemmed point eroded from the terrace side of the depression.

Unlike other areas of the site, relatively few distinct buried A horizons were present in the soil column in Area 1, although we were able to distinguish several stratigraphic packages through preservation of a distinct B horizon (Figure 5). We attribute the scarcity of preserved A horizons largely to a relatively slow accumulation of sediments in this area of the site.

Stratigraphic Package 1 (0-14 cm., L-1) - The upper stratigraphic package in this area consists of a plowzone 12-20 cm. thick. This horizon produced sherds from three distinct ceramic vessels:

1) Vessel 1 (Figure 6:A): a small, grit tempered vessel of unusual thinness (2-4 mm.). The vessel walls are smooth on the interior and upper exterior, and smoothed over fabric paddled (Z twist) on the exterior body. The rim is squarish and slightly thickened. There is no decoration on the lip or interior. Three design units can be distinguished on the exterior, described from the rim downward. Design unit 1 consists of narrow horizontal bands of linear punctations with vertical orientation. Below that design unit 2 consists of at least three horizontal incised lines. Design unit 3 is a second set of linear punctations (the same as unit 1). The design styles and extreme thinness of this vessel suggest that it dates to the very late prehistoric or the early contact period.

2) Vessel 2: this vessel is represented by a

single shell tempered body sherd. Its exterior surface is eroded, but appears to have been fabric paddled.

3) Vessel 3: again represented by a single sherd, this is a grit tempered vessel with a smooth interior and exterior and decoration consisting of horizontal bands of vertically oriented cord-wrapped stick impressions (S twist). It is likely that this vessel is somewhat earlier in the late Ceramic period than vessel 1, CP-4 or 5 in Petersen and Sanger's (1989) scheme.

Lithic material from this horizon consisted of a celt (Figure 7:L) and half a dozen flakes. The celt, made of a metavolcanic, is roughly oval in cross section and measures 192.0x62. by 1x32.8 mm. The body is pecked and lightly ground, and the bit, which has been heavily damaged, is polished over a distance of 2-3 cm. from the edge.

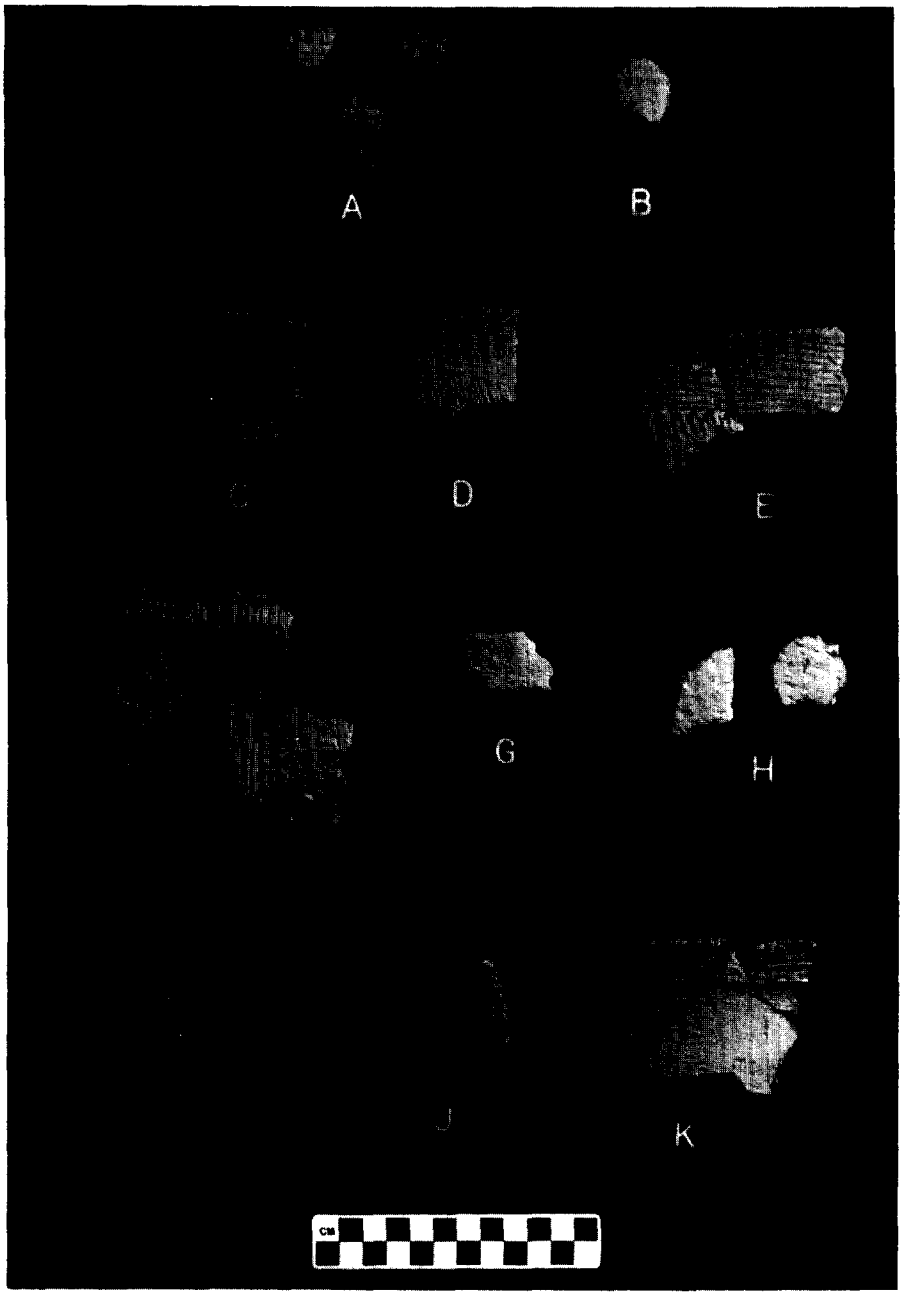

Figure 6. Rosie and Mugford site ceramics.

One cultural feature was associated with SP-1. Feature 1 consisted of a dark reddish brown soil stain of ca. 50 cm. diameter visible at the base of the plowzone in squares S15E12 and S16E12. The feature, possibly the base of a hearth, contained one rock and numerous calcined bone fragments (deer is the only identifiable species). Virtually all of the sherds from vessels 1 and 2 (104 of 107 total sherds from this horizon) were

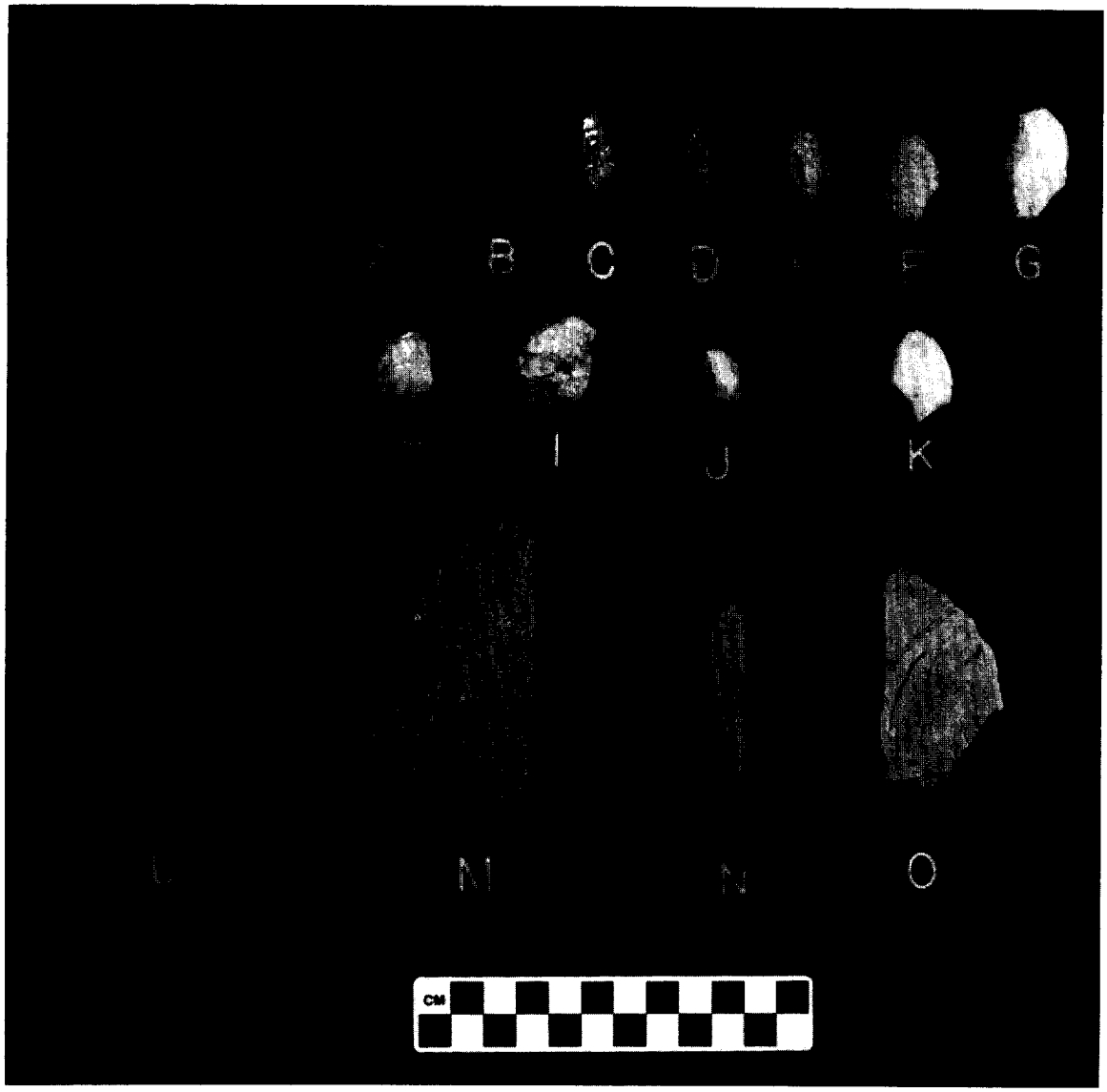

Figure 7. Rosie Area 1 lithic artifacts.

recovered in the vicinity of this feature.

In summary, SP-1 encompasses the late Ceramic and historic periods within the present plowzone. Most of the aboriginal material from this horizon clustered in the vicinity of a possible hearth feature at the northeastern end of the excavation. Vessel 1, which includes most of the sherds recovered and is probably associated with feature 1, appears to date to the end of the prehistoric or beginning of the historic period. Of the items of historic material recovered from the plowzone, only a single sherd of salt-glazed stoneware may be early.

Stratigraphic Package 2 (14-35 cm., L-2,3) - This package consists of a reddish-orange B2 horizon containing middle Ceramic material. Most of the cultural material clustered at 20-30 cm. depth on a probable living surface. As in most Ceramic period levels investigated so far at Rosie-Mugford, lithics were rela-

tively rare, while pottery was plentiful. Lithics included one quartz utilized flake and 20 unmodified flakes, 18 quartz and 2 rhyolite. Calcined bone from this package included that of deer and sturgeon. Sherds from three pottery vessels were recovered.
1) Vessel 4 (Figure 6:B): this is a grit tempered vessel with smooth exterior and interior surfaces. The rim is squarish, very thin (4-5 mm.) and of somewhat irregular form and thickness. There is transverse simple dentate decoration on the lip. Below the lip on the exterior design unit 1 consists of two horizontal bands of linear punctations, and below that design unit 2 consists of vertical bands of horizontally oriented rocker dentate impressions.
2) Vessel 5: this vessel is represented by a single grit temper body sherd with a horizontal band of vertically oriented rocker dentate elements.
3) Vessel 6: represented by body sherds only, this relatively thin-walled (7-8 mm.) vessel has both vertical bands of horizontal rocker dentate and horizontal bands of vertical rocker dentate decoration. The impressions are not clear, suggesting that the decoration was applied when the vessel was still wet.

One cultural feature was associated with this package. Feature 4 was a probable rock-lined pit extending from ca. 32 cm. to 50 cm. in squares S15/16E13. The feature, which extended into the east wall of the squares, measured about 70x85 cm. within the excavation area. It contained only a few flakes and pieces of calcined bone.

All of the diagnostic material from SP-2 is attributable to the middle Ceramic period. The pottery appears to date relatively early within the period, probably falling within Petersen and Sanger's CP-2 division.

Stratigraphic Packages 3 and 4 (35-75 cm., L-4,5,6) - This is a zone consisting largely of B horizon reddish-brown deposits without clear stratigraphic divisions or cultural layers. Probably the result of a very slow accumulation of sediments, these levels produced very little in the way of cultural material. Ceramics were limited to about a dozen small, undecorated sherds, perhaps mixed downward from SP-2. Lithics included quartz, rhyolite and a few chert flakes, worked and unworked chunks of quartz, a thin quartz biface tip (Figure 7:K), a rhyolite biface preform tip and a finely flaked rhyolite non-stemmed biface base. A rather worn and edge-damaged plano-convex adze bit (Figure 7:M) was recovered in the vicinity of feature 5 in SP-3. This is most likely Late Archaic in age, and may be associated with the SP-5 component (see the discussion of feature 5, below). None of the other material recovered is culturally diagnostic.

SP-3 and 4 probably represent a considerable span of slow sediment accumulation between roughly 4,000 and 2,000 years ago. An expanded stem point (Figure 3:A), probably Susquehanna, recovered at a depth of 60 cm. from 1989's test square 2 at the southern end of Area 1 is attributable to this zone, but otherwise there is little that is diagnostic to delineate occupation of this area of the site during the period. The only cultural feature noted was feature 5, described in connection with SP-5, below.

Stratigraphic Package 5 (75-150+ cm., L-7,8,9+) - This package consisted of a distinct A horizon lying at a depth of ca. 75-120 cm., with associated B and C subsoils extending to the base of the excavation. All of the cultural material recovered from this package is attributable to the small stemmed point phase of the Late Archaic. Virtually all of the cultural material was recovered from the A horizon.

The collection from this package includes half a dozen small stemmed points or point preforms (Figure 7:A,C-G), five of quartz and one of rhyolite. As mentioned above, an additional stemmed point of rhyolite (Figure 7:B) was found eroded from the bank in front of Area 1 in 1989, and this point is almost certainly attributable to SP-5 as well. All of the quartz specimens are quite crude, some of which we interpret as barely recognizable preforms.

Four quartz scrapers were recovered from this package. One is a crude flake

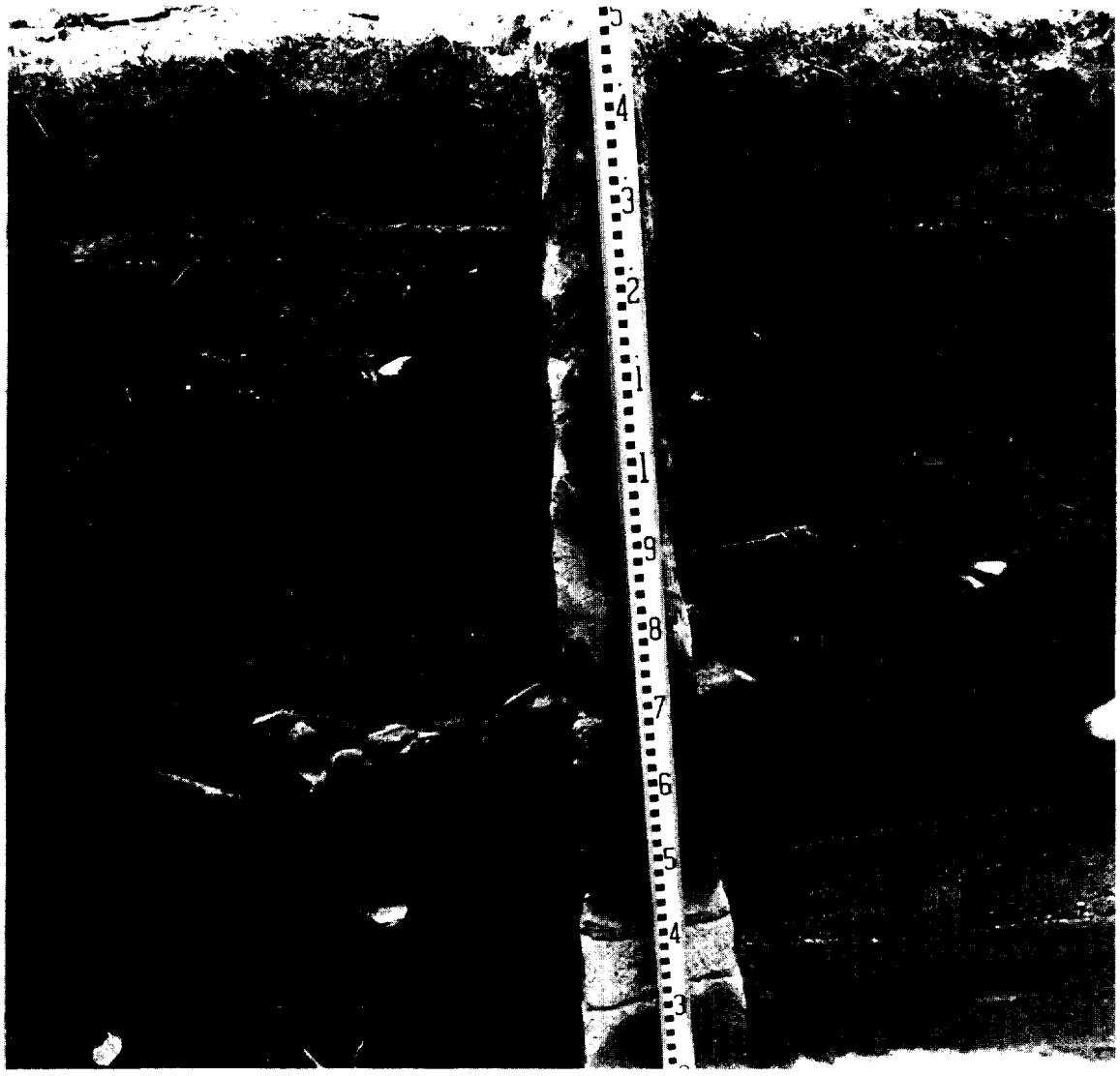

Figure 8. Rosie Area 1, West Wall showing Feature 6.

scraper. Of the three slightly more carefully shaped endscrapers (Figure 7:H-J), the two thickest specimens (11.5 and 14.5 cm.) were recovered from the base of the A or top of the B2, 10-20 cm. below the bulk of the other material, in the NW quad of S15E12. In general cultural material extended lower in SP-5 within this square than in the others, and there may have been an unrecognized pit feature there.

Other artifacts recovered from SP-5 include a stone rod fragment with subrectangular cross section (Figure 7:N), a pecking stone fragment, and a number of metavolcanic flakes, including some with a polished surface, possibly from an adze or gouge. A grooved slate fragment (Figure 7:O) from TS-2 recovered in 1989 is also probably attributable to SP-5 and the small stemmed point component.

Two or possibly three features are associated with SP-5. Feature 6 was a rock-lined

Figure 9. Rosie site Area 2, looking south.

pit about 65 cm. in diameter and 60 cm. deep in the west wall of square S17E12 (Figure 8). It began near the top of SP-5 with a double layer of rock slabs covering the pit. Slabs also loosely lined the sides and base of the feature. The pit had a black to dark brown sandy fill, rich with probable powdered charcoal but with few solid pieces. The feature produced a quartz biface tip, a few flakes, and pieces of calcined bone.

Feature 7 consisted of a concentration of small stemmed point cultural material and charcoal in a dark soil matrix in squares S17E12 (NE quad) and S17E13 (NW quad). In some areas of this feature the soil had been reddened by fire, and we interpret the feature as a surficial hearth, lying in the upper half of the SP-5 A horizon. A rhyolite small stemmed point (Figure 7:A), quartz flakes and calcined bone were associated with the feature. Charcoal from Feature 7 returned a date of 4385±250 B.P.(GX-16266).

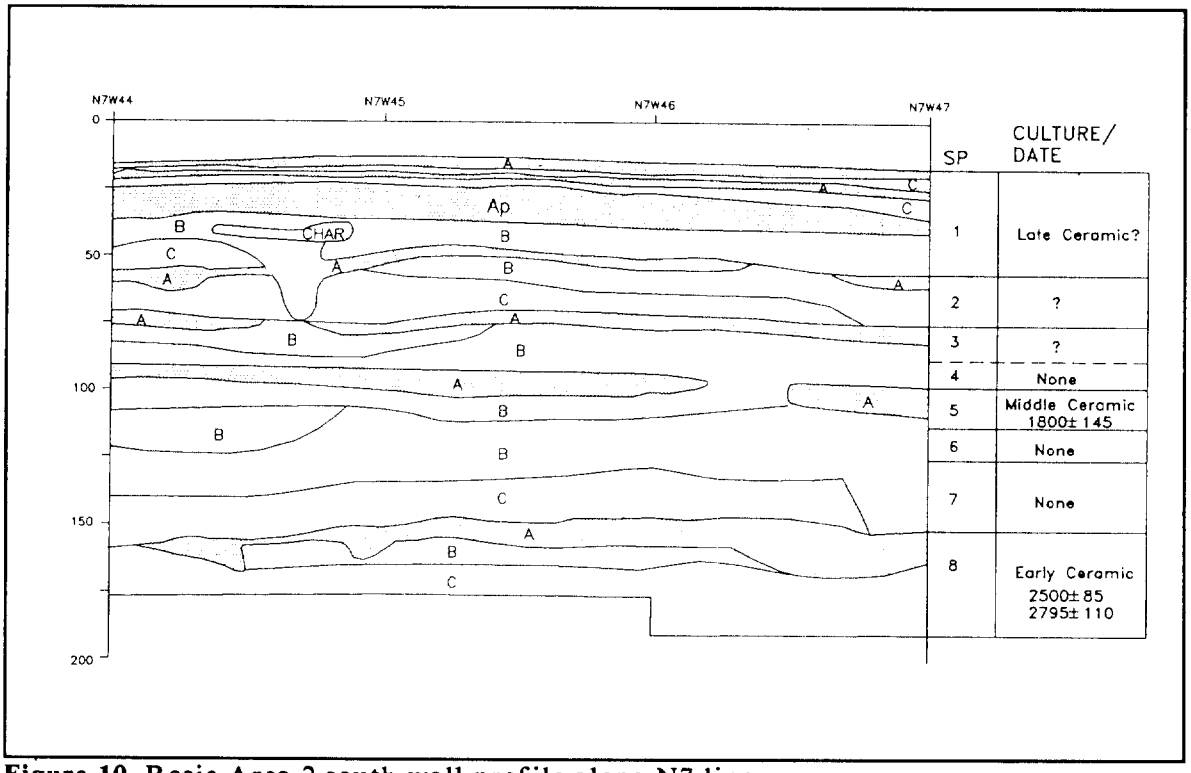

Figure 10. Rosie Area 2 south wall profile along N7 line.

Feature 5 was an enigmatic feature of uncertain date and stratigraphic association. Located in the southeastern portion of square S17E13, the feature was initially encountered as a cluster of rocks at 35-45 cm. below the surface (SP-3). Subsequent excavation produced a scatter of rocks at every level within the feature area extending to a depth of 90 cm. (SP-5). A similar cluster of rocks was noted in adjacent 1989 test square 2. There was no indication of a pit, and no pottery occurred in the area of the feature below SP-2. The soil was not discolored around the rocks, but a relatively large amount of calcined bone was present throughout. Artifacts in possible association with the feature included a quartz biface preform fragment and a plano-convex adze bit, both from SP-3 but both very likely Archaic.

One possible explanation for the feature is that it was an above-ground stone pile, perhaps a cache or cairn, dating to the small stemmed point period. As time passed and sediment gradually accumulated around it, the rocks were scattered, but remained thickest around the structure's original position. This explanation is highly conjectural, and we have submitted a radiocarbon sample from the feature (SP-3 level) in an attempt to further clarify the nature and dating of feature 5.

Calcined bone associated with the small stemmed point component includes that from deer, bear, bird sp., turtle (carapace fragments only), sturgeon and menhaden. Both the sturgeon and the medhaden suggest a summer occupation, although young sturgeon may remain in lower tidal reaches of rivers year-round (Bigelow and Schroeder 1953:82).

In Area 1 no cultural material was recovered below ca. 120 cm. below the surface, roughly the junction of the SP-5 A and B horizons. Below 150 cm. the sandy soil gradually grades to a coarse sand, gravel, pebble and cobble deposit, probably a stream chan-

nel deposit. This overlies bedrock at ca. 225 cm. depth. The water table was reached at 196 cm. below the surface.

In summary, SP-5 of Rosie Area 1 produced the earliest recognized occupation of the Rosie-Mugford site complex, a Late Archaic small stemmed point component. A radiocarbon date of 4385±250 B.P. on this component accords well with our expectations. Associated cultural material includes a number of quartz and rhyolite small stemmed points, thick quartz scrapers, a stone rod, pecking stones, worked slate, and possibly the feature 5 plano-convex adze. The presence of channel deposits below the small stemmed point levels, and the absence of a stable soil horizon below SP-5, suggests that the Rosie-Mugford terrace may not have been available for settlement much prior to the small stemmed point occupation.

ROSIE AREA 2

Excavation Area 2 is located near the terrace lip in the west-central portion of the Rosie terrace (Figure 9). In 1989 a one meter test square (TS-1) and an adjacent 1x0.5 m. test pit (TP-6) were dug in this area. Both units encountered a middle Ceramic level at 70-90 cm. below the surface and an early ceramic level with Vinette I pottery at 140-150 cm. below the surface (Figure 10). However, complicating the interpretation was the presence of two bifaces (Figure 3:B,E) resembling Susquehanna types within a concentration of dentate rocker stamp pottery at the 70-90 cm. level, and a date of 2930±170 B.P. (Beta-32650) on charcoal in association.

In 1990 we excavated eight 1 meter squares surrounding the two 1989 test units in a block 6-10 meters north and 44-47 meters west of datum. As discussed in the site description, Rosie Area 2 has seen more rapid deposition over the past 4,000 years than Area 1, with the consequence that cultural material of a given age is buried deeper, and there are more discrete buried A horizons in Area 2 (Figure 11) than in Area 1. Thus, because of the different depositional history, Area 2 stratigraphic packages are not the same as those of Area 1.

Stratigraphic Package 1 (0-41 cm., L-1,2,3) - Sp-1 in Area 2 includes a 10-15 cm. thick plowzone, two recent flood deposits overlying the plowzone, each with its own thin (2-3 cm.) A horizon, and an associated coarse sand B2 horizon underlying the plowzone. Cultural material from this horizon included rhyolite, quartz and chert flakes, mostly associated with feature 1 at the western edge of the excavation area, and a few small, undiagnostic pottery sherds.

Feature 1 was first recognized as a dense concentration of flakes within the plowzone in the western half of square N7W47. Just below the plowzone the soil had been reddened by heat to a depth of 5-7 cm. below the plowzone, and again contained many flakes and some fragments of calcined bone, including sturgeon scute. The feature extended into the western wall of the square, but appears to have been roughly circular, with a diameter of 50-70 cm. We interpret the feature as the base of a probable surficial hearth which lay mostly in what would become the plowzone. Culture was probably late Ceramic, although no diagnostic cultural material was recovered.

Stratigraphic Package 2 (41-56 cm., L-3,4,5) - This package includes a 5 cm. thick medium brown A horizon and 5-12 cm. of underlying light to medium reddish-brown B horizon sediments. Cultural material consisted only of two quartz flakes and two undiagnostic ceramic sherds.

Stratigraphic Package 3 (56-67 cm., L-5) - SP-3 consisted of a thin, discontinuous A horizon over a B2 horizon. All of the cultural material definitely attributable to SP-3 occurred in association with feature 2, a concentration of flakes, calcined bone and charcoal within the A horizon in squares N9W45 (primarily) and N8W45. Also in association was a thin quartz endscraper and one undiagnostic ceramic sherd. Culture could be either middle or late Ceramic.

Stratigraphic Package 4 (68-76 cm., L-5,6) - SP-4 was a discontinuous unit visible only in

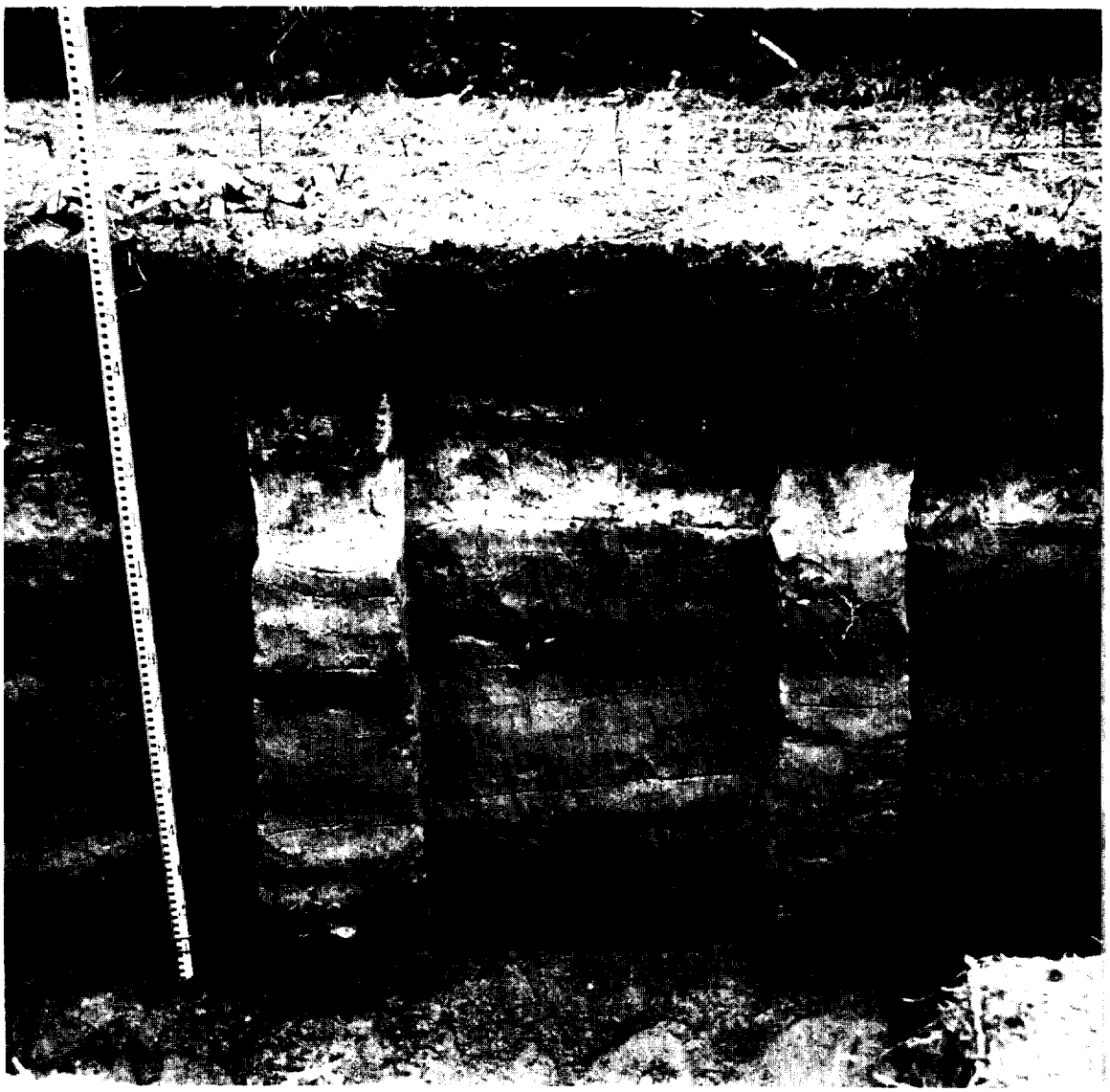

Figure 11. Rosie Area 2, south wall along N/ line. Middle prominent dark layer is middle Ceramic SP-5. Lower dark layer is early Ceramic SP-8, Feature 4.

the southern portion of the excavation block. It consisted of a B2 and C horizon with no associated A horizon, and produced no cultural material.

Stratigraphic Package 5 (76-93 cm., L-7,8) - This package consisted of a strong but discontinuous medium brown A horizon 5-10 cm. thick over a coarser sand reddish-brown B2 horizon. This was the major middle Ceramic horizon encountered in Area 2. Virtually all of the cultural material occurred within the A horizon scattered over what appeared to be a single living surface, with most of the material concentrated in a particularly dark soil zone at the southern part of the excavation block in squares N6W46, N6W47, N7W46 and N7W47. We assigned this concentration with its associated dark stained soil and charcoal feature number 3.

The 1990 lithic inventory from SP-5 consists of a total of two rhyolite flakes. Fortunately, pottery was another story entirely. When we exposed the living surface of feature 3 we found it almost literally paved with ceramic sherds. Of a total of approximately 1,700 ceramic sherds from SP-5, about 1,400 representing at least eight different vessels, described below, were found in the four feature 3 squares. Charcoal from the feature 3 floor associated with the ceramics returned a date of 1800±145 B.P. (GX-16263).

Vessel 1 (Figure 6:C) is a coarse grit tempered vessel with a squarish, slightly excurvate rim. Design unit 1 consists of oblique simple dentate stamping in a zone just below the rim on the exterior, extending onto the lip. Design unit 2 consists of vertical zones of horizontal or vertical dentate rocker stamping bounded by vertical bands of punctations made by the end of a dentate tool. The latter decoration extends to near the base of the vessel.

Vessel 2 (Figure 6:D) is a grit tempered vessel has a rounded lip with simple dentate stamping. Design unit 1 consists of a narrow horizontal band of right oblique simple dentate stamping. Design unit 2 is left oblique drag stamped. Design unit 3 consists of horizontal bands of vertical dentate rocker stamping. This vessel is quite similar to vessel 1.

Vessel 3 (Figure 6:E) is a grit tempered vessel with a slightly excurvate rim with transverse right oblique simple dentate stamping on the lip. Design unit 1 consists of a broad horizontal band of horizontal simple dentate stamping. This band is separated from the next design unit by rectangular punctations (unit 2). Unit 3 is a horizontal band of vertical dentate rocker stamping. Design units 1-3 repeat down the vessel.

Vessel 4 (Figure 6:F) is a relatively thin, grit tempered vessel with a collared rim. Design unit 1 consists of vertical rows of simple dentate stamping. Design unit 2 is a raised collar with circular punctations. Unit 3 consists of vertical bands of dentate rocker stamping cross-cut by vertically oriented incised lines.

Vessel 5 represented by one coarse grit tempered sherd, has a horizontal band of vertical rocker stamping on the interior and an unknown exterior.

Vessel 6 is a coarse grit tempered rocker dentate vessel represented by body sherds only.

Vessel 7 is represented by two body sherds with notable channeling on the interior. The exterior has vertical bands of horizontally oriented dentate rocker stamping with vertical bands of small oval punctations cross-cutting them.

Vessel 8 is represented by several relatively thick grit tempered sherds with burnished exteriors. Decoration includes an unusually narrow zone of linear (non-dentate) rocker impressions. Dentate rocker may also be present.

All of the pottery recovered from SP-5 fits comfortably into Petersen and Sanger's CP-2 division, and the radiocarbon date of 1800 B.P. seems reasonable. We still cannot account for the two anomalous Susquehanna-related bifaces and the 2930 B.P. date from this horizon in 1989's test square 1. There was no evidence of major disturbance within the excavation block, and a Susquehanna component, if it occurs in Area 2, would be at least a meter below SP-5. With the exception of those items, all of the cultural material in SP-5, and indeed in every horizon within Area 2, appears to be tightly constrained stratigraphically, with very little upward or downward post-depositional movement.

Calcined bone from this package includes that of shad and sturgeon, both summer indicators. In addition to the bone, a carbonized fragment of a nut, perhaps a hazelnut or acorn, was recovered from this level in TS-1.

Stratigraphic Package 6 (93-108 cm., L-8,9) - This was a discontinuous B2 and C horizon package recognized only in the eastern part of the excavation block. No cultural material was associated.

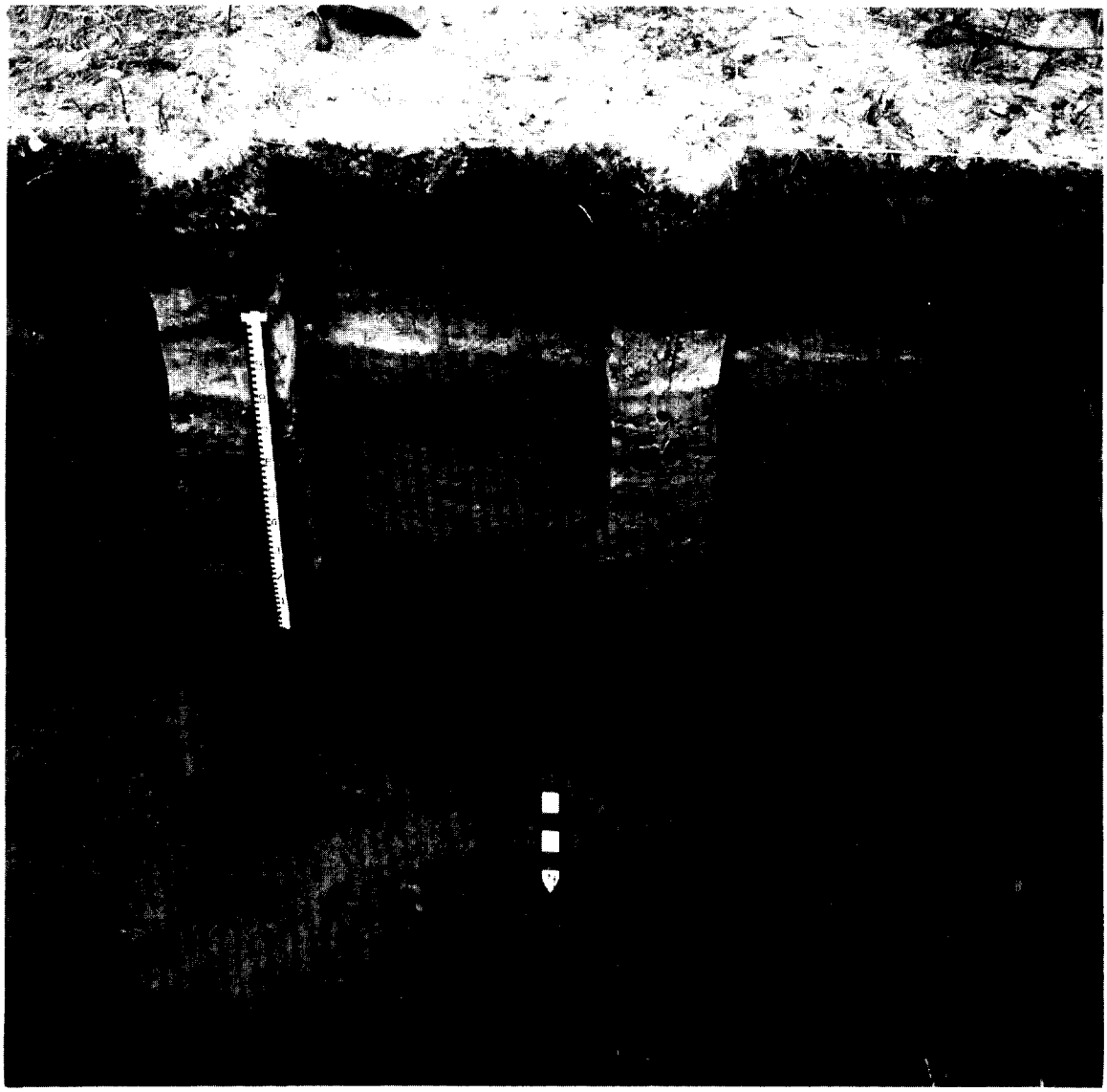

Figure 12. Rosie Area 2, view of northern part of Feature 4.

Stratigraphic Package 7 (108-143 cm., L-10,11) - This was another B2 over C horizon package, this one extending over the entire excavation block. Several small lenses of charcoal within the C horizon are interpreted as derived from the underlying SP-8 A horizon through turbation during the SP-7 flood event. No cultural material was found in this package.

Stratigraphic Package 8 (143-161 cm., L-11,12,13) - This package consisted of a brown-black A horizon up to 10 cm. thick with underlying B2 and C horizons. This was an early Ceramic level, containing a major hearth feature with Vinette I pottery in association.

Feature 4 (Figure 12) consisted of a cluster of numerous rock cobbles within the SP-8 A horizon extending over an area of about one meter (N-S) by two meters (E-W) in the southern part of the excavation block, in

squares N6W46,47 and N7W45-47. The rocks were in a matrix of dark brown to black soil containing abundant amounts of charcoal and moderate amounts of cultural material including flakes and pottery. The rocks appeared to form the base of the feature - dark soil and cultural material were present a short distance above them but disappeared rapidly below the base of the rocks. The rocks were not in any obvious pattern, and appeared to have been somewhat scattered after use. Small amounts of cultural material were also present in the same level outside the feature.

Of two dozen quartz, rhyolite and chert flakes recovered from SP-8, several are of a dark gray slightly translucent chert exotic to Maine. A total of 34 ceramic sherds from the 1990 excavation and 8 sherds from this level in TS-1 represent five Vinette I ceramic vessels, described below. Of the relatively small amount of calcined bone from this package, only sturgeon scute could be identified. Two charcoal samples from feature 4 were submitted for dating, one from the SE quad of N7W46 and one from the NW quad of N6W46. The respective dates are 2795±110 B.P. (GX-16264) and 2500±85 B.P. (GX-16265).

Vessel 9 is represented by two sherds found in square N9W45, about 1.5 meters northeast of feature 4. The squarish, flat rim is relatively thin (5-6 mm.) and slightly excurvate. Both the interior and exterior are fabric paddled, horizontally on the exterior and both obliquely (near the rim) and horizontally on the interior.

Vessel 10 is another relatively thin vessel from just west of feature 4. It is also interior-exterior fabric paddled, horizontally on the interior and obliquely on the exterior. Carbonized material is present on both sides.

Vessel 11 (Figure 6:G) is represented by several sherds found in feature 4, this vessel has a very thin rim (ca. 4 mm.) with a rounded lip, and has horizontal fabric paddling on the interior and both horizontal and oblique fabric paddling on the exterior.

Vessel 12 (Figure 6:H), found in feature 4, is relatively thick and coarsely tempered. Both sides are smoothed over fabric paddling, horizontal interior and oblique exterior.

Vessel 13, from 1989 TS-1 also has smoothing over interior-exterior fabric paddling.

SP-8 was the lowest cultural horizon reached in Area 2 during the 1990 excavations, as the water table was encountered at 175 cm. below the surface. In the 1989 tests, conducted later in the summer, a couple of pieces of calcined bone were found at 2.4 meters below the surface in test square 1, suggesting the presence of deeper cultural layers within the area.

OTHER 1990 ROSIE SITE TESTS

Test Square 3. In 1989 test pit 2, a 1x0.5 meter test pit located roughly mid-way between Areas 1 and 2, encountered a hearth feature with abundant calcined bone, 2 quartz flakes, 1 sherd of rocker dentate pottery and charcoal at a depth of 20-40 cm. below the surface. Charcoal from the feature produced a radiocarbon date of 1910±90 B.P. (Beta-32649). In 1990 we decided to open an adjacent one meter square, designated test square 3 and located at S11.8W14.3 on the grid, in order to both expose more of the hearth feature and to investigate more fully the stratigraphy (Figure 13) of an area of the site intermediate between Areas 1 and 2.

TS-3 proved to be something of a disappointment. The TP-2 hearth at 20-40 cm. largely ended at the eastern wall of the test pit, with only traces of it showing in the western wall of TS-3 at about 30-35 cm. depth. Cultural material at this level included only a few flakes, undecorated pottery sherds and calcined bone. Several body sherds of rocker dentate pottery recovered at a depth of 40 cm. may or may not be associated with the hearth.

Portions of two additional hearth features were found in TS-3. Feature 2 lay in a buried A horizon at a depth of ca. 75-80 cm. in the southwestern corner of the square, and consisted of a concentration of cobbles and charcoal in dark-stained soil. The only cultural material recovered from this level

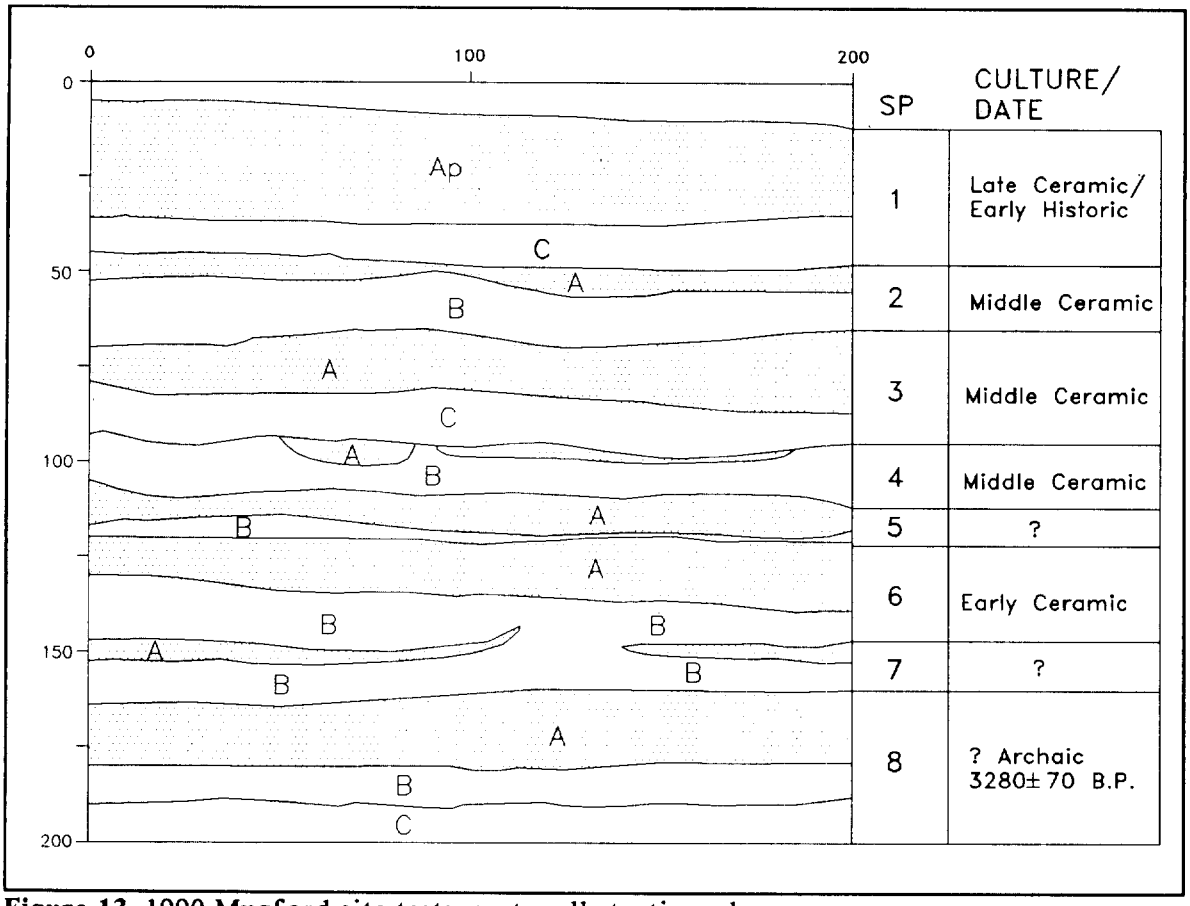

Figure 13. 1990 Mugford site tests, east wall stratigraphy.

was a single tiny, undecorated ceramic sherd from the square's northeastern quadrant, outside of the feature area. Feature 3 was a concentration of charcoal and rocks, a probable hearth, on the eastern side of the square at a depth of ca. 150 cm. below the surface. Unfortunately, this level produced no cultural material, and indeed no cultural material other than charcoal from the hearths was recovered from a depth greater than 40 cm., with the exception of the one sherd from 75 cm.

Test Pit 23 - This was a 1x0.5 m. test pit located on the lower terrace in front of Area 2 at S11W45. The primary purpose of the test pit was to investigate the age of the lower terrace and determine if it contained prehistoric occupations. The test pit encountered a number of buried A horizons but no well-developed B horizons, and the deposits throughout appeared recent. A piece of glass was recovered at ca. 135 cm. below the surface, at which point the pit was abandoned.

Test Pit 24 - This 1x0.5 meter test pit was excavated at the rear of the terrace behind Area 2, primarily to determine if depositional thickness lessened as one moved away from the terrace edge. As it turned out, it does not. We encountered a series of well developed stratigraphic packages in TP-24, which was dug to a depth of 160 cm., and we recovered several rocker dentate sherds from a depth of ca. 125 cm. below the surface.

Figure 14. Mugford site, Feature 1 in SP-8.

MUGFORD AREA 1

At Mugford we initially opened a 2x2 meter block of four squares near the western end of the site, about one meter west of 1989's test square 1. These squares were excavated to the base of the plowzone. At that point we decided that time and our commitment to ongoing excavation at Rosie Area 2 would not permit full excavation of all four squares. Accordingly, we ceased excavation of the two western squares, and continued down in the two eastern squares to the water table.

Test square 1, dug the previous year, had encountered multiple buried soil horizons, with middle Ceramic pottery recovered from ca. 50-70 cm. below the surface, and undiagnostic cultural material from buried A horizons at 105-125 cm. and 155-175 cm. depth. The latter horizon contained what appeared

to be a rock pavement feature extending throughout the square, and charcoal from this feature returned a date of 3280±70 B.P. (Beta-33436).

The two 1990 Mugford squares uncovered a stratigraphic and cultural sequence that is generally similar to that of Rosie Area 2, but which is even more detailed in terms of discrete cultural horizons recognized.

Stratigraphic Package 1 (0-40 cm., L-1,2,3) - The first package included a ca. 30 cm. thick plowzone and an underlying culturally sterile 10 cm. C horizon of medium-to-coarse sand. Cultural material from the plowzone included several rhyolite and quartz flakes, a small sherd of probable dentate pottery (vessel 1), a crudely worked rhyolite biface edge fragment, a copper bead, and three European flint flakes, one of them worked.

The bead is rolled from probable European copper, and is 2.75 cm. long. The largest of the flint flakes (2.9 cm. in its maximum dimension) is of gray-tan flint and retains its reddish cortex. Two of the edges have been bifacially worked, with irregularly spaced, short flake removals. This may be either a crude gun spall or an aboriginally worked flake (or both). The other two flint flakes are very small and may be removals from the larger flake. Certainly the copper bead and probably the flint document an early historic Indian occupation of the site.

Stratigraphic Package 2 (40-60 cm., L-3,4,5) - This package consisted of a 2-6 cm. thick A horizon with an underlying B horizon. The A horizon produced several ceramic sherds, only one of which is diagnostic - a body sherd from a dentate rocker stamp vessel (vessel 2).

Stratigraphic Package 3 (60-90 cm., L-5,6,7) - This package included a 10-15 cm. thick A horizon and a culturally sterile underlying layer of coarse, light-colored sand. The A horizon produced 168 ceramic sherds, possibly from only one vessel. Vessel 3, represented by body sherds only, has extremely fine-toothed rocker dentate decoration, and is probably early within the CP-2 period.

Stratigraphic Package 4 (90-104 cm., L-8,9). Package 4 consisted of a discontinuous A horizon 2-5 cm. thick underlain by a B2 horizon. Cultural material occurred in the A and the top of the B2, and included 2 rhyolite flakes and 56 ceramic sherds from at least three vessels.

Vessel 4 (Figure 6:J) is represented by body sherds only, this vessel has coarse grit temper and rockered pseudo-scallop shell decoration.

Vessel 5, one rather weathered body sherd, has probable rocker dentate decoration.

Vessel 6 (Figure 6:I) is a miniature undecorated vessel with a pinched, rounded lip of irregular (3-5 mm.) thickness. The rim diameter is approximately 5 cm.

We believe that SP-4 represents the earliest of the recognized middle Ceramic components at Rosie-Mugford, falling near the beginning of Petersen and Sanger's CP-2 division. A sample of charcoal from a concentration in the northern square at this level has been submitted for dating.

Stratigraphic Package 5 (104-115 cm., L-9,10) - This package included a 5-10 cm thick A horizon and a thin B2. Cultural material was limited to 5 rhyolite flakes.

Stratigraphic Package 6 (115-142 cm., L-10,11,12,13) - SP-6 consisted of a 10-15 cm. thick A horizon underlain again by a B2 horizon. Cultural material from the A and the top of the B2 included rhyolite flakes and sherds from two early Ceramic Vinette I vessels. 1) Vessel 7: an interior-exterior fabric paddled vessel with coarse temper. The interior fabric impressions are oblique, while the exterior surface has been smoothed. 2) Vessel 8: represented by a single exterior surface fragment with oblique fabric paddling.

Stratigraphic Package 7 (145-160 cm., L-13,14) - This package included a discontinuous 5 cm. thick A horizon and an 8-12 cm. B2

horizon. It produced only half a dozen rhyolite flakes.

Stratigraphic Package 8 (160-192 cm., L-14,15,16,17) - Package 8 consisted of a relatively thick (15-20 cm.) A horizon underlain by both B2 and C horizons. The A horizon was literally filled with a multi-layered rock pavement feature (Figure 14), the same feature encountered in TS-1. The rocks, generally about fist-sized or slightly larger, were in a dark black soil matrix. The pavement was solid in the southern square, somewhat more scattered in the northern. Cultural material from the feature included an undiagnostic fragment of ground stone, a rhyolite pecking stone fragment, one utilized or retouched flake of rhyolite, 42 rhyolite flakes, including one of banded spherulitic rhyolite, and calcined bone including unidentified mammal and sturgeon.

Unfortunately, none of the material is culturally diagnostic. The pecking stone and ground stone fragments are perhaps most likely at home in a small stemmed point component, whereas the banded rhyolite flake is of a material most commonly associated with Susquehanna. A 1989 date on the feature of 3280 B.P. from TS-1 is stratigraphically plausible, but absent diagnostic material we cannot say if it is accurate. We can, however, be reasonably certain that this component is pre-ceramic, given its position well under an early Ceramic level.

Stratigraphic Package 9 (192-225 cm., L-17,18) - The lowest of the Mugford packages included A and B horizons lying immediately above the water table at 225 cm. depth. The package produced a single rhyolite flake and one piece of calcined mammalian bone.

OTHER MUGFORD TESTS

While no additional testing was accomplished at Mugford in 1990, it is worth describing a middle Ceramic vessel recovered in 1989 from a depth of 60-65 cm in test pit 3, as it appears to date slightly later than the bulk of the Rosie-Mugford middle Ceramic pottery, probably falling within CP-3.

The coarsely tempered vessel (Figure 6:K) has a flat rim with simple dentate impressions over an incised line running parallel to the interior and exterior edges. It has an applique collar with simple dentate stamping. Beneath the collar there are vertically oriented bands of rocker stamping. On the interior of the rim simple dentate is crosscut by diagonal incisions.

SUMMARY AND CONCLUSIONS

The Rosie and Mugford sites contain a remarkably detailed record of the past 4,500 years of settlement in the lower Androscoggin region. We know of no other site in Maine which has such a detailed stratigraphic sequence for the span from the terminal Archaic through the middle Ceramic period.

The Rosie-Mugford cultural sequence begins with the small stemmed point phase of the Late Archaic. Represented primarily at Rosie Area 1, the inventory of this component includes quartz and rhyolite small stemmed points, quartz scrapers, a stone rod, pecking stones and possibly an adze. A radiocarbon date of 4385±250 B.P. is associated with this component.

It is likely that the Rosie-Mugford terrace was not in existence much prior to the above radiocarbon date. The older Hunter Farm site terraces just downstream from Mugford contain a mixture of small stemmed point and Brewerton types, together with a few possibly older items, that probably represent occupations of the area prior to the formation of the Rosie-Mugford terrace. In Maine Brewerton material is largely confined to western sections, and generally or perhaps always co-occurs with small stemmed point material. To our knowledge, no pure Brewerton component has been isolated in the state. We therefore consider it possible, perhaps likely, that Brewerton as a cultural entity did not exist in Maine, but rather that Brewerton point types co-existed with small stemmed points in the early stages of the small stemmed point phase, ca. 5,000 years ago, dropping out of the inventory by the time of the Rosie Area 1 component. If this hypothesis can eventually be

proven, it may have interesting implications for the origins of the small stemmed point complex.

In eastern Maine, from the Kennebec Valley eastward, the small stemmed point phase almost certainly gave rise to the Moorehead phase, marked by a dramatic rise in burial ceremonialism and the addition of several artifact types such as ground stone points and bayonets. In western Maine, including Topsham, there are few traces of the Moorehead phase, and it is likely that a relatively unchanged small stemmed point culture persisted until the appearance of Susquehanna by around 3,800 years ago.

A Susquehanna component is present at Rosie-Mugford, but is not well represented in a clear stratigraphic horizon. A probable Susquehanna biface was found in the undifferentiated middle levels of Rosie Area 1, and in TS-1 of Rosie Area 2 a large biface blade resembling the Mansion Inn type and a possible Susquehanna broadly stemmed biface of quartzite occurred anomalously in a middle Ceramic level.

The period from late Susquehanna to the beginning of the Ceramic period, ca. 3,500 - 2,700 B.P., is perhaps the least well understood period in Maine prehistory. Although the tests to date at Rosie-Mugford have not shed a great deal of light on this period, they do suggest that levels dating to this span exist at both sites, and that further work at the sites will produce material that will help clarify the terminal Archaic sequence. Particularly interesting in this regard is the rock pavement feature near the base of the Mugford sequence which produced a radiocarbon date of 3280±70 B.P. A single date from a feature without diagnostic cultural material is perhaps not very meaningful. But the feature is stratigraphically below an early Ceramic horizon, and no quartz debitage was found at that level, making it less likely that it pertains to the small stemmed point component.

The early and middle Ceramic periods are well represented at both sites. Early ceramic Vinette I pottery was recovered from stratigraphic packages at both Rosie Area 2 and Mugford. Several of the early Ceramic vessels are relatively thin and share some attributes such as rim shape with middle Ceramic specimens, suggesting that they might be fairly late in the early Ceramic sequence (J. Petersen, pers. comm.). However, the early Ceramic radiocarbon dates from Rosie A-2, 2795±110 and 2500±85 B.P., suggest a relatively early placement.

The middle Ceramic period seems to have been the heyday of occupation at the sites. Virtually every one of our 1989 test pits at Rosie and Mugford produced middle Ceramic pottery, and all three of the 1990 test areas produced at least one middle Ceramic stratigraphic package. At Rosie radiocarbon dates of 1800±145 B.P. (Area 2) and 1910±90 B.P. (1989 test pit 2) were obtained from middle Ceramic levels.

At Mugford three distinct stratigraphic packages produced middle Ceramic material. The lowest produced both pseudo-scallop shell and rocker dentate ceramics, confirming the suspected early placement of pseudo-scallop decoration at the beginning of the middle Ceramic period. Very fine-toothed rocker dentate decoration also appears to be relatively early in the sequence.

With a few exceptions, most of the middle Ceramic pottery from Rosie-Mugford appears to date relatively early within the period, to Petersen and Sanger's CP-2 division. There is also very little late Ceramic material at the two sites, although several upper soil packages at Rosie A-2 and Mugford which did not produce diagnostics could date to this period. Only one sherd of cord-wrapped stick pottery, from the plowzone of Rosie A-1, has been found at either site. This apparent settlement hiatus is not unique to Rosie-Mugford. Cord-wrapped stick ceramics are relatively rare in the Topsham area in general, and are largely confined to the area at the confluence of the river with Merrymeeting Bay. Our impression is that prehistoric settlement of this stretch of the river reached its peak in the middle Ceramic, perhaps in the first half of the middle Ceramic.

One of the mysteries of Rosie-Mugford

is the lack of Ceramic period lithics. No Ceramic period projectile points and only one scraper have been recovered from two years of tests on the sites, a decided contrast to the more than 4,000 ceramic sherds collected. Even flakes are relatively rare. This could in part be a sampling problem. Certainly stone tools must have been used at the site, but the picture we see is of stone tool use and resharpening rather than manufacture.

One of the surprises of the 1990 field season was the discovery of a late prehistoric-early contact component at both sites. The very thin incised and punctate vessel from the plowzone and feature 1 at Rosie A-1 could be either very late prehistoric or early historic. More work at the two sites may provide a link between this pottery and the clearly historic component which produced the copper bead and flint flakes at Mugford.

We hope to continue work at Rosie-Mugford. Our immediate goal is to investigate the Mugford sequence further. We would like to obtain a larger sample from the three middle Ceramic layers as well as the early Ceramic package in order to better document and understand cultural and stylistic change over a relatively restricted time span in Maine prehistory. We also believe that Mugford has high potential for producing information about the poorly understood transitional period from late Susquehanna to early Ceramic. In particular, we would like to fully excavate the rock pavement feature in SP-8, which is at least three meters in diameter, and determine its cultural affiliation and dating. Also, excavation later in the summer than was possible in 1990 should allow us to reach deeper cultural horizons that were under the water table during previous tests.

Our longer-term goal is to continue our investigation of cultural boundary phenomena in the Topsham region. We noted in the introduction that the Kennebec-Androscoggin region appears to have been a cultural boundary both in the Late Archaic and the early historic periods, and we suspect the same might be case for the Ceramic period. With its potentially large, well-dated ceramic collections, the Rosie-Mugford site complex is ideally suited for comparative studies with collections to the east and west in order to document such boundaries, and ultimately to better understand the types of cultural behavior associated with living in a boundary region.

ACKNOWLEDGEMENTS

Work at the Rosie and Mugford sites, as well as at a number of other sites in Topsham, was made possible by funding from the National Park Service Certified Local Government Program, awarded to the Town of Topsham and administered by the Maine Historic Preservation Commission. We are very grateful to the landowner of the Rosie-Mugford site complex, Tad Hunter, not only for permission to excavate on his land but also for his interest and his frequent assistance. Our 1990 field crew, which did a superb job in excavating these complicated sites, included Heather Coulehan, Carla Favreau, Jillian Galle, Amy Gookin, Allan MacIntyre and Tom Young.

We were greatly aided in the analysis of the Rosie-Mugford sites by a number of individuals. Tom Lowell of the University of Cincinnati has been our project geologist since the inception of the Topsham project in 1988, and has patiently put up with our foolish questions and unfounded certainties while trying to translate geology into terms even archaeologists can understand. Dan Belknap of the University of Maine has sloshed through a number of marshes on our behalf, coring fossil channels in an attempt to unravel the drainage history of the area. Jim Petersen of the University of Maine at Farmington kindly agreed to assist us in analyzing the Rosie-Mugford ceramics, and then wound up doing practically the whole job himself - virtually all of the ceramic description is his. Finally, we are particularly grateful to Bob "Ernie" Lewis of the Maine State Museum, not only for his analysis of the calcined bone from Topsham, but also for his valuable help and advice on many aspects of this and other projects.

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A WINGED FIGURE INCISED ON A SLATE PEBBLE

Mark H. Hedden

INTRODUCTION

While exploring the islands of Blue Hill Bay during the summer of 1964, Robert Lane of Friendship bent over on the beach of Pond Island and picked up a flat piece of slate. He was about to see how far he could skip it out on the water when he noticed faint incisions on one surface. A careful examination disclosed a fragmentary figure with a triangular bodied torso and parts of two winglike appendages still visible (Cover drawing and Figure 1). The rest of the incised surface had been deliberately broken or had spalled off at some time in the not too recent past. Lane noted that the slate piece lay loose on top of an eroding shell heap a little above the high tide line. Robert Lane kindly loaned the object for study after visiting a Maine Historic Preservation Commission excavation in Warren in the summer of 1989.

DESCRIPTION

The slate has one slightly convex worn cortex surface and a flat surface that is less worn. The original pebble or bedrock outcrop had split along natural cleavage lines well before the figure was incised. We shall call the incised face the "dorsal" face. The edge of the slate is roughly round with five indentations where battering or grinding had broken off parts of the edge. None of the broken edges are sharp. However, the portion of the dorsal face above, below and to the right (viewer's left) of the incised figure show less patination than the broken edges on the left side of the incised figure.

The slate measures 7.9 x 7.8 x 1.15 cm overall and weighs 97.9 grams. The remnant incised surface measures 5.6 cm across by 4 cm high. On one edge, the process of chipping has left a short projecting point, the apex of which is positioned to the lower left of the incised figure. However, given the indications of slightly greater patination along these edges, the pointed edge probably predates the incised figure. There are no indications of use-wear along any of the broken edges. The slightly rounded feel of all the edges indicates the whole slate piece has been subject to a period of wear by natural forces or possibly as a carried object.

The incised lines, probably engraved with a sharp stone tool, are consistently narrow, staying within 3 or 4 hundreths of 0.3 mm wide. The figure appears to be an anthropomorph representation, though the lack of head and lower appendages leaves room for other possible interpretations.

The body is triangular, missing the lower point (crotch) and shoulder line. Two fragmentary appendages appear to have once connected to the missing upper corners (shoulders) of the triangle. There is an elaborate complex of interior lines which replicate and emphasize the overall triangular form. The two outermost of four interior lines running parallel to the torso outline are joined by a series of oblique strokes and chevrons. These chevrons and oblique

The Maine Archaeological Society Bulletin 31:1:41-50 (1991)

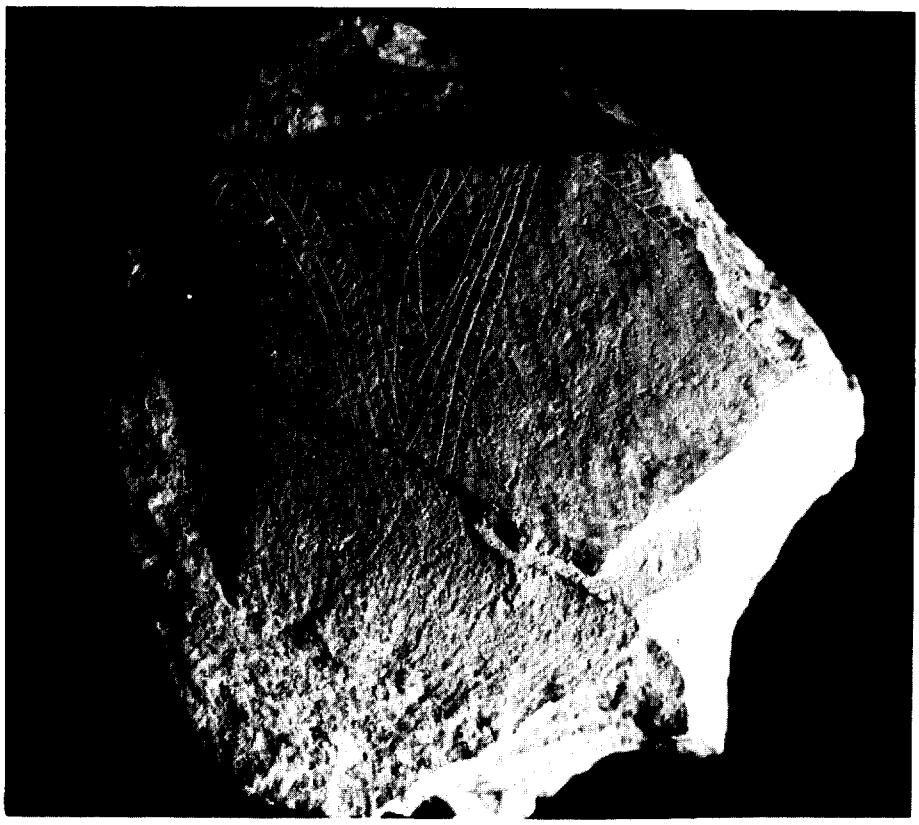

Figure 1. Photograph of the slate pebble with incised winged anthropomorph.

strokes are directionally oriented and suggest a flow of energy from the figure's right shoulder (viewer's left) moving down to the crotch and then up the left side. The two inner parallel interior lines, which are not connected by oblique strokes, are separated by a space from another set of 3 lines parallel to the outline in the center (chest) area.

In the chest area, oblique lines connect the three parallel lines joined at their apices in the center. The space enclosed by the innermost lines is filled with four horizontal lines in a ladderlike series to the broken edge where the shoulders should be. The apex of the chest area down to the apex of the crotch area are connected by 2 roughly parallel lines. Three oblique lines, oriented from (the figure's) right to left, provide filling between these parallel lines.

On the appendage (arm/wing) from the figure's left shoulder a filling of chevrons are placed, points directed outward, between two expanding lines but with no center line connecting the apices. The chevron pattern gives the appendage a feathered or winglike appearance. On the small remnant of the right appendage, however, the outer lines are parallel, narrowly spaced and are connected by oblique lines only.

Surviving portions of the incised motif are recognizable as an unusually elaborate version of a triangular torso anthropomorph with birdlike attributes. Such figures, commonly identified as "Thunderbirds" or shamans with special connections to Thunderbirds in Algonkian ideology (Schoolcraft 1853, Mallery 1883, Hoffman 1891) are frequent in petroglyphs of Maine, Vermont, and other areas occupied by Algonkian-speakers from at least the Late Woodland period into the historic period.

The birdlike aspect is consistent with shamanistic concepts of (spiritual, out of body) flight and more particularly with the perceived function of shaman as intermediary between spirits of the heavens and deeps and his people (petitioners). The decorative emphasis on the left side (chevrons pointing in that direction) reinforces the connection with the spirit world (powers of the sinister side). The interior pattern in the chest area corresponds with many ideographic representations dating from at least 1200 A.D. in the Great Lakes area (Cleland et al, 1984) of

the cosmic tree which connects the heavens and the deeps to the plane of the earth. The ladderlike series of horizontal lines in the upper chest area may express a concept, present in but not limited to Algonkian cosmology, of several ranked tiers of progressively more powerful and remote spiritual powers in the heavens (cf Landes 1968).

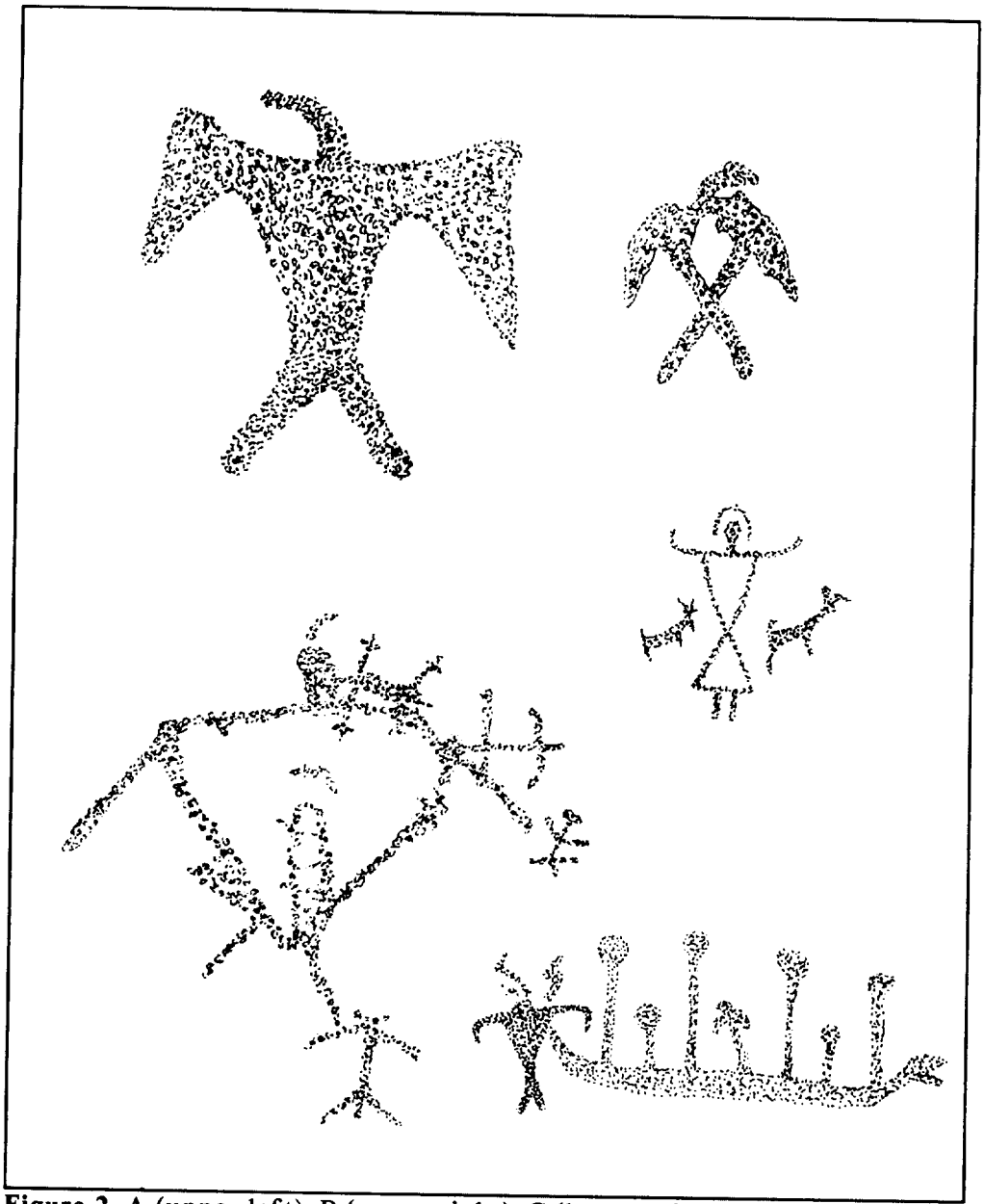

Figure 2. A (upper left), B (upper right), C (lower left), D (middle right), E (lower right).

DATING AND COMPARISON

Robert Lane indicated to me that the incised slate was a surface find associated with a remnant shell heap. All sites listed in Maine Archaeological Survey records for Pond Island are shell heaps, none of which have been systematically investigated (sites 31-2, 31-8, 31-9 and 31-10). Pottery has been surface collected from two of these shell heaps.

In prehistoric Maine petroglyphs, triangular bodied anthropomorphs with bird attributes begin to appear near the end of the middle period of petroglyph production at Birch Point (62.1 ca. 1000 A.D.) and are most frequent in the last period (Hedden 1988). Where they appear on the Kennebec (Figure 2A and 2B) at Embden (69-4), they are depicted as semi-naturalistic forms in association with late middle period sexual imagery. During the last period at Embden, bird/anthropomorphs take on the sharply angular

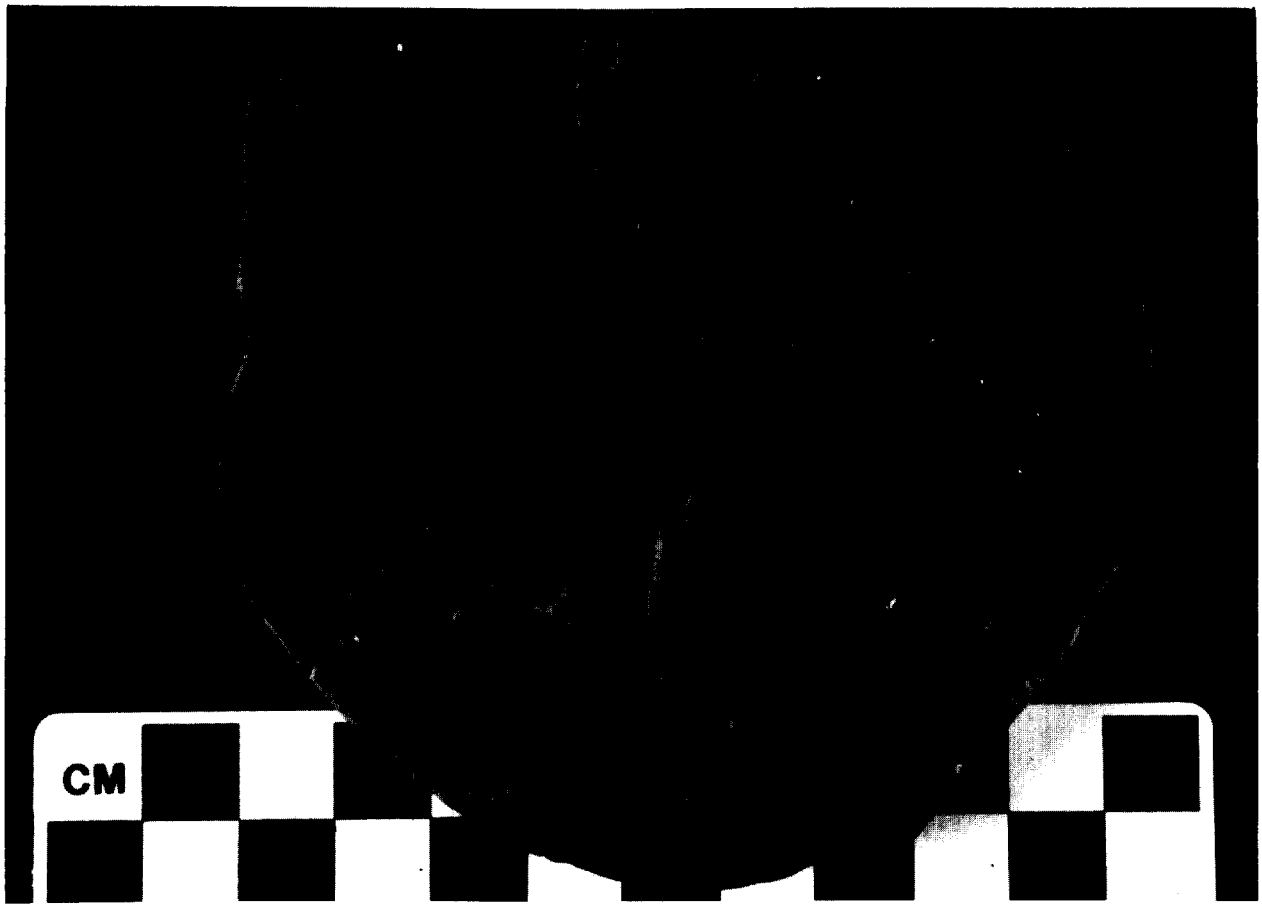

Figure 3. Plasticine impression of incised figure on potsherd from Martha's Vineyard.

features that are represented on the slate figure (Hedden 1985,1988). A similar progression is evident at Machias Bay (site 62-1, Figure 2C). Trianguloid forms with rounded corners and naturalistic bird attributes preceed schematic angular triangular torso forms (Figure 2D). Angular forms (Figure 2 E) are also late at the Peterborough, Ontario site analyzed by the Vastokas (1973). One example is partly superimposed on a canoe figure and may post-date the semi-naturalistic sexual imagery attributed to ca. 900 A.D (Figure 2E).

Another angular anthropomorphic form is incised on a shell-tempered vessel also impressed with a cord-wrapped stick impressed decorative pattern (Figures 3 and 4). The fragments of this vessel were picked up by S.J.Guernsey's assistant in situ during excavations on Martha's Vineyard in 1912/1913. I am grateful to James Petersen and Nate Hamilton for bringing this unique specimen, now in the Peabody Museum, Harvard, to my attention. The direct association with a shell-tempered vessel decorated with cord-wrapped stick impressions allows us to place the incised figure to a period dating between 800 AD and 1300 AD (Petersen personal communication and Petersen and Sanger 1989). The details of this design are relevant to the incised slate piece.

The anthropomorph/bird is headless with open shoulders. The torso and arms are outlined with parallel lines with the inner torso lines coming to an apex just short of the crotch. The outer torso lines cross and con

tinue as leg/tail lines which are joined by a horizontal line. There are at least five ladderlike crosslines in the lower part of the torso. The outer torso lines form acute angles with the inner arm lines and are joined to each arm. The parallel outer arm lines are free of connections or interior filling. Part of another double outline figure appears below the figure's right arm. All that can be discerned of this second figure on the vessel is a doubled oval with a line tangent running off laterally, away from the figure.

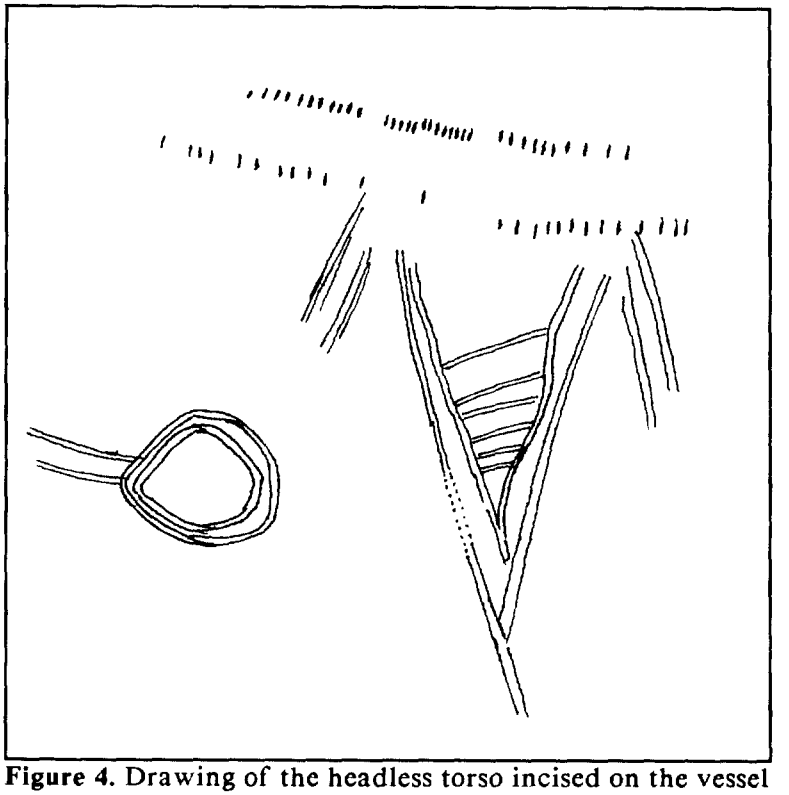

Figure 4. Drawing of the headless torso incised on the vessel in Figure 3.

A brief description of a cache of eight engraved pebbles recovered in a shell heap on Holt's Point, New Brunswick (Fowler 1966) extends the stylistic variety and range of such objects. All eight pebbles of an unspecified rock type, ranging in size from 3 to 7.5 cm long, were located within a one foot area 4-6 inches into the shell midden (10-12" below the surface).

Three of eight thinly incised designs share a similar configuration that can be described as doubled, tripled or redoubled parallel lines outlining a long torso-like form which gradually narrows towards the "crotch" (Figure 5). No head or arm features are apparent. At the "hip" area, the doubled lines outlining the "torso" angle more acutely and cross each other, forming a consistent "X" motif at the base of each figure. Interior filling in the "torso" area varies from crosshatch (1) to ladderlike series of lateral lines, 3 or 4 grouped together, and spaced to form a sequence of 3 and 5, respectively. Outside the perimeter of the torsos of these three figures, on both sides, appears a similar grouping and spacing of sequences of lateral lines. These generally alternate in spacing with the lateral lines within the torso area.

A fourth figure on the largest pebble (ca. 7.5mm long) shows doubled lines which cross to form an "X". The upper torso is decorated

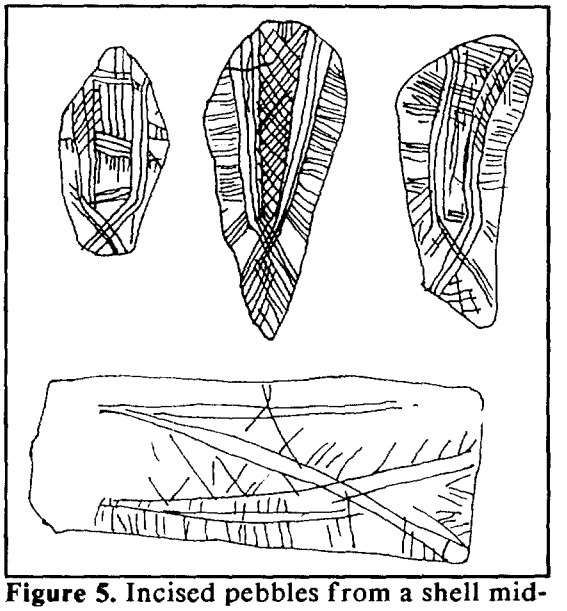

Figure 5. Incised pebbles from a shell midden on Holt's Point, New Brunswick.

by single oblique lines from each shoulder which join just above the intersection of the "X". From this juncture a single incised line continues to the "X" intersection. Within the chest area, incised lines converge towards the neck. Outside the doubled "X" oblique or lateral lines extend outward in series.

Such radiating lines, when they appear on historic Ojibway drawings, are interpreted as indicating the "power" of the figure depicted (Mallery 1883; Hoffman 1891). The "X" motif is an ideographic in expressing the point of intersection between the upper and lower realms occupied by spirit beings and the use of ladderlike series of lines to represent grades or divisions between these realms.

The formal development of the New Brunswick incised pebbles are quite distinct from the Pond Island figure, though they seem to share the same ideographic conventions. One stylistic trait, the rectanguloid torso outline, is an early feature of Maine petroglyphs (Hedden 1988). With the information presently available, we do not know whether we are dealing with more or less contemporary figures executed within different local stylistic traditions or with a fairly large time differential within a shared shamanistic tradition.

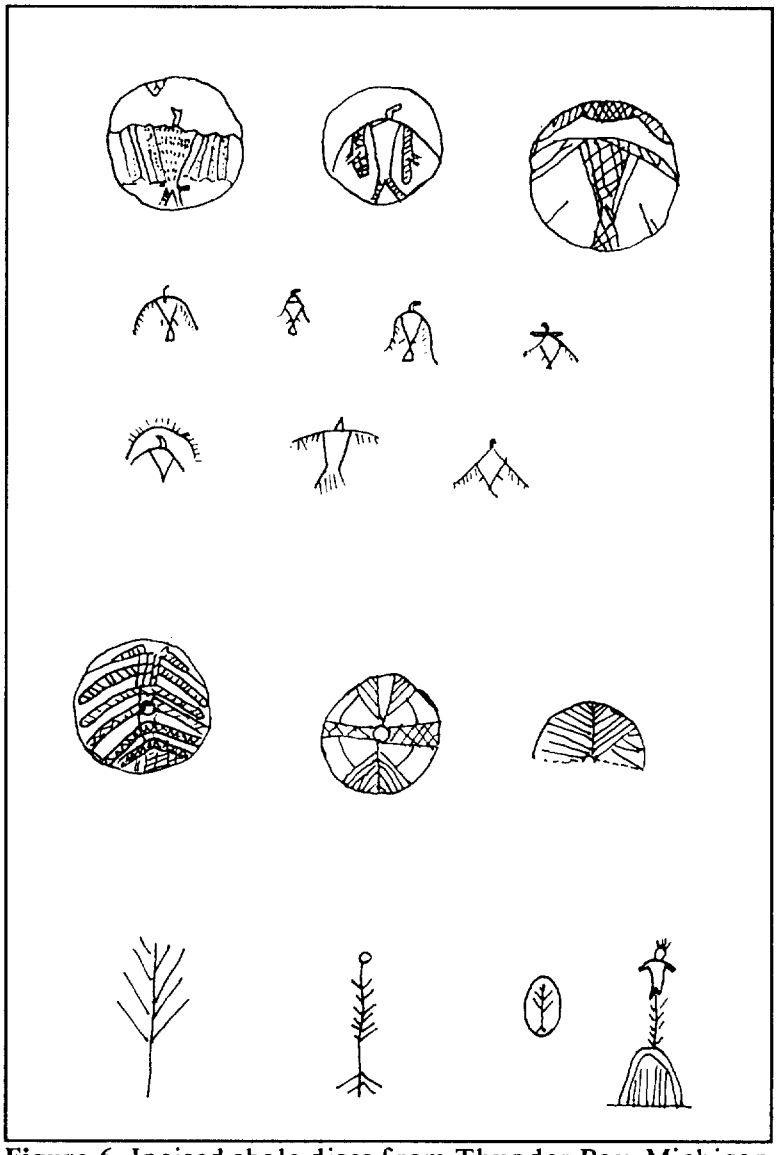

Figure 6. Incised shale discs from Thunder Bay, Michigan (after Cleland et al. 1984).

More than 200 shale discs incised with designs have been recovered from prehistoric village sites in the vicinity of Thunder Bay in northern Michigan (Cleland et al 1984). These specimens range in size from 5.8 to 1.1 cm in diameter. There are a number of whole examples among the many fragments. While most were found by collectors, the sites from which they came can be dated on the basis of pottery associations (Juntunen ware) as dating between 1250 and 1400 AD. The recognizable representational and symbolic figures incised on the discs constitute part of the inventory of ideographs used by historic Algonkian-speaking shamans of the northern Great Lakes and appear in pictographs of the Canadian Shield. For the purposes of this discussion, I will only describe the two symbolic figures that seem most relevant to the incised pebbles from Maine and New Brunswick (Figure 6).

Cleland (1984:Figures 2c and 3d) illustrates four examples of the figure identified as Ah-ne-mi-ke, thunder or thunderbirds, and three of the Great Medicine Tree, Michi-gi-zhik. In two instances, Ah-ne-mi-ke has a bird head on a triangular torso with wings curved off to the sides and legs that simply continue the lines of the torso. Another example is headless with doubled torso lines and a crisscross filling in the body area. The fourth has a head represented by a V-shaped projection from a virtually horizontal shoulder/wing line, with simple series of oblique lines representing the remainder of the figure. The four designs express a remarkable range of variation within a consistent, identifiable configuration.

The three examples of Michi-gi-zhik, the sacred tree, show a similar range of variation. In one, the roots are a series of 5 oblique lines extending downward from either side of a central stem. The stem continues to a central circle from which 2 parallel lines extend on either side with criscross filling. The stem above the circle divides into a V with 4 oblique lines extending above to the edge of the shale disc. In another, the stem rises from the crisscross triangular base through 5 doubled arcs with oblique or crisscross hatching. In the third, the stem passes from a hatched triangular base through a horizontal line with ticking and expands into four branches with oblique filling.

The Michigan examples document the practice of making incised disks in the Central Algonkian area. The Michigan figures, at the least, serve to document another instance of a Late Woodland period timespan for the Great Lakes figures that share motif features with the Northeast Coast figures.

We have no way of determining whether the purpose in making the disks at Thunder Bay is the same as the purpose behind the making of the Pond Island slate figure. Cleland (1984) has suggested that disks may have been good luck charms based on the spirit figures represented and the recovery of the disks on the shore of a notoriously dangerous stretch of water for canoeists. The Thunder Bay disks were much smaller and were made less carefully than the figure from Pond Island, however.

THE INCISED FIGURE IN THE ALGONKIAN SHAMANISTIC TRADITION

The Ojibwa distinguished between secular signs (ke-kee-win) which were meant to be understood by all and signs meant to be understood only by those with special knowledge (ke-kee-no-win)(Schoolcraft 1852). Messages indicating routes traveled, hunting plans, and clan markings are examples of the former (cf. Mallery 1883). Signs relating to the enhancement of success in hunting, love, or curing illness are examples of the latter. As Cleland (1985) points out, clear expression is necessary for communication in the case of secular ke-kee-win signs. For the ke-kee-no-win signs, ambiguous expression served to increase the mystical aura as well as obscure the meaning to the uninitiated. However, while the message may be obscured, the symbolic references of the ke-kee-no-win tend to remain constant. The subjects and their potencies or powers are recognized through a number of characteristics or attributes associated with a particular plant or animal or mythological being.

There is support in historical references for at least three possible functions for the making of the ke-kee-no-win images by Algonkian shamans or shaman initiates. These possible functions include 1) training of initiates by making iconographic images as mnenomic signs in series on bark or songboards to aid in learning chants and songs (Schoolcraft 1854; Hoffman 1891); 2) as images made to enhance success in love, the hunt, hazardous travel,etc., (ibid. and Cleland 1984); 3) as images carried in a shaman's kit or medicine bundle that have reference to particular powers he may claim or wish to invoke (ibid; le Clerq 1910:222). Either of the last two functions might apply to the Pond Island slate figure. The marine location of the findspots of the images cited (e.g. Pond Island, Holt's Beach, Martha's Vineyard, Thunder Bay) suggest a special relationship to water or travel over water.

This evidence supports Cleland's suggestion that Thunderbird images, like St Jude's medal, may have been carried by canoeists as good luck charms. However, the pebbles Cleland describes were quite small (1 to 2cm across) and were produced with no great attention to detail compared to the Pond Island image, even in its damaged state. Moreover, the signs of wear on all edges indicate the Pond Island figure had been carried about (If the wear came from wave action on the beach damage to the shallowly engraved image itself should be apparent.) This evidence suggests that the Pond Island figure was once part of a shaman's parapenalia.

THE POND ISLAND FIGURE IN LATE NORTHEASTERN PREHISTORY

There is a remarkable consistency in the spread of the triangular bodied stylistic convention throughout all the northern Algonkian speaking groups from Maine to Minnesota. The triangular bodied forms in Maine and at Peterborough, Ontario replaced more rounded naturalistic forms that are documented in the petroglyphs of both areas. In Maine, the earliest bird/anthropomorph form found in the petroglyphs has a trapezoidal or rectanguloid form (Hedden 1989). This form appears as an incised figure on the bottom of an Hopewellian style platform pipe from Revere Beach, Massachusetts (Willoughby 1935) and may be represented in a more abstract form in the Peterborough, Ontario petroglyphs (Vastokas 1973). These distributions point to a continuing, though perhaps intermittant exchange of ideas during a minimum of 1500 years between Central and Eastern Algonkian shamans despite physical separation and the blocking presence (after 1300 A.D.) of Iroquoian speakers in the St Lawrence Valley and in New York (Petersen 1990).

Continued trade contacts between the Great Lakes and the Northeast, from the Late Archaic through Middle Woodland, are indicated by trace element analysis of native copper (Petersen et al 1990). Associated with the Great Lakes native copper in Early Woodland Middlesex mortuary complexes of the Champlain Valley are a range of other shared material traits, including S-twist cordage, block-end tubes, lobate stemmed projectile points, leaf-shaped bifaces, pendents, gorgets and flaked and ground celts (Ibid). Linguistic indicators for the period of separation between Central and Eastern Algonkian languages tend to be recent -- somewhere on the order of 1500-2000 years BP (Fiedel 1987). If the linguistic date of separation is interpreted as a population movement, its date is still too early: approximately 1000 AD for the arrival of the triangular-bodied motif. Given the archaeological data cited above, continued contacts between the Northeast and the Great Lakes area through trading networks would provide a mechanism of transference consistent with data at hand. Long distance trading contacts involving residence of a season or longer with distant related bands would have provided opportunities for instruction in esoteric matters. There is historical precedence in the intermontaine interior of the Pacific Northwest for long distance travel of a 1000 miles or more by shamans and shaman initiates seeking instruction (Mooney 1896). The Midewin ceremony often involved the services of well known shamans from widely scattered bands (Landes 1968, Hoffman 1896) and even as late as the twentieth century, Frank Speck (1920) recorded oral references from Maine informants of shaman gatherings (See also Eckstorm 1948 on contests between shamans).

The Pond Island slate figure is one readily transportable cultural item which implies the possibility of other such items or styles. As an object considered among Algonkian speakers to be spiritually potent and dangerous, the Pond Island figure must have been guarded with considerable care. In the long view, such items as this help to clarify the nature of the separation between Central and Eastern Algonkians. Are we dealing with a clean break beginning ca. 2000 years ago (lingistic evidence for the separation between Eastern and Central Algonkian) or for continual though perhaps intermittant

contacts between widely separated Algonkian speaking groups through the late prehistoric period? The Pond Island bird/anthropomorph is one of a number of motifs documented in the Maine petroglyphs (Hedden 1988, 1989 and work in progress) present in the same sequential order east and west which seems most readily explained as a result of a continuing series of contacts.

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