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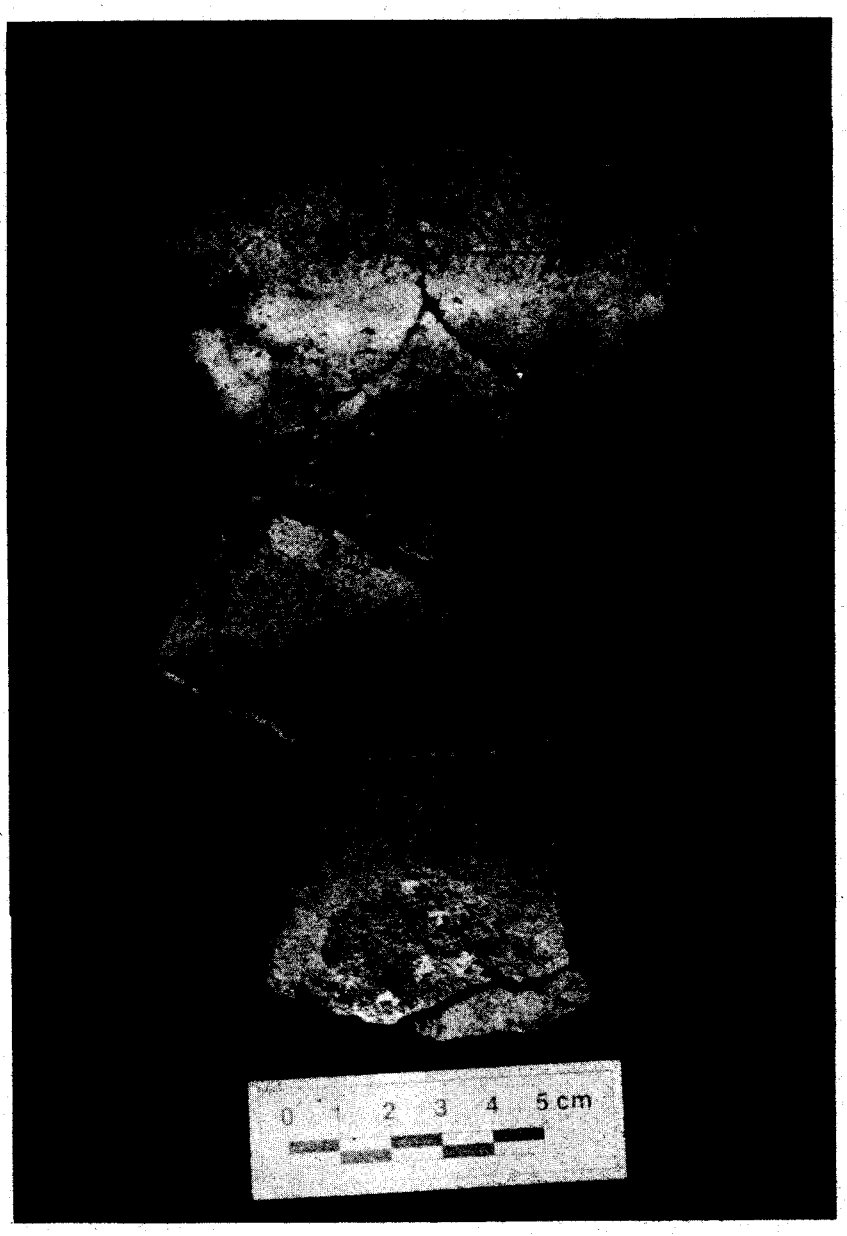

VOLUME 38:2

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Permanent Address:
The Maine Archaeological Society, Inc.
P.O. Box 982
Augusta, ME 04332-0982

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CONTENTS
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THE CERAMIC PERIOD IN THE UPPER SACO RIVER DRAINAGE: AN ANALYSIS OF THE HELEN LEADBEATER COLLECTION

William F. Rombola

INTRODUCTION

Southwestern Maine, and specifically the upper Saco River valley, has received little attention from professional archaeologists. There have been few thorough surveys done on the region and the work that has been done in the area has been limited to small scale consultant projects (Cox 1993; Mosher 1991). Much of what is known of the region comes from the work of private artifact collectors. Unfortunately these collections are often a mixed bag of materials from various locations not always of local origin. Often these collections are poorly documented or else show a substantial bias toward certain specific artifact types.

The Leadbeater Collection does lack intra-site spatial controls over artifact distribution. However, in contrast to most amateur collections, the Leadbeater collection, compiled from 1954 to 1974, was thoroughly documented and curated with more care than were some professionally excavated sites during the same period. Mrs. Helen Leadbeater very intentionally gathered all materials from the sites she collected. Not only complete tools but all broken fragments of lithics and ceramics, debitage, fire-cracked rock, soil and charcoal samples, as well as historic materials were saved. Mrs. Leadbeater took notes on her collecting activities and created maps of the sites she collected from and published some results (Leadbeater 1978). She also took great care to keep all artifacts separated by the site from which they were collected. Artifacts were carefully catalogued by site designation and item number and curated.

Besides her collecting activities Helen Leadbeater also spent time researching her own and other local collections as well as western Maine colonial history. Helen Leadbeater's background as a researcher as well a collector gave her a perspective unlike that of most collectors. This perspective has produced a collection that has proven to be an invaluable source of data on the prehistory of the upper Saco River Valley. It is the author's hope that this paper will stimulate new interest among professionals in the prehistory of the region.

Site Data

All artifacts discussed in the paper were collected by Mrs. Helen Leadbeater of Fryeburg, Maine. Artifacts were gathered from the lake and pond shores and cultivated fields in the towns of Bridgton, Brownfield, Lovell, Hiram, and Fryeburg in Maine and in Conway and Ossipee in New Hampshire. The vast majority of the material discussed in this paper was collected from 12 sites and at two primary locations, Lovewell's Pond in Center Fryeburg, and Fryeburg Harbor.

The artifacts discussed in this article have been separated into 13 groupings based upon the particular site they were collected from. These sites, all in Maine, and the Leadbeater designations for them are as follows: 21.7 (1L); 21.9 (2L); 21.8 (3L); 21.10 (4L); 21.11 (5L); 21.12 (K), 21.13 (N/0/00). These sites are located in Fryeburg Harbor where the old course of the Saco River connects with the Kezar Lake outlet and Charles River. Leadbeater's collection includes materials from site 21.1 (U,UG,UK,UT), 21.14 (W/X), 11.1 (Y), and 11.2 (S) which are located on Lovewell's Pond in Center Fryeburg. Finally, two sites from the Saco River near Kezar Pond (21.22 [P/2P]) and from Conway Lake in Conway, New Hampshire (NH 21.5 [C]), were collected. In addition, a few isolated finds are discussed in this paper as well.

The Leadbeater collection contains a minimum of 128 ceramic vessel lots, a number of which have been partially reconstructed by Helen Leadbeater. One of these, a fabric impressed vessel from Lovewell's Pond, is currently on display in the "Twelve Thousand Years in Maine" exhibit at the Maine State Museum in Augusta. Helen Leadbeater has previously published an article on some of the ceramics in the collection (Leadbeater 1978). That article dealt exclusively with the incised and perishable impressed vessels from her collection as well as ceramics from the Chapman collection from

The Maine Archaeological Society Bulletin 38:2:1-22 (1998)

Ceramic Attributes:		
Number of Rim Sherds	Lip Form	Manufacturing Technique
Vessel Portion	Rim Modification	Temper Type
Exterior Surface Treatment	Rim Eversion	Maximum Temper Size
Interior Surface Treatment	Maximum Lip Thickness	Minimum Temper Size
Lip Surface Treatment	Maximum Thickness (Below Lip)	Temper Percentage
Exterior Color	Exterior Decoration	Texture of Temper
Interior Color	Interior Decoration	Exterior Decoration
Maximum Neck Thickness	Rim Decoration	Carbon Deposits (presence/absence)
Maximum Body Thickness	Report Holes (presence and absence)	

Table 1. Attributes Used During the Leadbeater Collection Ceramic Analysis.

NH21.5 on Conway Lake in New Hampshire and the Newman collection from 21.14 on Lovewell's Pond in Fryeburg, Maine.

In addition to the ceramic remains (n=5151), the collection also includes 575 flaked lithic tools. This total includes 368 bifaces and 207 uniface scrapers. The majority of formed lithics in this collection are attributable to the Middle and Late Ceramic periods (2150-350 B.P.). The collection also includes a moderate portion of material dating from the Early Archaic Period to Late Archaic Period Susquehanna Tradition (8000-3000 B.P.).

METHODOLOGY

Prior to analysis, all artifacts were washed or dry-brushed, catalogued and bagged by site. While site designations had already been placed on the artifacts by Mrs. Leadbeater, a unique catalog number was scribed onto each item using India ink and nail polish. Catalog information, site notes, and any other information provided by Mrs. Leadbeater was photocopied for archival purposes.

The level of analysis varied depending upon the artifact class. Lithic tools and ceramic rim sherds were separated from the rest of the collection for in-depth analyses (see appropriate sections). All debitage was washed, separated into raw material types and counted. No further analysis of debitage was undertaken. Fire-cracked rock, soil and charcoal samples were noted a but have not yet been analyzed.

CERAMIC ANALYSIS

The Leadbeater collection contains a total of 5151 ceramic sherds of which 4946 are body sherds. The majority of the sherds (n=3307) are undecorated. The remainder was placed in the following gross categories: 697 cord-wrapped stick, 517 dentate stamped, and 415 perishable fiber impressed. The following section describes attributes employed in this analysis as well as a summary of the vessel lots by decorative technique and affiliation.

A total of 205 rim sherds were sorted into a minimum of 128 vessel lots based on an analysis of temper type, decorative technique and surface treatment. The entire suite of attributes used appears in Petersen and Sanger (1991). After the analysis Petersen and Sanger (1991) was also consulted for assigning specific Ceramic Period temporal affiliation according to their revised Maine Maritime Chronology. A total of 128 vessel lots were designated from the 205 rim sherds present in the collection. Two of these, vessel lots 1 and 2, are attributable to Ceramic Period 1 (CP1) and likely date somewhere between 3050 to 2150 B.P. (Petersen and Sanger 1991). At least 25 vessels with dentate stamping have been assigned to CP2-4. These probably date between 2150 and 1350 B.P. There are 57 cord-wrapped stick-impressed vessels present in the Leadbeater collection. These are attributable to CP 4-6 and date to between 1350-400B.P. The collection also included seven undecorated vessels and sixteen perishable-impressedvessels. These most likely date to 950-400 B.P. CP5 or 6. Finally 21 vessels lots of incised ceramics were placed in CP6 or CP7 dating between 650-200 B.P..

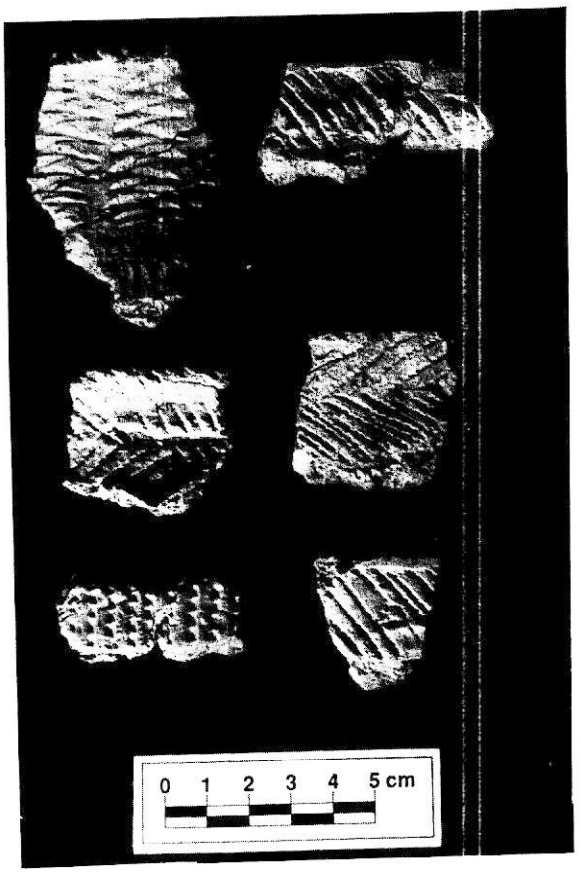


Figure 1: Rocker and Linear impressed vessels from 21.12
TL: VL19: CP3-4 Rocker Dentate
TR: VL20: CP3-4 Rocker and Linear Dentate
ML: VL17: CP3-4 Linear Dentate
MR: VL15: CP3-4 Linear Dentate
BL: VL8: CP3 Linear Dentate
BR: VL24: CP4 Linear Dentate

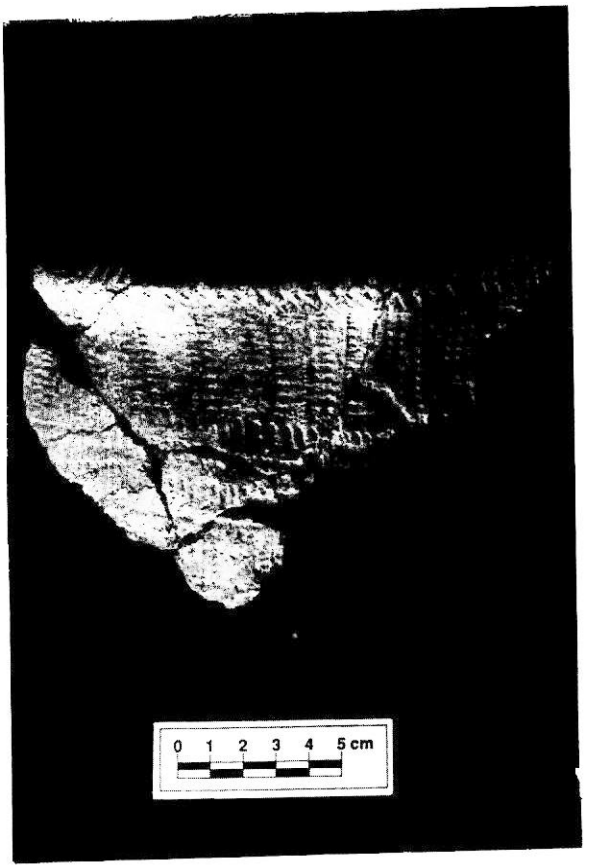


Figure 2: Vessel lot 10: CP3 Rocker and Incisions 21.13 area OO

Ceramic Period 1

Two Vinette I vessels, lots 1 and 2, were present in the Leadbeater collection. Similar vessels have been dated to 3050-2150 B.P. (Petersen and Sanger 1991). One of the two specimens was identified only on the basis of a body sherd. Both vessels exhibited smoothed-over fabric or cordage impressions on their exterior and interior surfaces. These vessels seem to have been constructed using a coiling technique, which is typical for this vessel type. A coarse grit temper was used in these vessels. Vessel lot 1 was recovered from area UG of site 21.1 on Lovewell Pond. Vessel Lot 2 comes from site 21.11 along the Kezar Lake outlet in Fryeburg Harbor.

Ceramic Period 2-4

Twenty-five vessel lots of dentate-stamped ceramics were present in the collection (Figure 1). These vessels were collected from 21.1 and 21.14 area WX on Lovewell's Pond. The main concentration of dentate ceramics was at site 21.12 (K) which contained 15 vessels. Of these 25 vessels, three were CP2 (2150-1650 B.P.), three were either CP2 or CP3 (2150-1350 B.P.), three were CP3 (1650-1350 B.P.) and the remainder were classified as belonging to either CP3 or CP4 (1650-950 B.P.).

All the dentate vessels exhibited a coiled construction method and grit tempering. The texture of the tempering agents ran from medium to coarse grit. Dentate-stamped ceramics exhibited square,

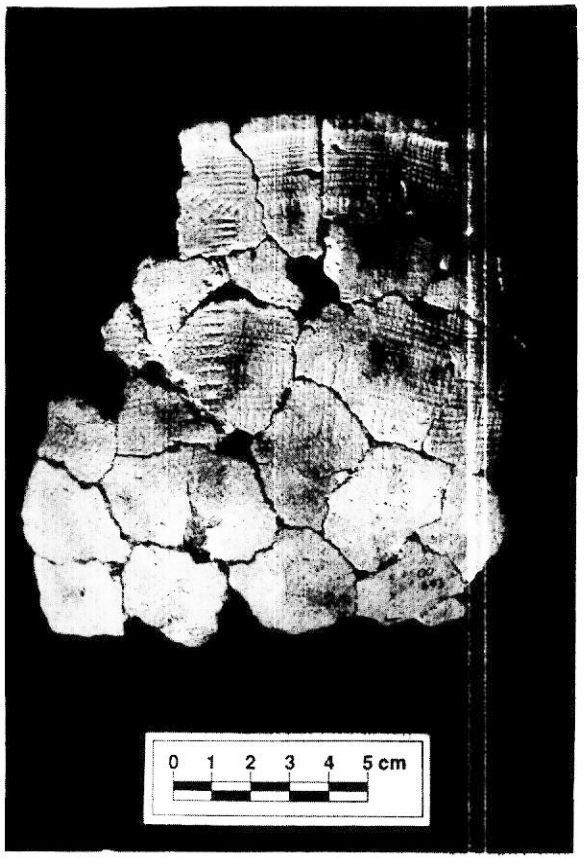


Figure 3: Vessel lot 3: CP2 Fine Rocker Dentate 21.13 area OO

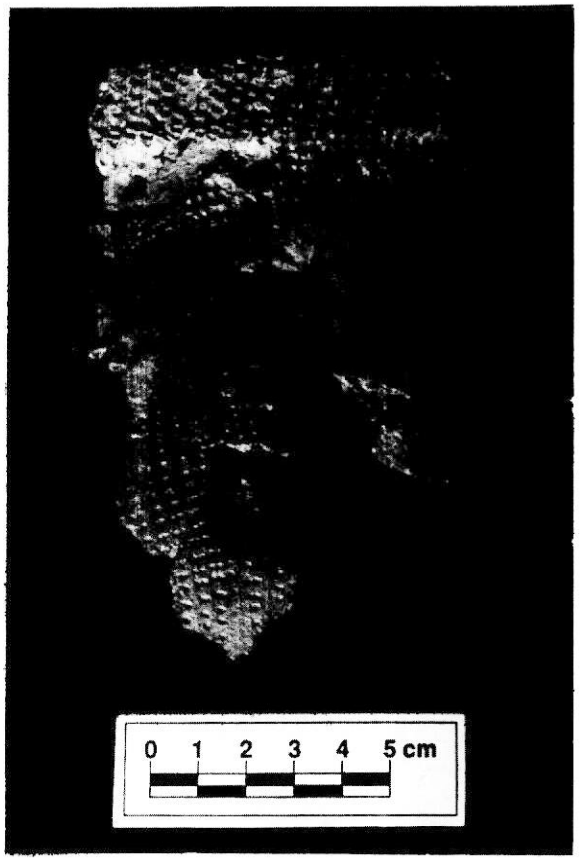


Figure 4: Vessel lot 12: CP3-4 Linear Dentate 21.1 area UK

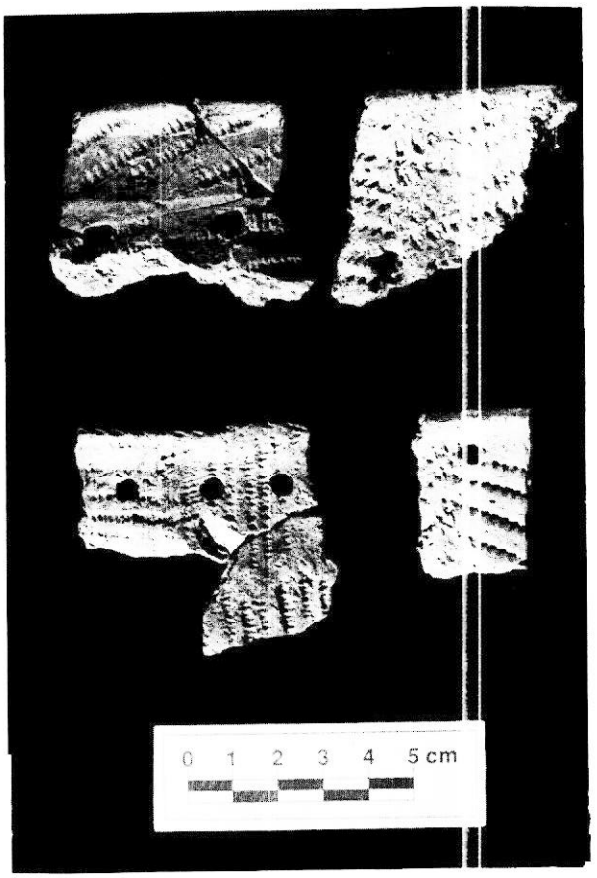
rounded and pointed rim forms. Six vessels had vertical incisions present on their lip surfaces. Rim eversion in these dentate-stamped vessels ran from straight to moderate eversion. Only one vessel had a severely excurvate rim form. Lip thickness runs from 3.98mm to 9.94mm with an average rim thickness of 6.22mm. Repair holes were present on two vessels.

Twenty-two of these vessels had experienced some degree of smoothing on their exterior surfaces. Another three exhibited wiped exterior surfaces on which impressions, in the form of striations were clearly visible. Two dentate vessels had deep channeling on their interior surfaces. Twelve vessels had wiped interior surfaces and ten others had smoothed interiors. One vessel exhibited channeling on its interior surface. All but one of these vessels had smoothed lip forms.

Rocker dentate impressions were present on 11 vessels and linear dentate was present on 14. Impressions were generally present on the exterior surface only. Decorations were applied at horizontal and vertical orientations. Nine vessels had dentate impressions on their interior surfaces. These were all confined to the very uppermost portion of the vessel bordering the lip. Nineteen vessels exhibited dentate impressions on their lip surface. These were typically applied in parallel vertical rows on the lip surface. These incisions give the impression of slight notching on the lips. One vessel exhibited punctations on its exterior surface.

Ceramic Period 2

Three of the 25 dentate vessels in the Leadbeater Collection were intact enough to detail separately from the rest of the sample. The first of these, vessel 3 (OO-693), is complete enough to reconstruct the morphology, manufacturing and decorative techniques employed (Figure 2). This coiled, medium grit- tempered vessel has a pointed rim form with a slight rim eversion. The lip thickness on this vessel was 4.97mm. The maximum body



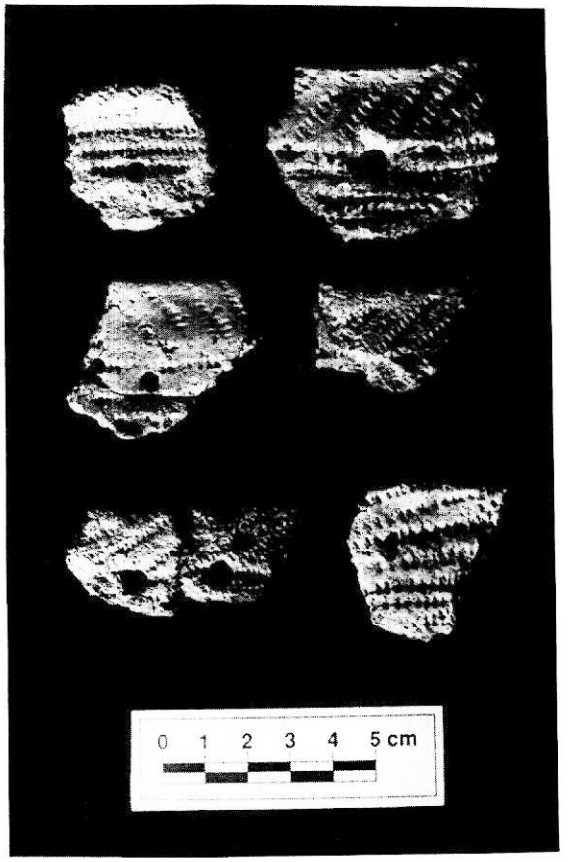


Figure 5: Cord-wrapped stick and circular punctate vessels:
TL: VL65: CP5 11.2
TR: VL32: CP4 11.2
BL: VL28: CP4-5 21.13 area N
BR: VL79: CP5-6 21.1 area UE

F
punctate vessels
TL: VL29: CP4-5 21.13 area N
TR: VL64: CP4-5 11.1
ML: VL64: CP4-5 11.1
MR: VL35: CP5 21.13 area O
BL: VL31: CP4-5 11.1
BR: VL66: CP5 11.1

thickness on the vessel is 9.60mm. Vessel 3 had a pointed base.

The top two thirds of vessel 3 is decorated on it's exterior with a fine rocker dentate impression. The impressions were applied lightly in both horizontal and vertical directions. The tool employed to create the decoration was approximately 30.38 mm in length with six teeth measuring 1.08 mm in width. The interval between the teeth was 0.63 mm.

Modifications to this vessel were readily apparent. There is a repair hole in the upper portion of this vessel. The interior of this vessel shows signs of scraping. The exterior surface of the vessel was smoothed. Carbonized food remains appear on the exterior surface as well. Based primarily on the thinness of this vessel and its fine rocker dentate impressions, Vessel 3 is probably attributable to the time period between 2150 and 1650 B.P or 200B.C-300A.D. (Petersen and Sanger 1991).

Ceramic Period 3

Vessel 10 (OO-694) was coiled and had a coarse grit temper. This vessel had a severely excurvate and pointed rim. The lip thickness was only 4.17mm due to its pointed rim. The thickness quickly expanded to 10.66 mm at 10 cm below the lip. Neck thickness was 9.18 mm and maximum body thickness was 12.50 mm. (Figure 3). Vessel 10 had a smoothed interior surface. The exterior of

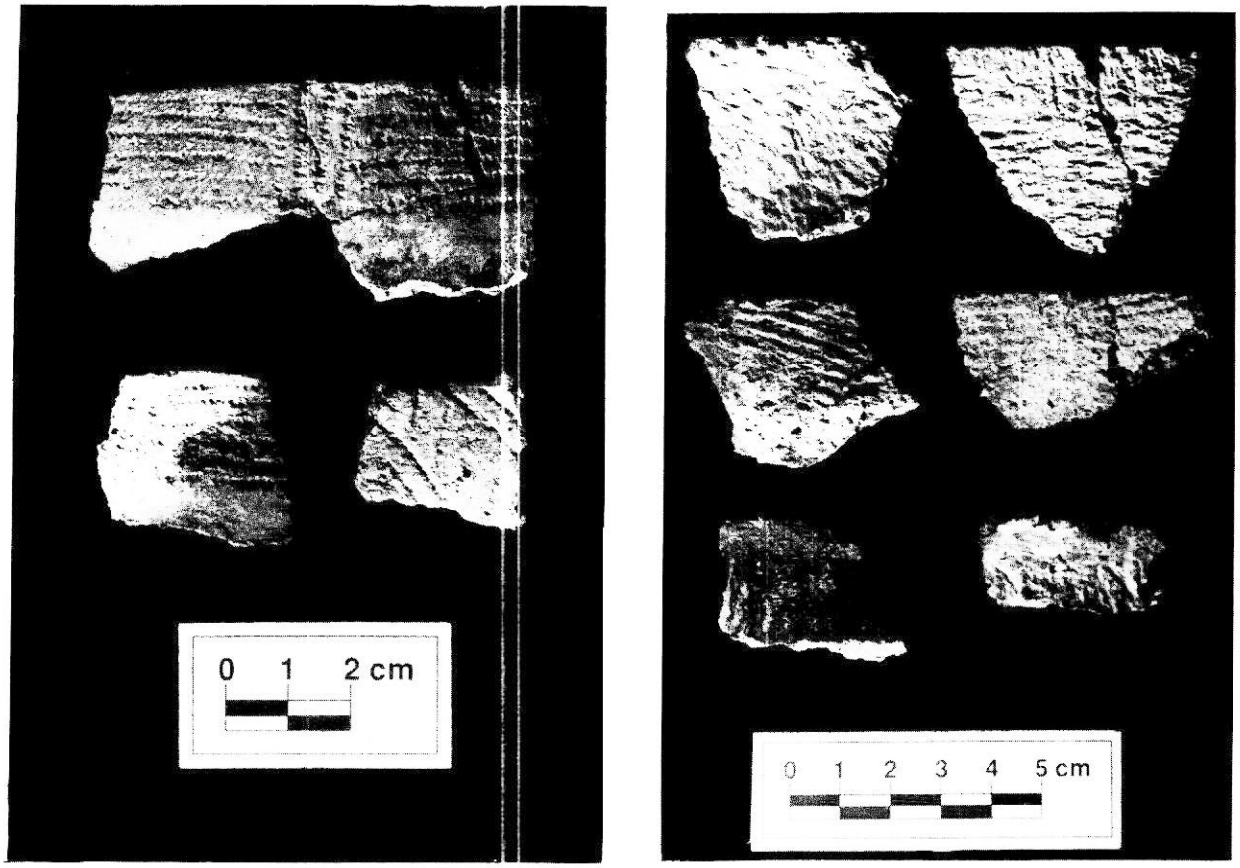


Figure 8: Perishable- impressed vessels
TL: VL87: CP4-6 11.1
TR: VL99: CP5-6 21.14 area WX
ML: VL85: CP4-6 21.1 area UG
MR: VL97: CP4-6 11.1
BL: VL94: CP4-6 11.1
BR: VL86: CP4-6 21.1 area UG

this vessel was smoothed making it impossible to decipher the type of tool used to create the dentate impressions. The impressions were applied at oblique left and right angles at the top of the vessel and horizontal and vertical directions near the bottom. This vessel also had parallel incised decorations running in vertical directions on the lip of the vessel. Vessel lot 10 is most likely attributable to CP3 (1650-1350 B.P.) in the Ceramic period sequence. It was recovered with Vessel 3 at area OO of 21.13.

Vessel 12 was also complete enough to detail separately from the rest of the sample (Figure 4). This vessel was coiled and had a coarse grit temper. The lip form was rounded with only a slight eversion present. The lip thickness in this specimen was 4.25mm. At one centimeter below the lip thickness expands to 8.34mm. The maximum neck thickness is 8.89mm. The maximum body thickness for this specimen was 9.25mm. The exterior of this vessel was smoothed while the interior showed signs of channeling. The lip of this vessel was also smoothed.

Linear dentate impressions were applied to the exterior, interior and lip of this vessel. On the exterior surface impressions were applied in vertical and slightly oblique angles over the top half of the vessel. The interior of the vessel had horizontally-angled impressions applied to the very top of the vessel. There was a row of circular punctates on the exterior surface of this vessel below the neck. This was the only dentate vessel in the collection exhibiting circular punctation. Vessel 12 also had a

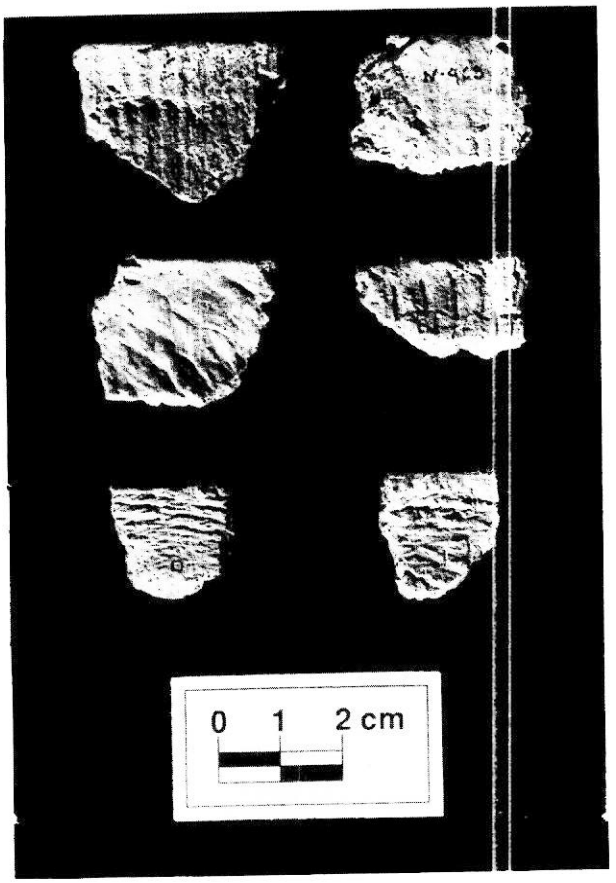


Figure 9: Perishable-impressed vessels
TL: VL100: CP4-6 21.13 area O
TR: VL98: CP5-6 21.13 area N
ML: VL95: CP4-6 21.1 area UG
MR: VL92: CP5-6 21.13 area N
BL: VL89: CP5-6 21.13 area O
BR: VL88: CP5-6 21.7

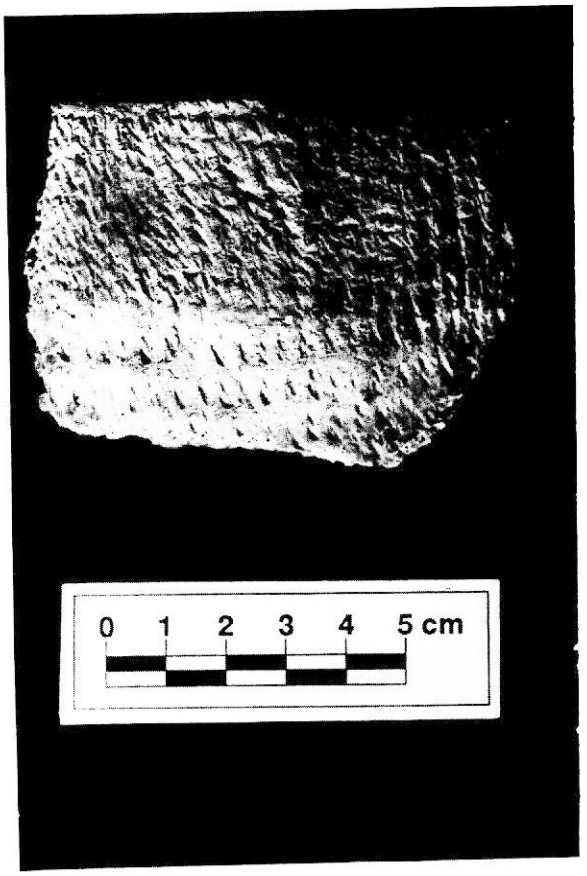


Figure 10: Cord-wrapped stick and perishable-impressed vessel
VL#43 CP5-6 21.13 area O

possible repair hole. This vessel was recovered from 21.1 area UK.

Ceramic Period 4-6

Of the 57 cord-wrapped stick-impressed vessels four were assigned to CP4 (1350-950 B.P.). These vessels were identified by their thick walls, large punctate impressions and coarse grit temper. Twelve vessels were classified as either CP4 or CP5 (1350-650 B.P.) (Figures 5 and 6). Twenty-eight vessels are attributable to CP5 (950-650 B.P.). Two vessels were classified as being either CP5 or CP6 (950-400 B.P.), and eleven were assigned to CP6 (650-400 B.P.). These CP6 vessels were dramatically thinner than the other vessels and had finer cord-wrapped stick impressions. (Figure 7) The placement of the decoration was reserved for the top of the vessel only. Some of these decorations are somewhat similar to later incised patterns.

Cord-wrapped stick-impressed vessels were all manufactured using a coiling technique. Temper was uniformly grit with variations in texture from fine to coarse. The size of the tempering agents generally increased with the age of the vessels. Vessels of CP4 or CP5 had medium-coarse grit temper while CP6 vessels usually had a fine textured sand or grit temper.

Lip form varied with square, round and pointed styles present. Six vessels had notched lips caused by the vertical application of cord-wrapped sticks to the lips, giving the impression of notching. Rims were generally straight to slightly excurvate with a

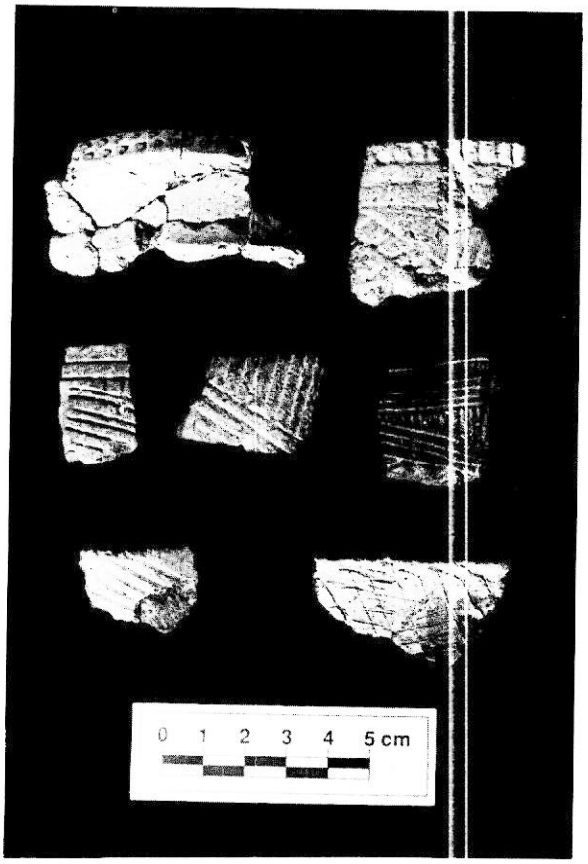


Figure 11: Incised ceramics
TL: VL93: CP6 21.1 area U7
TR: VL114: CP6-7 21.14 area WX
ML: VL128: CP6 11.1
MC: VL118: CP6 21.1 area UG
MR: VL108: CP6-7 21.9
BL: VL110: CP6 21.14 are WX
BR: VL109: CP6 21.14 area WX

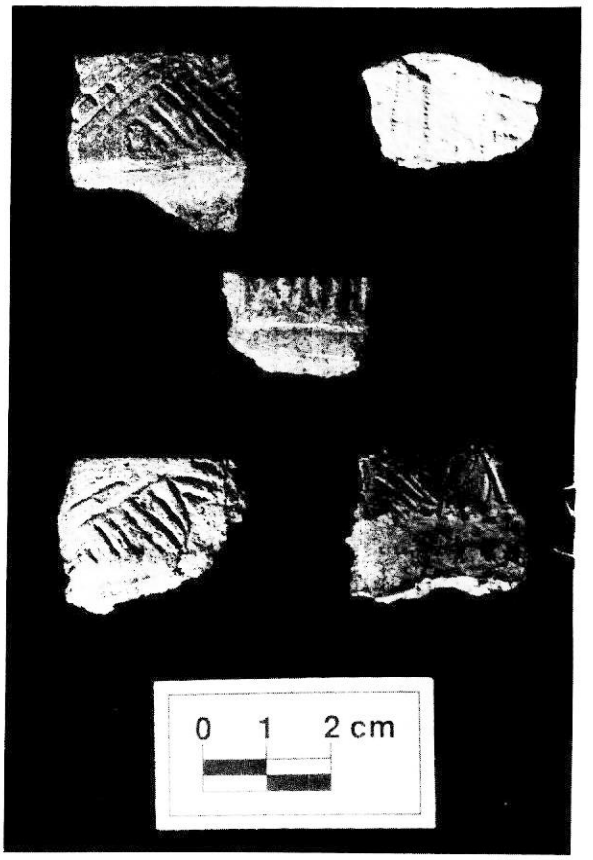


Figure 12: Incised ceramics and tiny Cord Wrapped Stick vessels
TL: VL117: CP6-7 21.7
TR: VL83: CP6 21.14 area WX
Middle: VL115: CP6 21.14 area V
BL: VL116: CP6 21.7
BR: VL111: CP6 21.7

few moderately to severely excurvate specimens present. Lip thickness varied widely with a range of 2.10- 14.10mm. Ceramic Period 4-5 vessels were generally thicker than the later CP6 vessels. For example the forty-five CP4-5 vessels had an average thickness of 6.82mm. The twelve CP6 vessels had an average thickness of 4.54mm.

Thirty-seven of these vessels exhibited smoothed exterior surfaces. Ten more had wiped exteriors. On four of the vessels, fabric or cordage impressions were present on the exterior surfaces in association with cord-wrapped stick impression (Figure 8). Two of these had their impressions smoothed over before applying the cord-wrapped stick. Three more vessels had fabric or cordage impressions on their exterior surfaces without any other decoration. These vessels were very similar to other cord-wrapped stick-decorated vessels and are probably related to them. Thirty-eight of the cord-wrapped stick vessel lots exhibited a smoothed interior surface. Another 19 had wiped interior surfaces. None of these vessels exhibited any channeling. Lip surfaces were almost always smoothed except for one vessel that had a wiped lip surface.

Cord-wrapped stick decorative elements were present on the exterior of 50 vessel lots. These were applied at vertical and horizontal angles over the top half of these vessels. Twenty-three vessels had cord-wrapped stick impressions on their lip

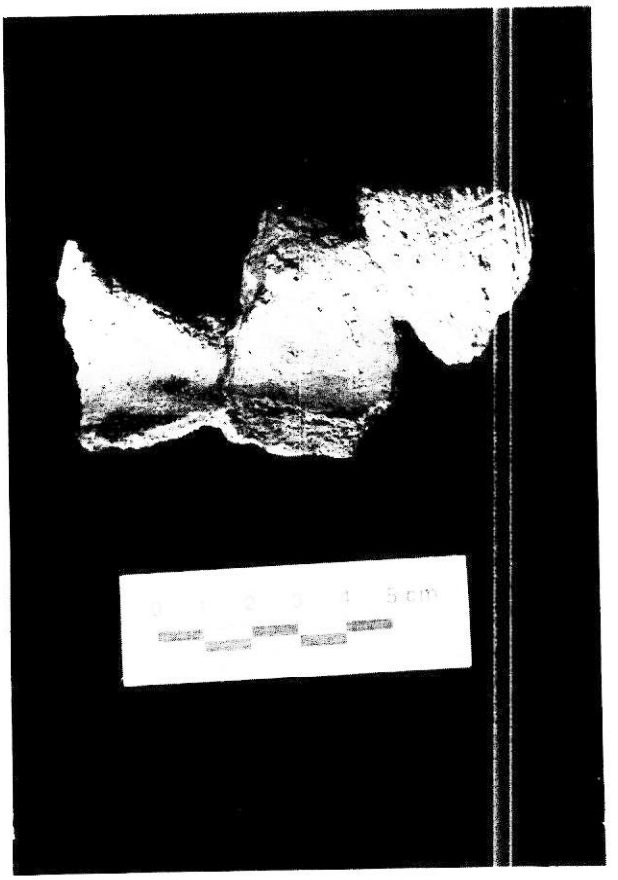


Figure 13: VL134: CP6-7 21.1 area UG

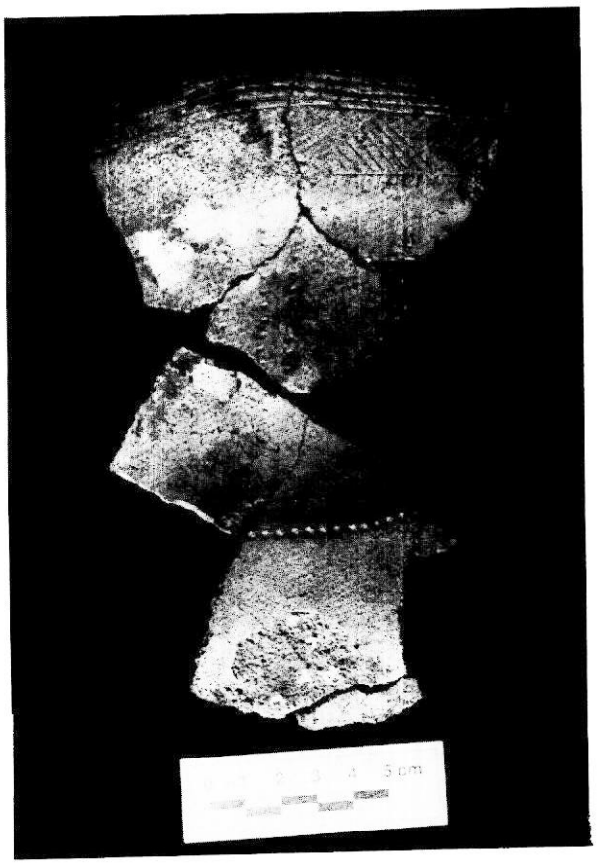


Figure 14: VL124: CP7 21.14 area WX

surfaces. These impressions were often on the interior portion of the surfaces. Cord-wrapped sticks were rolled across the interiors of the rims. Vessels exhibiting this type of decoration were generally thick with coarse grit tempering and circular punctations on their exterior surfaces. These vessel forms are probably CP4 or CP5 (1350-650 B.P.). Except for a few vessels that had cord-wrapped stick impressions near the upper portion of their interior surfaces, these vessels lacked any interior decoration. The tools used to create these decorations were generally employed in horizontal and vertical directions. Only a few specimens exhibited oblique-angled impressions.

Twenty-five specimens exhibited circular punctations on their exterior surfaces. One vessel had two rows of circular punctuation on its lip surface. Punctate impressions were between 1.90-7.19mm in diameter. Repair holes were present on only two of these vessels. Three of these vessels had carbonized remains of their interior surfaces. None of the cord-wrapped stick-impressed vessels were complete enough to reconstruct vessel morphology.

Perishable-Impressed

Sixteen vessel lots of cordage or fabric-impressed ceramics were present in the collection (Figures 8, 9 and 10). This total does not include those vessels that had cordage or fabric impressions in association with other decorative motifs such as cord-wrapped stick or incision. All but one of these vessels exhibited distinctive horizontal coil fractures, which suggests that they were constructed using a coiling method. The exception appears to have been constructed using a modeling technique. All vessels were grit-tempered employing a medium-fine-textured grit temper.

Lip forms varied between square, round, and pointed types. Rims were generally straight to slightly excurvate with some moderately excurvate specimens present. Lip thickness ran from 2.34mm-8.71mm with an average thickness of 4.70mm for these vessels. No rim modification was present on

these vessels. None of these vessels e: hibited any repair holes. Carbon deposits were pre :nt on only one vessel. Only two vessels had circul .r punctates on their exterior surfaces. These circul r punctates were 3.26mm and 3.30mm in diameter :spectively Cordage or fabric impressions were pr sent on the exterior of all vessels. Ten of these v :ssels have been smoothed obscuring the details c the fabric or cordage impressed on them. Twe ve vessels exhibited a smoothed interior and fou had wiped interiors. Nine of these vessels had sn oothed lips and two were wiped. The last four vesse had fabric or cordage impressions on their lip surf :es.

Based on rim thickness, temper and e presence of cord-wrapped stick and incised e ements in association with these fabric or cordage i npressions, these vessels are attributable to CP5 o CP6 (950-400 B.P.). These vessels were prese at 21.13 area N (n=4) and 21.12 (n=1) in Fryeb rg Harbor. Cordage and fabric-impressed vessels were also present at 21.14 area WX (n=2), 11. (n=3) and 21.1 area U (n=4) on Lovewell's Pond.

Undecorated

A total of seven undecorated vessel lots v ere present in the collection. These were all constr cted using a coiling method. Temper was uniform y grit with medium-coarse texture. Rim forms w re square, round or pointed. Rims exhibited straigh to slightly excurvate forms. Lip thickness ran rom 2.33-5.12mm. with an average thickness of 3 4mm. Five vessels had smoothed exteriors anc wo others had wiped exteriors. Four vessels had wi ed interior surfaces and three others had smoothe interiors. All vessels had a smoothed lip form. Th se vessels lacked repair holes or other forms of m dification. Undecorated vessels were recovered fro two sites in Fryeburg Harbor, 21.13 area N/O n=3) and 21.7 (n=1). On Lovewell's Pond such v ssels were recovered from 21.1 area U (n=1) and .2 (n=1).

Incised

There were twenty-one vessel lots of incised ceramics in the collection (Figures 11, 2, 13 and 14). Seven of these vessels were attr utable to Ceramic Period 6 exclusively. Eight mor were from Ceramic Period 6 or 7. The remaining x vessels were classified as CP7 exclusively. Inci ed vessels were constructed by two methods. The f st method was a coiling method that was used primarily on CP 6 (650-400 B.P.) ceramic types. The other method employed was a modeling technique that was generally used in the construction of CP 7 (450-200 B.P.) ceramics.

Temper type for incised ceramics was uniformly grit, usually a medium to fine sand. Seventeen incised vessels had smoothed exterior surfaces and another three had wiped surfaces. One vessel exhibited smoothed over fabric or cordage impressions on its exterior surface. Analysis of the body sherds relating to incised vessels show a high number exhibiting fabric impressions. Again, many of these fabric or cordage impressions had been subsequently smoothed over. Fourteen vessels had smoothed interior surfaces and seven exhibited wiped interior surfaces.

All incised vessels had smoothed lip forms. Nine of the vessels exhibited collared rim forms. Ten exhibited castellated rims. Castellation with collaring was combined in six of the incised vessels. The six vessels of this type all had excurvate rims up to the vessel's collar at which point the rim was turned abruptly inward forming a straight or incurvate rim eversion. These traits were combined only in these six CP7 vessels. The CP6 incised vessels displayed straight to slightly excurvate rim forms while, as previously noted, CP7 vessels exhibited a straight to incurvate rim eversion. Rim thickness runs from 2.43-7.47mm. with an average thickness of 5.60mm. Neck thickness runs from 4.29-10.76 mm in these specimens with an average thickness of 7.20mm.

Incised decoration was placed on the upper rims of these vessels. Vessels with collars only had impressions on their collared portions. Impressions were oriented in a number of ways. Horizontal, vertical and oblique right and left were all employed. Incisions were placed in parallel rows sometimes connected by other lines forming ladder shapes. Rarely do incisions cross over each other. Another ten vessels had incised decorations on their lip surfaces. Circular punctation was present on the exterior of four vessels.

Incised vessels were recovered from the following sites. In Fryeburg Harbor, 21.9 and 21.7 produced three vessels each. 21.12 produced one more vessel as well. On Lovewell's Pond, 21.1 contained two vessels, one from area U8 and another

Raw Material	Biface	Uniface	Number of Tools	Percentage(%)
Hornfels	201	17	218	37.9%
Mt. Jasper rhyolite	36	41	77	13.4%
Kineo Traveler rhyolite	33	40	73	12.7%
Milky quartz	9	26	35	6.1%
Crystalline quartz	7	19	26	4.5%
Munsungun chert	5	15	20	3.5%
Champlain Valley chert	16	13	29	5.0%
Onandaga chert	2	8	10	1.7%
Cheshire quartzite	6	0	6	1.0%
Marblehead rhyolite	3	0	3	<1.0
Mistassini chalcedony	2	0	2	<1.0
Ossipee rhyolite	2	0	2	<1.0
Other unknown	46	28	74	12.9%
Totals	368	207	575	100.0%

Table 2: Frequency of Tools per Ra Material Type

from area UK. On the southern e of the pond 11.1 produced one incised vessel. B far the largest sample of incised ceramics in the a a comes from 21.14 at the northern end of Lovewe 's Pond. Area V of this site produced one ves l. Area WX contained ten vessels.

LITHIC ANALYSI

The native inhabitants of the u er Saco River utilized a variety of lithic raw m terials in the production of stone tools. It is l ely that other materials such as bone or wood wer lso employed to produce tools. However, unlike s ne tools, wood and bone rarely preserve due to the igh acidity of the soil. This makes the intensive a alysis of lithic materials that much more critical t he researcher. Besides their most basic use as road cultural markers lithics also shed light on tive trade and exchange networks.

Analysis of all lithic tools (excl ding reworked flakes and cores) shows that the ajority of the lithic raw materials identified in the llection come from eastern New Hampshire a l central and western Maine. To a lesser extent orthern Maine and Vermont materials were als employed. It should be noted that almost 1 of the raw materials could not be sourced a are likely of exotic origin. Table 2 details the p centage of raw materials used in the entire collecti of stone tools.

The most commonly emplo ed lithic raw material in the collection, compri g nearly 38% of the tools, is a coarse grained vo anic known as hornfels. This material is prevalent in New Hampshire and southern Maine and is often referred to as argillite. Hornfels is a contact metamorphic material that is formed when intrusive bodies of magma come into contact with older sedimentary materials. This process changes the sedimentary materials that come in contact with the igneous intrusion into a metamorphic material (Philpotts 1995).

Hornfels exhibit a differential resistance to weathering, which is caused by the chemical composition of its original parent material. Some of the hornfels in the collection actively resists weathering. These specimens have a Munsell color of *N1 Black*. Except for it's characteristic grainy texture this particular type of hornfels may easily be confused with a black chert. Most hornfels weather easily and have a Munsell color of *N6 Medium to light gray*.

In the Leadbeater collection hornfels were employed primarily in manufacturing bifaces. All but seventeen of the 218 hornfels tools in the collection were finished bifaces or biface preforms. There were 3089 pieces of hornfels debitage in the collection representing primary, secondary and tertiary lithic reduction. There were also twenty-four hornfels cores present within the collection. A source for this material has been tentatively identified in stream channels on the East Side of the Ossipee Mountains in Ossipee, New Hampshire (Richard Boisvert, personal communication).

The second most common raw material in the

collection accounting for 13% of the ool total is a volcanic material known as Mt. Jaspe rhyolite. This material is common to New Hampsh and western Maine, particularly the Androscoggi River valley. This rhyolite comes in a variety of c ors making it a challenge to visually identify at mes. Further complicating the situation is the ten ency for Mt. Jasper rhyolite to change color aft it weathers. Unweathered, this material appears ark red with lighter spots or occasionally oliv with darker colored banding. As this material we hers the dark red variety change to a *10YR3/4 da red- brown* and the olive variety changes to a *0YR8/2 very pale orange*.

The Leadbeater collection contai d 495 pieces of debitage identified as Mt. Jasper rh olite. Nearly all of this material was clearly relate to secondary or tertiary reduction activity. There re also four cores of this material in the sampl Mt. Jasper rhyolite has been actively mined fro a section of Mount Jasper in Berlin, New Hampsh e.

A greyish blue-green (*5BG5/2*) v lcanic made up 12.7% of the tool total. This mat ial has been identified as Kineo Traveler rhyol e. The six hundred and ninety (n=690) piec s of Kineo Traveler debitage represented some s ondary (but mostly tertiary) reduction activity. N cores of this material were present. Kineo Travel rhyolite is widely available in the north-central laine region as well as from Mt. Kineo in Mooseh d Lake.

Quartz of varying quality account for (10.6%) of the total tools. Both milky and cl r crystalline quartz is available in the upper Sac River valley region. One hundred and three milk and twelve crystal quartz cores were identified, estifying to the extensive use of this material a well as its local origin. Besides these cores the were 1611 pieces of quartz debitage represent g primary, secondary and tertiary stage reduction

Various cherts make up 16.3% f the tools. Included in these cherts is a red-gr and black material known as Munsungun Chert. his material has a source near Chase and Munsun n Lakes in northern Maine. The few pieces of Munsungun debitage recovered appeared to repres t secondary and teriary reduction.

Another common chert in the c lection is a black opaque material known as Chan lain Valley chert. This material comes from Ve ont and is related to the Normanskill chert from New York. The final identifiable variety of chert in the collection is Onandaga chert from New York State. Debitage of Vermont chert or New York chert were all but absent.

Biface Analysis Attributes	
Raw material type	Notch width (right)
Maximum length	Wear patterns
Blade length	Weight (G)
Blade width	Maximum thickness
Stem length	Notch depth (left)
Basal width	Notch depth (right)
Notch width (left)	

Table 3: Leadbeater Collection Biface Analysis Attributes

Projectile Points

There were a total of 575 flaked stone tools in the collection. 368 of these were bifaces or biface fragments. Of these bifaces 156 lacked enough extant attributes to further classify them. These specimens were generally tips and other fragments of broken bifaces. The remaining 212 bifaces were more complete and could be separated into one of seven main groupings based on morphology. These are: Levanna-like, triangular, corner- notched, side-notched, stemmed, long-stemmed, and short-stemmed types. Attributes recorded for these specimens are shown in Table 3.

All measurements were taken to 0.01mm. Weight was recorded to 0.1g using a digital scale. Only those specimens that exhibited completeness for a particular attribute were measured. No attempt was made to measure broken, incomplete or exceptionally retouched specimens. All measurements were recorded on standardized attribute analysis sheets and then entered into a computer database to facilitate further statistical analysis.

Of the 358 bifaces present in the collection only 175 were complete enough to be used in qualitative or quantitative analysis. Measurable bifaces were sorted into categories based on notching, stem type, and overall morphology. The most common identifiable biface type was the Levanna triangle (n=64). These are followed by a side or corner-notched variety (n=43). There were also nine small stemmed bifaces as well as fourteen other triangular

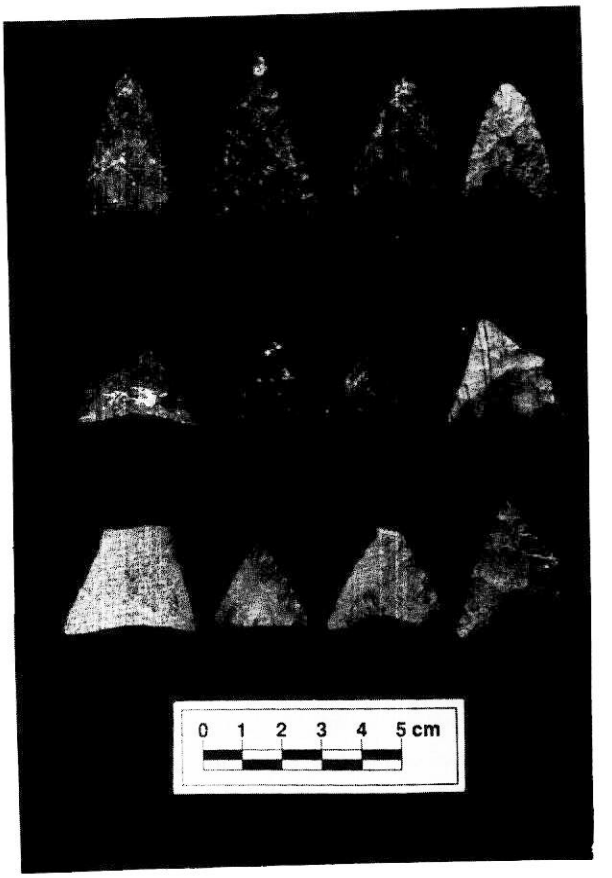
Criteria	Cnt.	Mean	Min	Max
Length (mm)	42	26.73	19.84	39.42
Blade length (mm)	41	30.85	20.25	43.81
Blade width (mm)	45	26.93	19.30	37.23
Thickness (mm)	63	6.04	4.02	10.27
Weight (grm)	39	3.59	1.20	8.0

Table 4: Summary Statistics for Levanna Bifaces from the Leadbeater Collection

bifaces. Besides these there were also forty-five bifaces that were clearly related to Early Archaic Period-Early Ceramic Period biface types. None of these older specimens occur in great enough quantity to warrant further study. The Levanna bifaces and the corner or side-notched specimens did undergo a statistical assessment (see Table 4).

Levanna biface forms from New York State were described by William Ritchie as being nearly as broad as they are long, often exhibiting a basal concavity (Ritchie 1961:31). The 64 specimens in this collection fit that description fairly well (Figure 15). For example the maximum length that was recorded on forty-two specimens produced a range of 19.84-39.42mm with a mean of 26.7mm. Meanwhile, the maximum blade width recorded for forty-five specimens produced a range of (19.30-37.23mm) and a mean of 26.93mm. With a mean maximum length of 26.73mm and a mean blade width of 26.93mm these specimens are, on average, very close to perfect triangles. Another trait these bifaces share with the New York varieties is the presence of basal concavities. Fifty-two of the sixty-four Levannas in the sample had at least a minimal basal concavity.

The Levanna bifaces in the collection were constructed of the following raw materials: hornfels (n=24), Vermont chert (n=10), Kineo Traveler rhyolite (n=6), Mt. Jasper rhyolite (n=6), milky quartz (n=5), Cheshire quartzite (n=3), Ossipee rhyolite (n=2), unknown rhyolite (n=5), and Onandaga chert, brown chert, and Mistassini chalcedony with one specimen of each. Besides the reliance on local raw materials (i.e. hornfels, quartz, Mt. Jasper rhyolite) there is a significant use of raw materials with sources west of the region. Vermont chert and quartzite, for example, seem to have been relied upon to a significant degree. This probably indicates the presence of long distance trade networks in place connecting the upper Saco River to Vermont, New Hampshire and into the Kennebec River valley of Maine.



It has been previously noted that Levanna bifaces tend to occur more infrequently in Late Ceramic sites east of the Kennebec River drainage as compared to sites to the west (Robinson 1996). Overall evidence from the Leadbeater collection shows a slight dominance of Levanna biface forms

Attribute (mm)/(g)	CNT.	Mean	Min	Max
Max Length	26	18.13	22.14	46.37
Blade Length	27	24.20	13.85	36.28
Blade Width	40	17.45	12.86	21.35
Stem Length	37	9.58	6.24	12.06
Basal Width	30	14.61	11.21	18.02
Max Thickness	42	5.89	3.04	7.97
Notch Depth (Left)	37	2.38	.68	5.67
Notch Depth (Right)	37	2.59	.65	5.53
Notch Width (Left)	35	5.10	.72	8.89
Notch Width (Right)	31	5.32	3.11	8.90
Weight	24	2.79	1.5	4.6

Table 5. Summary statistics of Corner and Side-Notched bifaces.

over corner and side-notched points. For example, at 21.13 (which is the largest Late Ceramic Period site assemblage in the collection) Levanna bifaces out-number corner and side-notched bifaces 2 to 1. Another large Late Ceramic Period site, 11.2, contained a more balanced sample with nine Levannas and ten corner and side-notched projectile points. At still another site, 21.9, produced a dominant sample of corner and side-notched bifaces over Levannas types with seven of the former and only two Levannas present.

There was a total of twenty-seven side-notched and fifteen corner-notched bifaces used in this statistical analysis. Despite the difference in the placement of notches these bifaces were essentially identical. I feel that this morphological similarity, as well as the tendency for these bifaces to be found in the same sites, justifies the lumping of these specimens together for the purpose of a statistical analysis.

Side or corner-notched bifaces were, on average, nearly a gram lighter (3.59g to 2.79g) than the Levanna bifaces. Considering the weight of these tools, they were probably used as points on arrows. The notching on these specimens exhibits a high degree of symmetry. For example there was only a 0.21mm difference in the mean notch depth on the right and left sides of these bifaces. The mean notch width on these bifaces differed by only 0.2 mm.

Side and corner-notched bifaces were

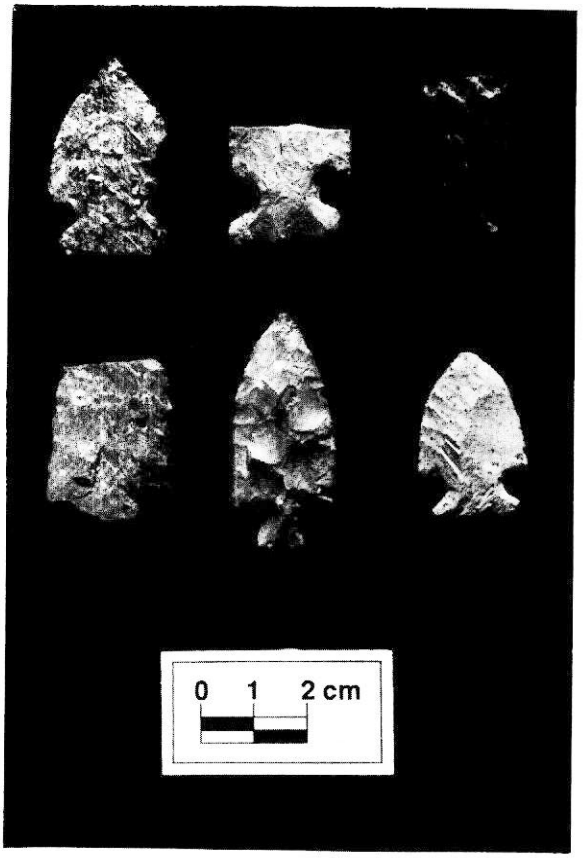


Figure 16: Middle Ceramic Period bifaces
TL: 21.1 area UG Jack's Reef Marblehead Rhyolite
TC: 21.1 area UG Jack's Reef Kineo Traveler
TR: 21.1 area UK Jack's Reef Black chert
BL: 21.13 area N Corner-notched Kineo Traveler
BC: NH21.5 Corner-notched Rhyolite
BR: 11.2 Corner-notched Rhyolite

constructed of the following raw materials: hornfels (n=21), Kineo Traveler rhyolite (n=4), Mt. Jasper rhyolite (n=4), unknown rhyolite (n=2), unknown chert (n=2), Munsungun chert (n=2), crystalline quartz (n=2), milky quartz (n=2). There was one specimen each of Mistassini chalcedony, Saugus rhyolite, and Ramah quartzite. Again, in this sample, the local materials such as hornfels and quartz dominate. However, there is still a sizable portion of non-local lithics represented as well. Of particular note is the absence of the Vermont cherts, and quartzites, both of which were well represented

in the Levanna biface assemblages.

Triangular Bifaces

Triangular bifaces were generally l nger than the Levanna points but lacked the basal concavity often present in the Levannas. The ollection contained fourteen (n=14) of these bifa es. There were ten other larger triangular bifa s in the collection, however, these appeared to b preforms. Due to the small sample size a statistic l analysis of these specimens was not compiled.

Only two sites in the collection, 21.1 and 11.2, produced triangular bifaces. This lea ls one to believe that these biface forms are clos ly related to the Levanna bifaces found at these ame sites. Triangular bifaces were constructed of th following raw materials: hornfels (n=8), Kine Traveler rhyolite (n=2), and Mt. Jasper rhyolite, Mistassini chalcedony, unknown chert, and an unknown rhyolite with one specimen each.

Other Bifaces

Besides the vast quantity of Cera ic Period bifaces found in the collection there are lso a small number of older biface forms. None of t se bifaces have been described but I will give a cursory description here. The oldest of these bif es was an Early Archaic bifurcate-based Kanawh stemmed point. This was recovered from somew ere in the vicinity of Walker's island on the Sa River in Fryeburg. This specimen was extremel weathered and is made of hornfels.

Two sites, 21.14 and 21.1, on the orth shore of Lovewell Pond contain evidence of a Late Archaic and, possibly, a Middle Archaic component as well. Area V of 21.14 contained one Merrimack stemmed biface (V57) made of Ossip e rhyolite. Another Merrimack biface (UC38) wa recovered from area UC of 21.1. This specimen w also made of Ossipee rhyolite.

The Late Archaic Period (6,000-3, 00 B.P.) is much better represented in the colle ion. There were six untyped Late Archaic-like b faces from 21.1 and 21.14 in the collection. Also Brewerton ear notched biface was recovered fr n 21.11 in Fryeburg Harbor. This specimen w s made of Munsungun chert. There was also an Otter Creek biface recovered from the falls in Hi am, Maine. This biface was constructed of a high q ality variety

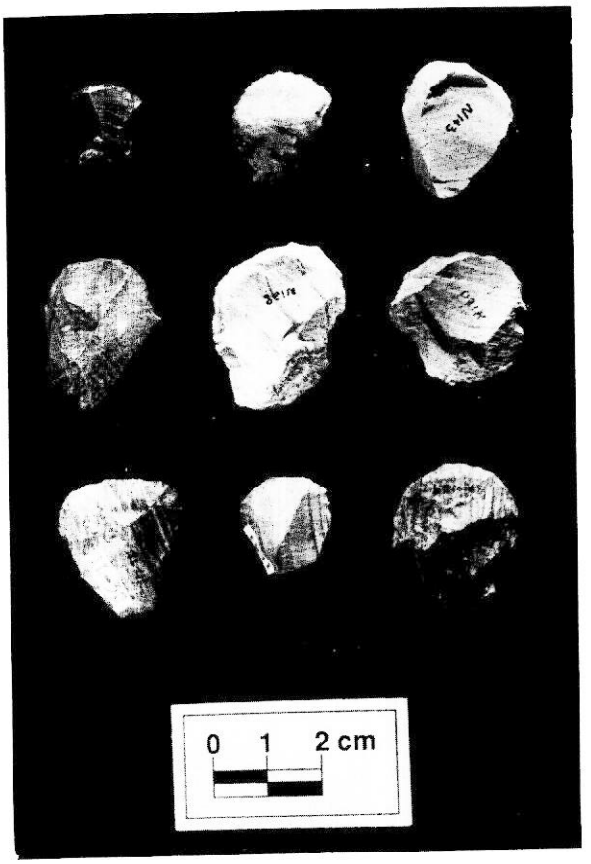


Figure 17: Unifaces
TL: 21.7 Munsungun chert
TM: 21.7 Grey chert
TR: 21.13 area N Rhyolite
ML: 21.17 Saugus Rhyolite
MC: 21.13 area N Mt. Jasper
MR: 21.13 area N Mt. Jasper
BL: 21.7 Mt. Jasper
BC: 21.7 Mt. Jasper
BR: 21.13 area N Mt. Jasper

of hornfels.

Ten Susquehanna Tradition bifaces were recovered from 21.14 on Lovewell's Pond. Included in this total are four Orient Fishtail points, three of which are made of hornfels and the fourth of an unknown variety of rhyolite. Four Susquehanna broadspears were also present. These were made of hornfels, Kineo Traveler rhyolite, Marblehead rhyolite, and an unknown rhyolite. Three Snook Kill bifaces made of hornfels and rhyolite and one strike-a-lite made of chert were present at this site as well. Site 21.1 area UC produced one large Susquehanna broadspear made of highly weathered

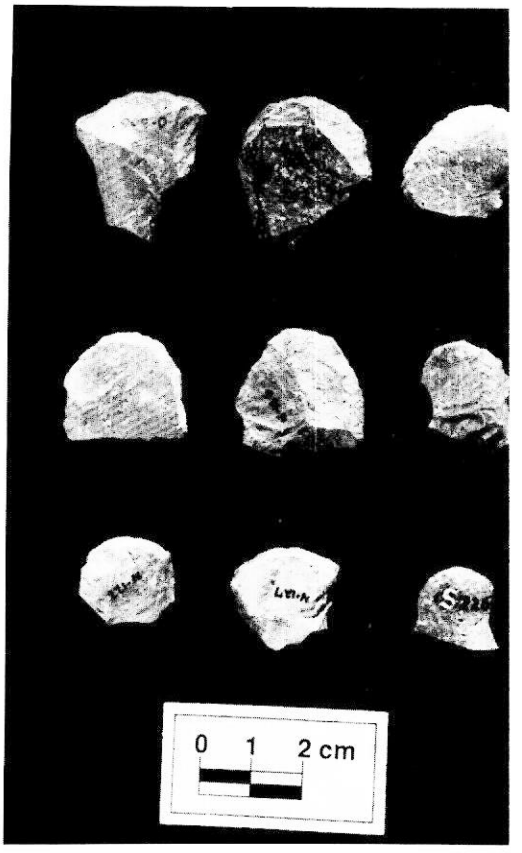


Figure 18: Unifaces Kineo Traveler
TL: 21.13 area O TC:11.2
TR: 11.2 ML: 21.14
MC:21.13 area N MR:11.2
BL: 21.13 area N BC: 21.13 area N
BR:11.2

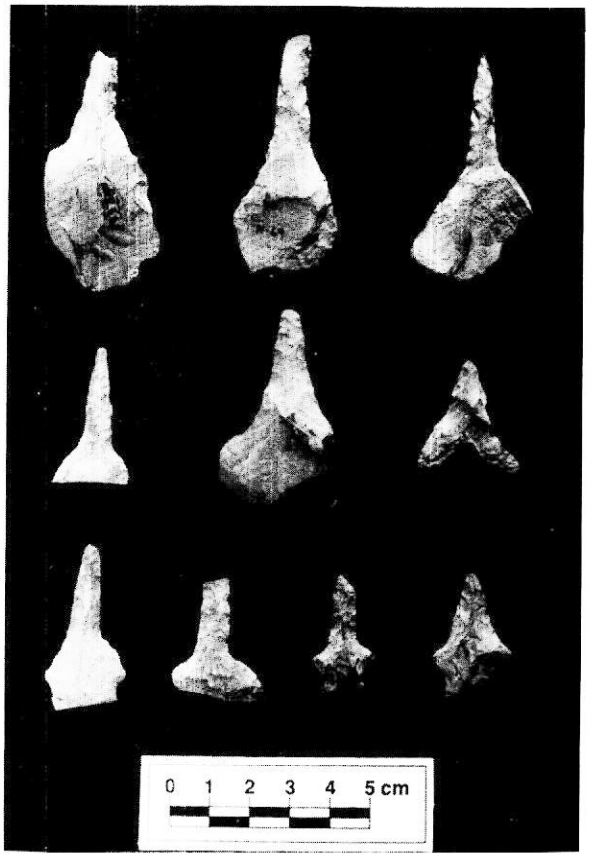


Figure 19: Hornfels Perforators/Drills
TL:21.13 area O TC: 21.13 area N
TR:21.8 ML:21.13 area N
MC:21.1 area UG MR:21.13 area O
BL:21.13 area O BM:21.13 area O
BR:11.2

Kineo Traveler rhyolite.

Finally, the Leadbeater collection con ined seven probable Early to Middle Ceramic l eriod bifaces. The most diagnostic of these were three Jack's Reef points recovered from 21.1 are UG and UK. These bifaces were constructed of .ineo Traveler rhyolite, hornfels, and a black hert (Figure 16). In addition, the collection contai , one Fox Creek biface made of Marblehead rhyolit .

Unifaces

The Leadbeater collection contains som 207 unifaces. Beyond a suggested sourcing by raw material type no further analysis was attempt d on these specimens. Based on their small size ar l the fact that these specimens were recovered at sites with known Late Ceramic Period affiliation can be safely assumed that these artifacts date to the Late Ceramic Period as well (Figure 17 and 18).

The vast majority of these unifaces were recovered from 21.13. This site contained 137 of the 207 unifaces in the collection. Site 11.2 contained the second highest number of unifaces with twenty-four specimens present. The breakdown of the remaining unifaces by site was as follows: 21.14 (n=15), 21.1 (n=10), 21.10 (n=6), 21.7 (n=6), 21.11 (n=4), 21.8 (n=3), and 21.9 (n=2). Unifaces were constructed of the following raw materials: Mt. Jasper rhyolite (n=41), Kineo Traveller rhyolite (n=40), milky quartz (n=26), crystalline quartz (n=19), hornfels (n=17), Munsungun chert (n=15), Vermont chert (n=13), Onandaga chert (n=8), and various unsourced raw materials (n=28).

Other Tools

There were a total of twenty gr und stone tool specimens in the collection. A num er of these are fragmentary and difficult to identif beyond form. However the collection does contair small number of complete groundstone tools. O e grooved axe was recovered from site 21.14 area WX on Lovewell's Pond. It is likely that th artifact relates to the Late-Archaic or Susquehann occupation of this site. Site 21.14 also conta ns three half-channeled gouges. These artifacts are thought to have been used for some speci lized form of woodworking. One other gouge was recovered from the north end of Kezar Lake i Lovell, Maine.

One complete atlatl weight mac of marble was recovered from the Saco River so ewhere in the vicinity of Conway Lake. This art fact was found right in the river channel having, pre umably, eroded out of a nearby site. One celt wa present in the collection. The celt was from 21. and probably relates to the Ceramic Period oc ipation of that site. Finally, a steatite bowl frag ent and stone pipe were found at 21.14 on Lovev ll's Pond. It is notable that the steatite fragment an the four Orient bifaces occur at the same site. It i not at all clear what the stone pipe bowl's cultural ffiliation is.

A total of twenty-nine bifa al drills were present in the collection (Figure 1 Twenty-six of these specimens were from 21.13. Two were from 21.1 and the last was recovered f m 21.8. These drills, like the unifaces in the collection, are attributable to the Late Ceramic Pe od, particularly the occupation at 21.13 in Fryeburg Harbour. Drills were constructed of hornfels (n 26) and Kineo Traveller rhyolite (n=3). No further nalysis on these drills has been attempted. .

DISCUSSION AND CONC USIONS

While the Leadbeater collecti does contain a significant sample of Early Archai -Early Ceramic Period artifacts, the real value of t e collection lies in the vast quantities of well-doc nented Middle-Late Ceramic Period artifacts it ontains. Due to Helen Leadbeater's exceptic ally detailed documentation of her collecting act vities it has been possible to construct a generaliz chronology of Native American settlement patter s at the sites she collected. This has been done b comparing the material cultural remains from the hirteen primary sites that make up the Leadbeater collection with other well-documented Ceramic Period sites in the region.

The earliest Middle Ceramic Period occupations in the Fryeburg region are identified by the presence of coiled, thin walled, fine-toothed rocker dentate vessels. Vessels of this type often show a high degree of vessel integrity when compared to later dentate-impressed ceramics. Sites containing this type of ceramic were all small-scale containing no more than two ceramic vessels each and very little in the way of lithic tools. The majority of these sites (21.13 area OO, 21.7, 21.8, and 21.9) were located in the elevated portions of fields in Fryeburg Harbor. Only one Middle Ceramic Period site from the collection was located outside of Fryeburg Harbor. This site, 21.14, was located near an obvious portage location between Lovewell's Pond and the Saco River via Ward's Pond.

The Fryeburg Harbor location would have provided an exceptional base from which groups could exploit a wide range of resources within the area. From Fryeburg Harbor it is possible to travel by canoe north via the Cold River to Charles Pond and beyond into the Evan's Notch area. Also, the Kezar Lake outlet would have provided quick access to that lake and it's resources. Following the Saco River South from Fryeburg Harbor would have provided access to Kezar and Lovewell Ponds and the vast areas of boglands surrounding these water bodies.

Dating these early dentate-impressed ceramics accurately can be quite difficult. Rocker dentate vessels have been dated to AD310±100 at the Kipp island site in New York State (Ritchie 1965). Similar thin-walled rocker dentate ceramics from cultural level III of the Winooski site in Colchester, Vermont have been dated to AD160±135 and AD170±155 (Petersen and Power 1983). The Fryeburg vessels, unlike the Winooski vessels, lack pseudo-scallop shell decoration. In Maine rocker dentate and dentate-stamped ceramics were dated to AD85±150 and AD110±135 on Great Diamond Island in Casco Bay (Hamilton, personal communication).

Later Middle Ceramic Period occupation in the area is identified by the presence of coiled, medium to coarse grit-tempered vessels with thicker walls and poorer vessel integrity than earlier rocker dentate ceramics. Vessels of this type often combine

rocker and linear decoration wi 1 occasional incisions. These vessels were founc n far greater quantities than earlier rocker dentate eramics.

Two sites on Lovewell's pond 1.14 area W and 21.1 area UK) contained smal quantities of these ceramics. Fryeburg harbor cor ained a much larger sample of these vessels. Unlik earlier rocker dentate-decorated vessels (which v ere found in small quantities at three sites in Fry burg harbor) these ceramics are found at only one l cation, 21.12. Site 21.12 seems to have been a ve large or, at least, a long-term occupation are for Middle Ceramic Period peoples.

Site 21.12 contained at least fift n vessel lots of CP3-4 dentate-stamped cerami s. This site contained only a few stemmed bif es that may relate to these ceramics. The ceram cs recovered from 21.12 are similar to those dated t AD610±100 at the Kipp island site in New York tate (Ritchie 1969). This site lacked a large enougl sample to be very useful in establishing a chron logy. Thick walled vessels with large-toothed, near dentate impressions and punctation we e dated to AD725±135, AD750±130, and Al 655±150 in cultural level II of the Winooski site Colchester, Vermont (Petersen and Power 198 . However, unlike those vessels, the Leadbeate vessels lack punctation. Large dentate-stamped ves els have been dated to AD350±95 and AD430±55 at the Great Diamond island site in Casco Bay, Mai e (Hamilton, personal communication). On the Pis ataquis river in Maine the Brigham site produced thick-walled dentate-stamped vessels that dated t AD435±40 (Petersen et al. 1986).

Based on these dates it would be asonable to place the beginning of occupation at 21 2 sometime after AD300-400. The occupatic probably continued at this site until AD600-70(Occupation of this site seems to have been discontinued sometime after this, seemingly coinci ing with the first use of cord-wrapped stick-impres ed ceramics in the area.

There are three Late Ceramic Perio occupations in Fryeburg harbor. Two of these, 21 7 and 21.8, are rather small. The third Late Cer mic Period occupation in the area continues the pa ern of large settlements in Fryeburg harbor first seen in the Middle Ceramic Period. However, inst ad of 21.12 being the focus of settlement, 21.13 as the new focus of occupation. 21.13 is located on the inside bend of the old course of the Saco River, downstream from the confluence of the Cold River and Kezar Lake outlet. The site stretches intermittently along the length of this field. Helen Leadbeater separated this site into three areas: O, N, and OO (see map).

Site 21.13 contains a minimum of fifteen cord-wrapped stick-impressed ceramic vessels as well as four perishable-impressed vessels and three undecorated vessels. All of these vessels are related to the Late Ceramic Period occupation of this site. Besides these ceramics there were also forty-two (n=42) Levanna bifaces and eighteen (n=18) Corner and Side-notched bifaces. 21.13 also contained a small number of triangular bifaces. Also of note from this site were the 137 unifacial scrapers and twenty-six drills. All of these artifacts relate to the Late Ceramic period occupation of this site.

It is quite clear from the vast quantity diagnostic artifacts recovered that 21.13 was a major Late Ceramic Period center of occupation. Besides the diagnostic artifacts there was also a wide range of other materials collected from this site. Site 21.13 contained the majority of the preforms, debitage, cores, tool fragments, and fire-cracked rock present in the collection. Based on the material culture remains, a wide range of activities can be inferred to have taken place at this site.

The vast quantity of debitage present, including many secondary and tertiary flakes along with cores, preforms and broken tools suggests that the inhabitants were heavily engaged in the manufacturing and maintenance of lithic tools. Site 21.13 contains 137 of the 207 unifaces in the collection. The site also contained twenty-six of the twenty-nine bifacial drills. These tools were probably used for working wood, bone or fiber and in the manufacture and repair of clothing and other items. A plethora of fire-cracked rock as well as the large number of scrapers and drills present at this site is indicative of long-term, intensive domestic activities.

Site 21.13 wasn't the only large Late Ceramic Period occupation in the region. On Lovewell's Pond two sites (11.1and 11.2) contained significant Late Ceramic Period artifacts. Site 11.1, located on the south section of Lovewell's Pond, contained eleven cord-wrapped stick-impressed ceramic

vessels and three perishable-impress d vessels. This site produced only a few lithics an very little in the way of debitage or fire-cracked r ck.

Site11.2, which is located adja nt to 11.1 on Lovewell's Pond, produced ten cord wrapped stick-impressed vessels. This site also ontained nine Levanna bifaces and eleven corner a d side-notched bifaces. Site 11.2 also contained wo drills and twenty-four unifacial scrapers and a small quantity of fire-cracked rock and debitage The material culture remains of this site are very milar to 21.13 in Fryeburg Harbor.

Both 21.14 and 21.1 on the orth shore of Lovewell's Pond contain small qu ntities of Late Ceramic Period materials. These s es were most likely temporary special purpose tes. One final Late Ceramic Period site, 21.22, v s located in a field near where the Kezar Pond ou let reaches the Saco River. This site contained sm l quantities of cord-wrapped stick-impressed eramics and Levanna bifaces.

In New York State cord-w apped stick-decorated ceramics have been date o AD630±100 at the Kipp Island site (Ritchie 19). A later date on these vessels AD1070±60 was btained at the Round Top site (Ritchie and Funk Also, dates of AD1125±100 and AD1190±100 w re obtained on thin-walled cord-wrapped stick-im essed ceramics at the Bates site (Ritchie 1969). Cor -wrapped stick-decorated ceramics were dated to A 01065±130 and AD1140±125 at the Winooski sit in Colchester, Vermont (Petersen and Power 1 83). Also, in Maine, the Great Diamond Islan site produced dates of AD1130±60 and AD123 110 associated with cord-wrapped stick-deco ted ceramics (Hamilton, personal communic ion). Also of relevance here in producing a ch nology are the Levanna bifaces. These artifacts were dated to AD900-1350 in New York (Ritch 1969).

Tracking Late Ceramic Perio occupation in the area becomes more difficult fter this time. However it does seem clear that t re is a definite shift sometime around AD1100- 00 away from large, dense, long-term occupati areas such as 21.13 in favor of smaller, probably emporary sites. For example Fryeburg Harbor co ains three sites, 21.7, 21.9 and 21.12, all of which ontain no more than three incised vessels each. On ovewell's pond three sites, 11.1, 21.1 area UG a 21.14 area W contained small quantities of CP 6 incision-decorated ceramics. A brief survey of the Saco River valley from the New Hampshire border to Swann's Falls located four very small Late Ceramic Period sites (Cox 1993). The author has also discovered five small previously unknown Late Ceramic Period sites in the floodplains of Fryeburg.

It is possible that occupation during this period was located away from the lakes and floodplain where Helen Leadbeater did most of her collecting (Leadbeater, unpublished notes). This would account for the lack of large sites in the collection. Another possible explanation for the scarcity of large sites could be the adoption of horticultural practices such as maize cultivation. The Saco River has long been recognized as the perceived northern limit of maize cultivation. If, in fact, the Native peoples of the area were engaged in maize cultivation they may have been forced to periodically move their settlements, thereby reducing the visibility of these settlements in the archaeological record. Settlement may have been more dispersed as a strategy for reducing the demands on the soil and other resources. Also, villages may have been placed in more defensible positions thereby reducing their visibility.

The timing of the shift from large settlements to small temporary settlements also coincides with the archaeological evidence for the adoption of maize horticulture in the Northeast. A date of AD1160 was obtained on maize at the Hornblower II site on Marthas Vineyard, Massachusetts (Ritchie 1969). Also, evidence of maize horticulture can be seen at the Skitchewaug site in Springfield, Vermont. This site produced maize and bean remains from a pit feature that was dated to AD1100 (Heckenberger 1992). Another date on maize was obtained closer to the study area at the Early Fall site in Steep Falls. This site produced a date of AD1380±70 on maize in association with incised ceramics (Cowie and Petersen 1990). It would seem that the vast floodplains of the Upper Saco River Valley would be ideal for horticulture. However, until there is more direct archaeological evidence, the role that horticulture may have played in Native settlement of the region will remain a mystery.

Dating sites containing incised ceramics is difficult due to the lack of other dated incised ceramics from the region. In New York incised

ceramics have been dated to A)1390±100 at the Kelso site (Ritchie 1973). The pre iously mentioned Early Fall site produced a dat of AD1380±70 associated with incised cerar cs (Cowie and Petersen 1990).

The last known Native settl ment in the area seems to occur at only one sit 21.14 area W, produced seven CP6/7 incised v ssels notable for their distinctive collaring, cas llations, flaring incurvate rims and precise geo etric lattice-like designs (which are applied exclus ely to the collars of these vessels). These vessel t pes have, in the past, been referred to as "Iroqu ian-like". While these vessels do appear very sir lar to Iroquoian incision-decorated vessels thi by no means, suggests that the Contact Peric inhabitants of Fryeburg were Iroquoian rather th n Abenaki.

The relationship of these c amics with the ceramics of other Contact Period ites in Maine is poorly understood. At least, in Fry urg, these vessel types are absent from the floodpla is. Instead, these vessel types are primarily located on lakes and pond and are found in far greater concentrations tha earlier incision-decorated vessels. Ceramics simila to these have been seen from NH21.5 on Conwa Lake in Conway, New Hampshire, 22.9 on Lon Lake in Bridgton, Maine and at Ossipee Lake i Ossipee, New Hampshire.

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The author wishes to acknowledge the following people who helped bring this paper to fruition. First I would like to thank Helen Leadbeater for he lifetime of historic and prehistoric research in the Fryeburg area. I am also grateful to Helen fo allowing me access to her collection so I could undertake this project. I would also like to thank Nathan Hamilton for letting me use the lab at the University of Maine to analyze the collection and James Petersen whose photos of the Leadbeate collection grace this article.

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CONTROLLED SURF ,CE COLLECTION AND ARTIFACT ANALYSIS OF THE STEVENS ;ROOK SITE, PRESUMPSCOT WATERSHED

Craig Norman

INTRODUCTION

Archaeological survey and cont olled surface collection at the Stevens Brook Out t site (22.9) was undertaken over a two-and-one-h lf year period which concluded in the early winter f 1996. The project was undertaken as an indepe dent study in archaeology at the University of Sc thern Maine under the auspices of Dr. Nathan D. H amilton. The site is the property of the State of laine, so Dr. Arthur E. Spiess was contacted at the ! laine Historic Preservation Commission (MHPC) f r permission to undertake the study.

The site was first recorded and r orted to the MHPC in early 1994 by Richard A. D yle, Jr., who in turn contacted Hamilton about the nature of his personal collection and the significan e of his finds. The site is located on the northwest ore of Long Lake at the outlet of Stevens Brook in Bridgton, Maine. The survey area is part of a S ate of Maine owned access to Long Lake for recrea onal boating.

The site aroused my interest pri arily due to the continual exposure of prehist ric artifacts eroding from both intact and rework d shoreline. There has been a 60 to 70 yearlo g history of collecting from this shore location. The outlet is one of several regional sites that I wa cognizant of where private collections have been m intained that allowed the opportunity to examin diagnostic artifacts collected from the southern o tlet of Long Lake. Some of the artifacts turned ut to be of Middle and Late Archaic origin. They are currently curated in the Naples Historical Soc ety Museum and were collected by Harold "Huck" Ridlon and Charles Norman (Dingley 1979; Yes er, Hamilton and Doyle 1983).

My personal goals center around detailing the prehistoric settlements of a single a chaeological site. What are also being explored a e the effects of European development on the site a d the impact of changes in the impoundment caused by damming the outlet of Long Lake. The study ncompasses detailing the cartographic history of t e lake basin, while also looking at the specific geol ical changes in the landscape and hydrologic configuration of Stevens Brook and Long Lake during the Holocene. Additionally, the study looks at the historical aspects of change to the Stevens Brook site area.

Site Description

The site is an eroding sand bar at the outlet of Stevens Brook. The sand bar is approximately 100 meters long by 10 meters wide. An example of how this site is diminishing from erosion can be illustrated by measurements taken in 1994; the length was approximately 120 meters long by 30 meters wide. The site is situated on shore adjacent to a small stream. The vegetation cover consists of trees including maple, oak, and alder, as well as wetland species such as cat-o-nine tail. The site matrix is made up of a limited surface extent of intact "A" horizon situated above well-drained sandy sediment. The site stratigraphy is generalized and has not undergone detailed sedimentological study. Of the artifacts recovered to date, about 90% have been found in newly deflated, redeposited sands. There are four to five "patch"areas left that include intact "A" horizon. During the course of collecting the site, the author has witnessed the loss of about 50% of the "A" horizon to erosion.

Stevens Brook is the second largest tributary that feeds Long Lake. The brook originates from Highland Lake to the west and its course to the outlet runs for a mile and one half. The drop in elevation from Highland to Long Lake is roughly 48 meters (157 ft) (Shorey 1974). There are twelve natural falls in the brook, with the last one being a drop of 4.5 meters (15 ft) at the outlet (the author feels that the relationship of close proximity between the first falls and the lakeshore made this area attractive for seasonal resource exploitation, notably fish). The elevation of the site is 82 meters (268 ft) above mean sea level.

Environmental History

Permanent European settlement on Stevens Brook began *ca.* A.D. 1768. Bridgton was settled

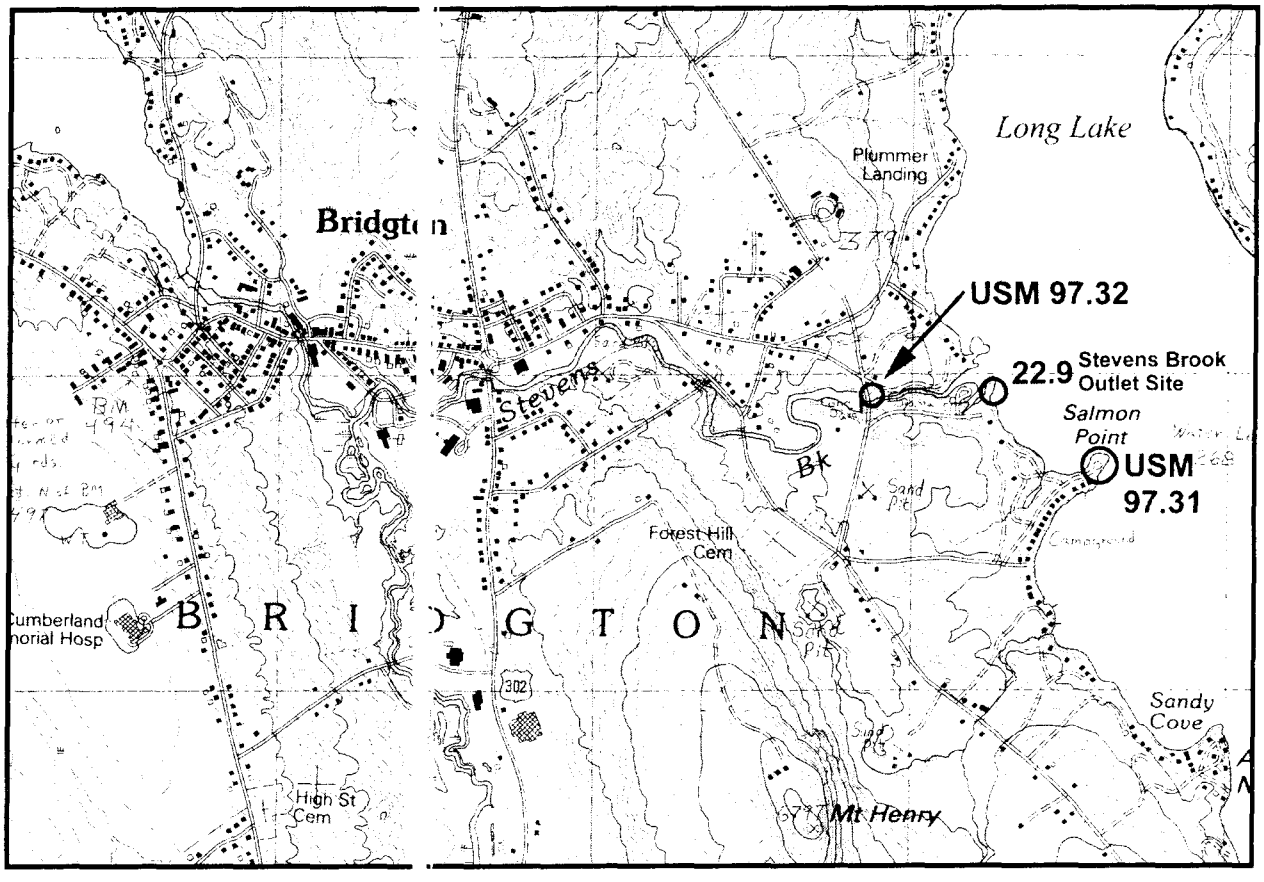


Figure 1: Map showing the locati n of the Stevens Brook Outlet site as well as USM 97-32 and USM 97-31

by Jacob Stevens who came here from Topsfield, Massachusetts to develop the wa erpower of the brook. Stevens was contr cted by the Commonwealth of Massachusetts t build a gristmill and a sawmill. For his agreement he was given a plot of land, which consisted of tw ve acres, along with the rights to build on the b ook that would bear his name (Shorey 1974). The land he developed is adjacent to the Steven Brook site.

Since the 1830's, the water lev l of Long Lake has undergone profound changes. he construction of various historic dams up to the urrent dam and locks system at the confluence o the Songo and Crooked rivers raised the lake 2 meters (9 ft) (Dibello, pers. comm.) above the original normal flow. A copy of an 1803 map (Ci ation unknown) located at the Town Office in Bri gton, reflects a vastly different shoreline before th dam regulated the impoundment. With the co npletion of the Cumberland and Oxford Canal in 1830, the Town of Harrison, at the northern tip of Long Lake, and the City of Portland, at the mouth of Fore River (a distance of about 40 miles) were connected thereby opening up the region to economic development (Jones 1949). By the 1870's, most of Long Lake's shoreline and Stevens Brook river banks had been cleared of valuable pine and hardwood, and the replacement industry for lumbering in the region became recreation (Shorey 1974). At the dawn of the 20th Century, the outlet site shifted from private to public ownership. Its ownership went to the Town of Bridgton, then to Central Maine Power Company, before finally being donated for public access to the State of Maine.

Long Lake and the outlet of Stevens Brook have received little professional archaeological scrutiny because of environmental conditions and the lack of a survey such as would be required for hydroelectric relicensing (Spiess pers. comm. 1995). The primary factors affecting erosion at the prehistoric site can be found on Stevens Brook. There are currently two dams on the brook which

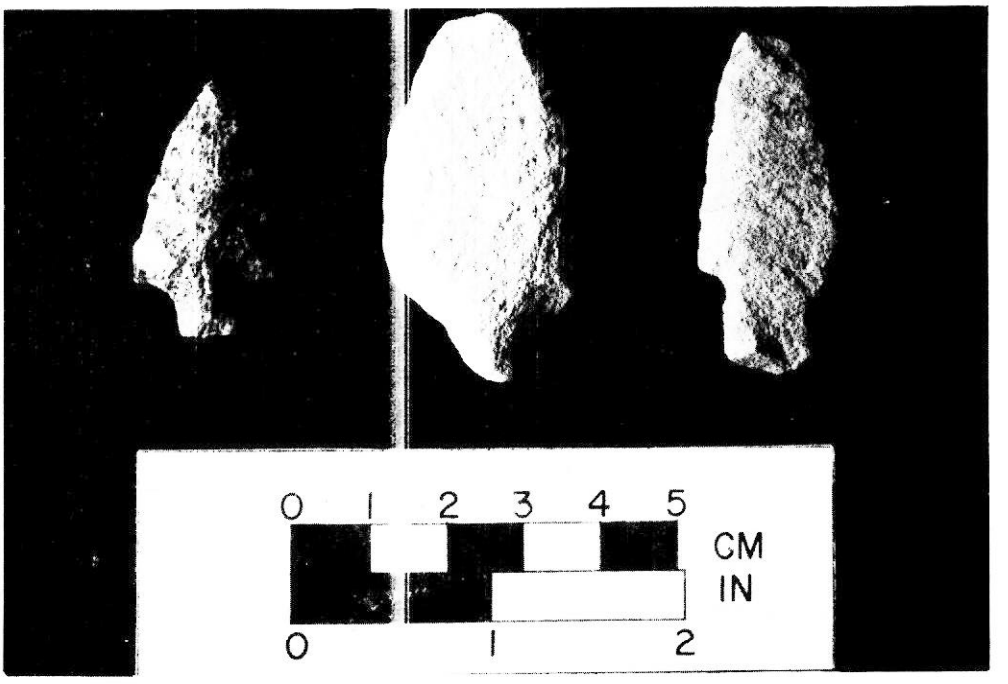


Figure 2. Middle Archaic Period Projectile Points. Neville (CN3), Stark (CN1429), Marrimack (CN8)

hold back water-born sediments that would normally flush into the lake. Without the accumulation of these sediments, wave action from Long Lake has pulled back sands from the site. The result is shrinkage of site dimensions due to erosion.

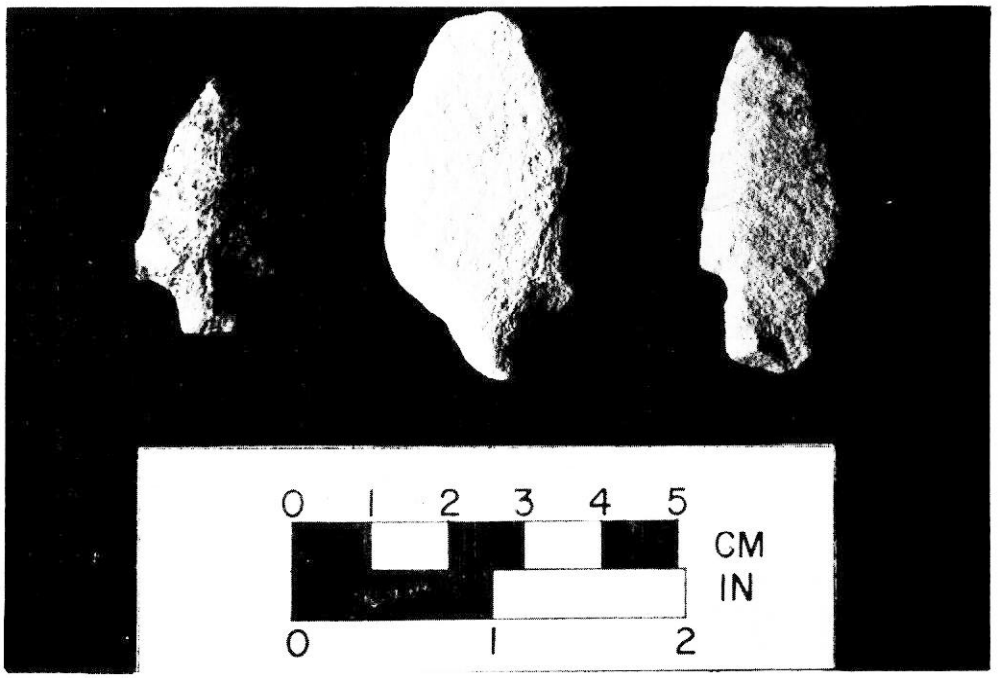
History of Archaeological Work

There was a 19th Century interest in Sebago Lake. J. Walter Penney (an avid antiquarian) contacted a series of local artifact collectors such as Marks, Rolfe, Dillingham, etc., (Moorehead 1922) and these individuals helped build an understanding of what was happening at Sebago Lake The primary emphasis was at areas like Witch Cove or the Basin outlet area of Sebago Lake. It was apparent that collecting artifacts was not happening at Long Lake. Moorehead (1922) was an archaeologist generally in search of Red-Paint Indian habitation and burial complexes. He came to the Maine Historical Society and followed up on the work of J. W. Penney while also tracking down and interviewing the collectors mentioned bove. Moorehead met with varying success so he spent only a limited amount of time in this region. He outlined the details of the other work, but concentrated his efforts at Sebago Basin.

The first archaeological mention of the Stevens Brook site occurred in 1913 by Ernest Sugden (field supervisor for W .K. Moorehead's expedition to Maine), while searching for likely spots to collect artifacts on Long Lake. While there was no actual documentation of his going to the site (Bennett 1992), there was a lot of innuendo about his knowledge of several sites on the north end of the lake (Hamilton pers. comm. 1995). Only a small number of sites on Long Lake are known to the MHPC and two of these in the MHPC database have been annotated as "RSPF" (R. S. Peabody Foundation - Phillips Academy).

The time period after Moorehead from the 1920's until the 1960's was archaeologically quiet. *The Bridgton News*, a small local paper, made occasional references to Indian artifacts found by various individuals at the outlet. The first survey was performed by an avocational collector, Terry Moynihan, who kept meticulous records. Terry created a site plan, provenienced most artifacts to their point of collection, compiled detailed field notes and even excavated a couple of test units. The resulting artifact collection is currently on loan to USM.

It was not until 1980 that a systematic Phase I archaeological assessment was performed on the region by Hamilton and Doyle under a Maine



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It was not until 1980 that a systematic Phase I archaeological assessment was performed on the region by Hamilton and Doyle under a Maine

Historic Preservation Survey and Planning Grant to the University of Southern Maine (Yesner, Hamilton and Doyle 1983). The focus this time still wasn't on Long Lake but, rather, it was on Brandy Pond to the South. The focus of the survey was the examination of lake inlets and outlets in search of Middle Archaic sites.

Since 1980, the most recent work in this area of southwestern Maine again focused on Sebago Lake. Nine contracts for archaeology have been performed by Hamilton (pers. comm. 1994) which resulted in the identification of several prehistoric Native American sites, including one that was Palaeo Indian. My introduction to this regional study came about as the result of participating in the 1994 USM archaeology field school. Prior to starting field work at the Stevens Brook site, the author met with Judy Crowell who possesses a small collection of artifacts from there. She identified an area that produced materials along one margin of the site. Judy generously provided her collection for analysis and inclusion in this study. Shortly after this, the author started systematic artifact collection at the Stevens Brook outlet. In analyzing the artifacts, it became obvious that the site was primarily a Middle and Late Woodland period occupation. Given the volume and scale of recovered material culture, Hamilton (pers. comm. 1997) suggested that this was representative of a significant Late Woodland habitation site. The collections studied (J. Crowell, T. Moynihan, and C. Norman) include a Late Archaic group of artifacts as well as three bifaces identified as from the Middle Archaic Period.

Cultural Setting

Archaeological culture units of prehistory are defined by different functional classes and styles of artifacts. Before the advent of the ceramic manufacture, with its diverse styles of pottery, the most frequently employed artifacts utilized diagnostically have been bifacial projectile points. In some cases, a single tool may serve to identify the presence of a cultural abstraction (Robinson 1996:1). At the Stevens Brook site, four distinct culture units have been identified: the Middle Archaic, Late Archaic, Middle and Late Woodland (Ceramic) periods.

Middle Archaic sites, *ca.* 7500 - 6000 B.P., are much more common than the Early Archaic sites in the Presumpscot Drainage, Southwestern Maine and the Lakes region of southeastern New Hampshire. At least eleven Middle Archaic site locations, defined on the basis of diagnostic Stark, Neville, and Merrimack projectile point forms (Dincauze 1976; Snow 1980) are known from Sebago Lake (Hamilton, N. D.). The introduction of these point forms may have occurred sometime after 7200 B.P. (Spiess 1991a: 2). The number of sites and the relative abundance of associated flaked stone tools seemingly represent a significant increase in prehistoric human populations in the region. These Middle Archaic sites are situated at the outlets of rivers and streams or within a few kilometers and may correlate with the exploitation of anadromous fish. Yesner, Hamilton and Doyle (1983: 314) have suggested that Middle Archaic populations developed a subsistence pattern based on intensive exploitation of anadromous fish, turtles and aquatic mammals and, likely, a "landlocked" salmon population.

In reviewing Middle Archaic sites in western Maine, Stevens Brook was attributed to the Middle Archaic Period on the basis of: one Neville point (CN3) made from a black-banded, brown chert or very fine grained felsite, one Stark point made of a whitish weathered rhyolite (Kineo?) and one Merrimack point made from a bluish-banded tan coarse-grained felsite (see Fig. 1). To date, these points place the site as one of the earliest known on Long Lake. The closest comparable site can be found slightly north at Bear Pond (Spiess 1985) site 22.8 or at the southern outlet of Long Lake at site 12.1.

Late Archaic sites, *ca.* 6000 - 2800 B.P. are still more common around Sebago Lake and in the broad region, probably representing a variety of sub-regional complexes (*i.e.*, Borstel 1982, Bourque 1995, Hamilton nd, Moorehead 1922). Cultural remains representing Laurentian Tradition, Moorehead Phase of the Maritime Archaic Tradition, Small-stemmed Point (Squibnocket) Tradition and Susquehanna Tradition are all found in the Sebago Lake Region (Hamilton nd; Yesner, Hamilton and Doyle 1983:318). The available evidence suggests continued population growth during the Late Archaic in the southwestern Maine seaboard lowlands and southeastern New Hampshire lakes region. At the Stevens Brook site, the Small-

VL1, CP5 or 6 - 1 Rim Sherd (CN364). Black exterior and interior coloration; interior paddled smooth; 5.23 mm thickness; rim and exterior decoration is a bold chevron made by cord-wrapped stick impressions, cordage twist unclear; carbon deposits present on exterior grooves; fine sand temper; 3.0 gm weight. (Fig. 3)
VL2, CP6 or 7 - 2 Rim Sherds (JC61, JC66). Tan exterior, black-gray interior coloration; 4.67 mm thickness; diagonally incised exterior decoration; fine sand temper; 3.0 gm total weight.
VL3, CP7 - 2 Sherds, portion of neck, body, and rim (JC181, CN367). Light brown exterior; black-brown interior coloration; 6.0 mm lip thickness, 7.77 mm neck thickness, 3.92 mm body thickness; carbon deposits present on interior of neck and rim; exterior decoration consists of diagonal incision and punctate on the neck, notching on the rim; fine-medium grit temper, 39.0 gm total weight. (Fig. 4)
VL4, CP7 - 1 Rim Sherd (TM43). Tan exterior, dark brown interior coloration; rim eversion is slightly in-curved, square internal lip; 6.75 mm thickness; diagonally incised exterior decoration; fine feldspar-quartz temper; 3.8 gm weight. (Fig. 4)
VL5, CP5 - 2 Sherds, neck and rim (JC62, CN365). Brown exterior; black interior coloration; 6.65 mm lip thickness, 4.9 mm neck thickness; cord-wrapped stick decoration on rim, rolled cord-wrapped stick on neck, cordage is Z-twist, 2-ply, S-spin; coarse feldspar temper; 10.0 gm total weight. (Fig. 3)
VL6, CP4 or 5 - 1 Rim Sherd (CN209). Light brown exterior and interior coloration; 6.36 mm thickness; rim and exterior decoration is cord-wrapped stick impressed, cordage twist is unclear; coarse feldspar temper; 4.4 gm weight.
VL7, CP7 - 2 Rim Sherds (JC68, JC108). Light brown exterior and interior coloration; rim shows internal wiping (channeling), slightly incurvate; 6.0 mm thickness; carbon deposits present on rim; rim decoration is incised and punctate; medium feldspar-quartz temper; 6.3 gm weight. (Fig. 4)
VL8, CP5 or 6 - 1 Rim Sherd (CN182). Dark brown exterior, black interior coloration; rim eversion slightly excurvate; 5.98 mm thickness; carbon deposits present all over exterior; rim decoration is cord-wrapped stick impressed, cordage twist unclear; fine feldspar temper; 5.5 gm weight.
VL9, CP5 or 6 - 1 Rim Sherd (CN363). Dark brown exterior, black interior coloration; 5.11mm thickness; carbon deposits present inside rim; rim decoration is cord-wrapped stick impressed, cordage twist unclear; coarse grit temper; 2.9 gm weight. (Fig. 3)
VL10, CP6 or 7 - 1 Body Sherd (JC158). Tan-brown exterior, light brown interior coloration; 7.35 mm thickness; carbon deposits present on interior; exterior surface treatment is open simple twining, cordage is Z-twist(?), 2-ply, S-spin(?); 5.0 gm weight. (Fig. 3)
VL11, CP2 or 3 - 1 Rim Sherd (CN208). Light brown exterior and interior coloration; slight rim eversion; 6.69 mm thickness; rim decoration is punctate; coarse grit temper; 4.6 gm weight. (Fig. 3)
VL12, CP2 or 3 - 1 Body Sherd (CN362). Light brown exterior and interior coloration; 7.89 mm thickness; exterior decoration is cord-wrapped stick impressed and diagonal incision, cordage twist is inclear; medium grit temper; 5.0 gm weight.
VL13, CP2 or 3 - 1 Rim Sherd (JC110). Light brown exterior and interior coloration; 6.03 mm thickness; exterior decoration is dentate rocker-impressed; medium grit temper; 3.5 gm weight.
VL14, CP6 or 7 - 1 Body Sherd (JC63). Light brown exterior, black interior coloration; 4.75 mm thickness: exterior surface treatment is rolled cord wrapped paddle and cordage impressed, cordage is Z-twist, 2-ply, S-spin; carbon deposits on exterior; medium grit temper; 2.0 gm weight.
VL15, CP6 or 7 - 1 Body Sherd (CN375). Light brown exterior and interior coloration; 5.62 mm thickness; exterior surface treatment is cordage impressed, cordage is Z-twist, 2-ply, S-spin; fine feldspar (sand?) temper; 4.0 gm weight.
VL16, CP2 or 3 - 1 Rim Sherd (JC31). Light brown exterior, black interior coloration; 9.46 mm thickness; exterior decoration is cord-wrapped stick impressed, cordage twist unclear; carbon deposits on exterior; medium feldspar-quartz temper; 14.0 gm weight.
VL 17, CP 4 or 5 - 1 Body Sherd (CN366). Light brown exterior and interior coloration; 9.61 mm average thickness; exterior decoration is cord-wrapped stick impressed, cordage twist unclear; carbon deposits on exterior; medium feldspar-quartz temper; 14.0 gm weight.
VL 18, CP6 or 7 - 1 Body Sherd (JC160). Light brown exterior and interior coloration; 8.56 mm thickness; exterior decoration is cord-wrapped cord and cord-wrapped stick impressed, cordage is Z-twist, 2-ply, S-spin; medium feldspar-mica temper; 5.0 gm weight.

Table 1. Ceramic Vessel Lot Descriptions from the Stevens Brook Site.

VL 19, CP6 - 1 Body Sherd (CN28). Dark brown exterior, light brown interior coloration; 7.36 mm thickness; exterior surface treatment is cordage impressed, cordage is Z-twist, 2-ply, S-spin; medium feldspar temper; 12.0 gm weight.
VL 20, CP5 or 6 - 1 Rim Sherd (CN371). Black exterior and interior coloration; 6.64 mm thickness; no decoration; medium texture feldspar-quartz temper; 6.0 gm weight.
VL 21, CP5 - 1 Rim Sherd (TM23). Light brown exterior and interior coloration; 6.43 mm thickness; exterior decoration is cord-wrapped stick impressed, cordage twist unclear; fine sand temper; 8.0 gm weight.
VL22, CP4 or 5 - 1 Rim Sherd (CN390). Light brown exterior, dark brown interior coloration; 8.79 mm thickness; exterior decoration is cord-wrapped stick impressed, cordage is S-twist, 2-ply, Z-spin; medium feldspar temper; 7.0 gm weight. (Fig. 3).
VL23, CP4 or 5 - 1 Rim Sherd (CN382). Light brown exterior, gray-black interior coloration; 5.51 mm thickness; exterior decoration is cord-wrapped stick impressed, cordage is Z-twist, 2-ply, S-spin; fine sand temper; 4.0 gm weight.
VL24, CP4 or 5 - 1 Rim Sherd (CN376). Light brown exterior, dark brown interior coloration; 7.44 mm thickness; exterior decoration is cord-wrapped stick impressed, cordage twist is unclear; medium quartz temper; 5.0 gm weight.
VL25, CP5 or 6 - 1 Rim Sherd (CN233). Brown exterior and interior coloration; 6.18 mm thickness; exterior decoration is cord-wrapped stick impressed, cordage twist unclear, and rim is castellated and fabric impressed, cordage twist is unclear; medium quartz temper; 2.0 gm weight.
VL26, CP 6 or 7 - 1 Rim Sherd (JC53). Light brown exterior and interior coloration; 4.18 mm thickness; exterior surface treatment is fabric impressed, rim decoration is cord-wrapped stick impressed, cordage twist is unclear; carbon deposit present on interior; fine sand temper; 3.0 gm weight. (Fig. 3)
VL27, CP6 - 1 Pipe Bowl Fragment (TM13). Rough green-gray exterior and interior coloration; 5.4 mm thickness; exterior surface treatment is cordage impressed, cordage is Z-twist, 2-ply, S-spin; medium feldspar temper; 5.0 gm weight. (Fig. 5)
VL28, CP5 or 6 - 1 Body Sherd (CN393). Light brown exterior and interior coloration; 5.84 mm thickness; exterior decoration is cord-wrapped stick impressed, cordage is S-twist, 2-ply, Z-spin; carbon deposits present on exterior; medium quartz temper; 2.0 gm weight.

Table 1. Ceramic Vessel Lot Descriptions from the Stevens Brook Site (cont.).

stemmed Point Tradition, as defined by Ritchie (1969:205), is represented by four quartz projectile points (CN30, CN15, CN1410 and CN1692) (not shown).

People of what is known as the Susquehanna Tradition lived in Maine sometime between 4000 - 3000 B.P. (Snow 1980) at the end of the Late or "Terminal" Archaic Period. According to Spiess (1989), the location of some Susquehanna Tradition sites would indicate a reliance on the birchbark canoe, which is a northern invention. With the Susquehanna Tradition, a stone tool technology based on large, well-made bifaces emerges. These artifacts have been used to establish temporal affiliations (Ritchie 1994: 150). In New England, diagnostic bifaces are identified as Atlantic, Susquehanna Broad, Orient, Mansion Inn and Wayland Notched (Snow 1980; Spiess 1990). Sites attributable to the Susquehanna Tradition have been found throughout the State of Maine. The evidence at Stevens Brook consists of two bifacial projectile points: one, a fragment (missing its distal tip), is made from a green, fine-grained, non-identifiable stone (CN1430); the second biface is made from Kineo rhyolite (CN1431). The end of the Archaic Period (and the Susquehanna Tradition) in northeastern prehistory occurs with the adoption of ceramic technology sometime around 3000 B.P.

The most recent era of prehistory, the Woodland or Ceramic Period, is divisible into three periods: Early, ca. 2800 - 2100 B.P.; Middle, ca. 2100 - 1000 B.P.; and Late, ca. 1000 - 300 B.P. Numerous sites are present south of Long Lake but, again, the Stevens Brook site is the first to be studied on this body of water.

Maine's Native American population was adapted to a generalized hunting, fishing and gathering economy based upon mobility in birchbark canoes (Spiess 1991b). Long sandy beaches with flat adjacent areas for camping located on lakes or near confluences of rivers were their preferred sites. The Woodland (Ceramic) Period also witnessed

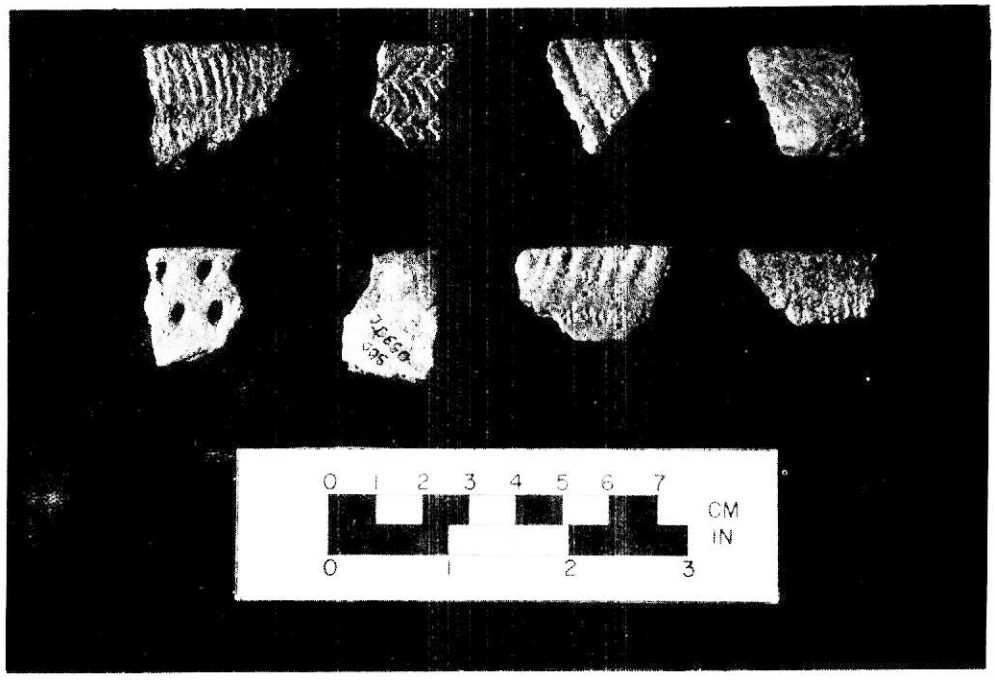

Figure 3. Cord-wrapped Stick Impressed Rim Sherds. Top: VL 5 (CN365), VL 1 (CN364), VL 9 (CN363), VL 10(JC158), Bottom: VL 11 (CN208), VL 26 (JC53), VL 22 (CN390), VL 5 (JC062).

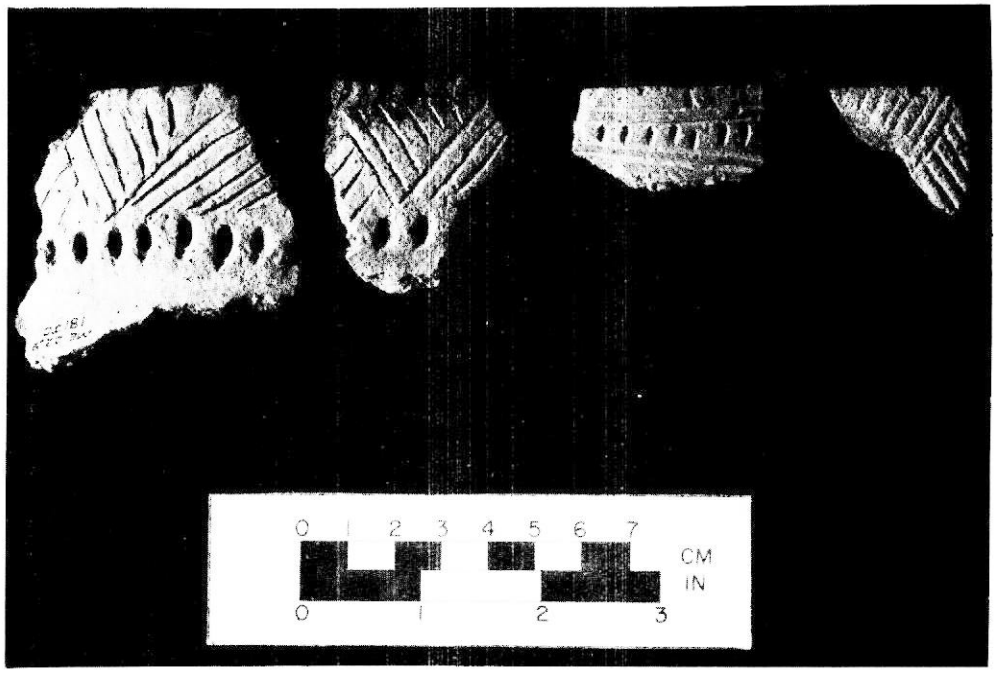

Figure 4. Incised Rim Sherds. VL 3 (JC181, CN376), VL 7 (JC108), VL 4 (TM43)

some degree of social evolution, possible group amalgamation and incipient differentiation between coastal and interior populations, as well as the introduction of cultigens into local economies during the Late Woodland Period (Snow 1980).

Field Methodology

My initial visit to the site occurred during July 1994, accompanied by Judy Crowell. Judy led me to the margin of the site where she had collected

SITE NAME	LOCATION	CULTURAL REMAINS	DATE
Basin Island	Sebago Lake Outlet	Dentate Ceramics	---
Clark Cove	Casco Bay	Dentate Ceramics	---
Goose Island, A	Casco Bay	Dentate Ceramics	---
Great Diamond, A	Casco Bay	Dentate Ceramics	A.D. 85±150 A.D. 115±135 A.D. 350±95 A.D. 430±95
Great Moshier Island, A	Casco Bay	Dentate Ceramics	A.D. 80±90 A.D. 80±160 A.D. 190±100 A.D. 200±110
Hamilton	Merrymeeting Bay	Dentate Ceramics Psuedo-Scallop Shell Ceramics	---
Haskell Island, A	Casco Bay	Dentate Ceramics	A.D. 150±
Haskell Island, B	Casco Bay	Shell Tempered Ceramics	A.D. 750±120
Leighton	Sebago Lake Outlet	Dentate Ceramics Cord-Wrapped Stick Ceramics	---
Marine Hospital	Casco Bay - Presumpscot Bay	Dentate Ceramics Psuedo-Scallop Shell Ceramics	---
Outlet Brook	Sebago Lake Outlet	Dentate Ceramics	---
Panther Run I	Panther Pond	Dentate Ceramics	---
Presumpscot Falls	Presumpscot River	Dentate Ceramics Cord-Wrapped Stick Ceramics	---
Upper Flagg Island, A	Casco Bay	Dentate Ceramics Cord-Wrapped Stick Ceramics	---
Witch's Cove	Sebago Lake	Dentate Ceramics	---
Wooley	Casco Bay	Dentate Ceramics Cord-Wrapped Stick Ceramics	---

Table 2. Casco Bay, Presumpscot Drainage and Sebago Lake site correlates of the Middle Ceramic Period Occupations

eroded artifacts. After examination of Judy's artifacts, we attempted to provenience them to their point of origin. I then performed a walkover of the site to ascertain any other area(s) to investigate. During this initial period the physical boundaries of the site (length and width) were recorded. The reference point used as a datum is an historic brick pile on the lake margin at the northeastern tip of the sandbar. I then proceeded to photograph various aspects of the site. The photos were the start of what became a 2.5 year long photo journal that has documented site orientation and the effects of erosion and water level fluctuation on the reduction of the sandbar's size.

The start of the second season (May - December 1995) began in the archaeology lab at USM. Here, the collection of Terry Moynihan was made available for evaluation. What was found to be most useful were the detailed field notes that consisted of exact provenience, along with the

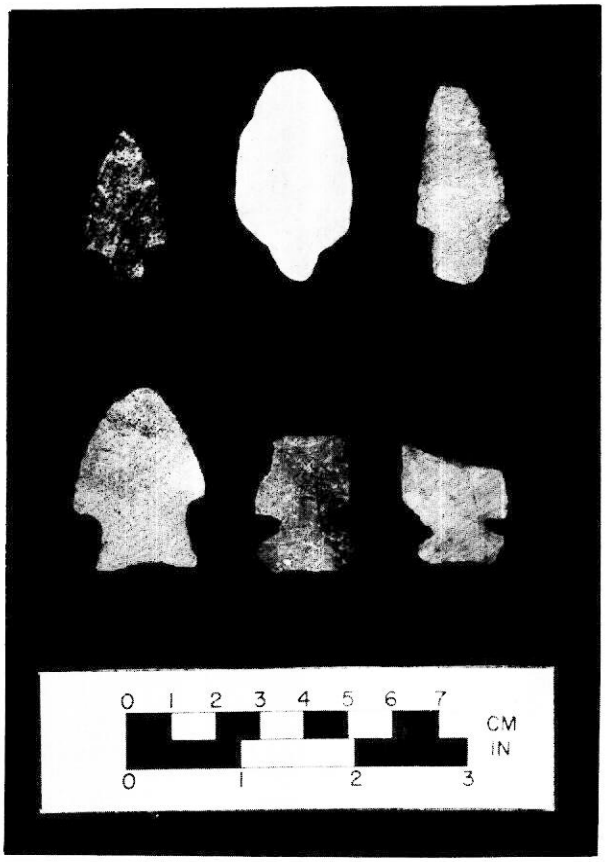

Figure 6. Side-notched Projectile Points. (TM3) CG Rhyolite, (CN1698) Kineo, (JC7) Onandaga Chert

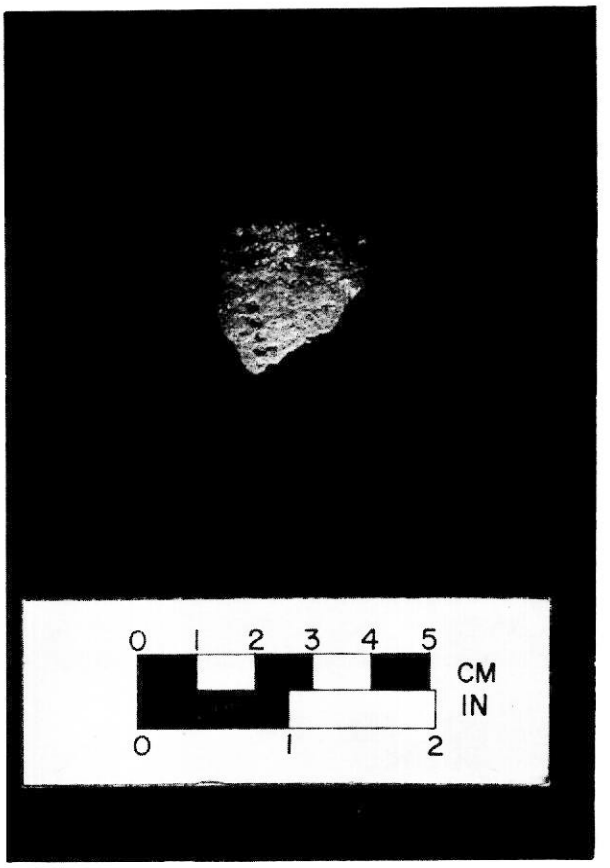

Figure 5. Ceramic Pipe Bowl Fragment, Cordage or Fabric Impressed. VL 27 (TM13)

artifactual descriptions. Moynihan also generated an accurate field sketch map of the site. The map is interesting because it allows one to compare the dimensions of the site from the 1960's to the current measurements and to see how the site dimensions have changed. Terry's map was gridded into ten-foot squares and lettered. I followed this format but laid out the site grid into three-meter squares. A site map was then generated. By comparing locations of surface finds, a definite pattern emerged that differentiated artifacts by chronological time periods. This second season also had the addition of a volunteer field crew. It consisted of my fiancée, Heather Hoover, her brother Wayne, and my son, Corey. By combining everyone's time together [collecting artifacts], the average time spent per week on the site was roughly 60 hours. As reflected in the overall artifact totals (n=2552), the time invested was worthwhile.

The last season (May - December 1996) of collecting at the site brought a synthesis of the patterning described above. Three discreet loci were spatially delineated. One of the loci, number 3 produced only Middle and Late Archaic materials, while locus number 1 produced Late Woodland period artifacts and locus number 2 produced Middle Woodland artifacts.

All artifactual materials recovered were processed in the Archaeology Laboratory, 317 Bailey Hall, at the University of Southern Maine. These items will also be curated here until final disposition is decided in consultation with MHPC.

CULTURAL REMAINS

A large number of aboriginal (n=2989) and a small number of Euro-American historic (n=13) cultural remains were recovered from the Stevens Brook Outlet site. The aboriginal sample includes

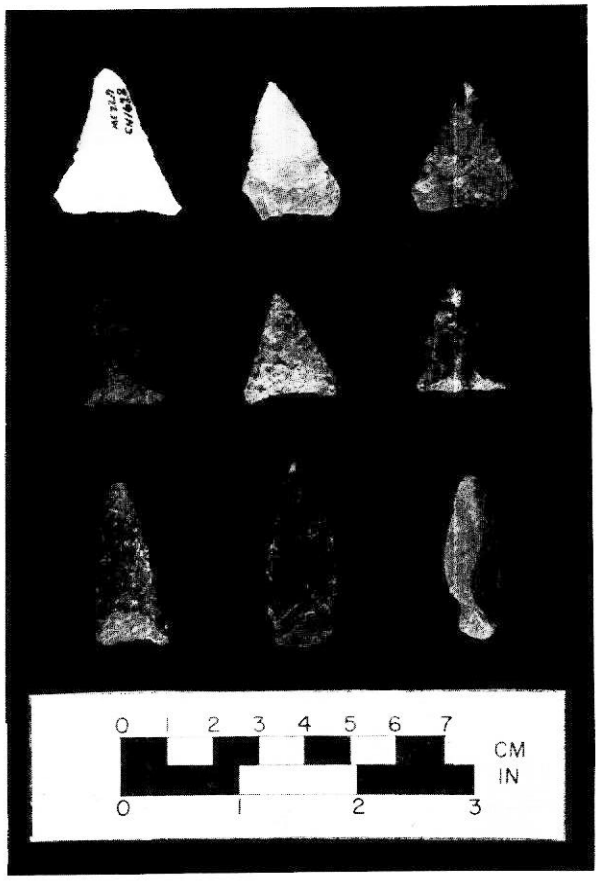

Figure 7. Triangular and Stemmed Projectile Points. Top: Levanna (CN1628) Quartz, (CN1283) Chert, (JC5) Chert, Middle: Levanna (CN027) Chert, (CN014) Chert, (CN1284) Chert, Bottom: Untyped Stemmed (JC4) Kineo, (TM7) Chert, (CN1529) Chert

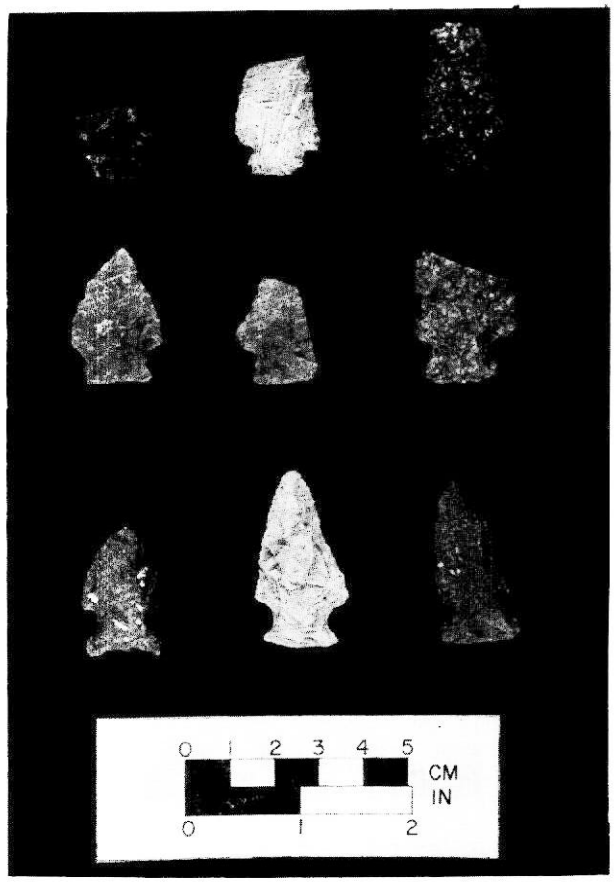

Figure 8. Side-notched Projectile Points. Top: (CN40) Chert, (TM9) unknown, (JC2) Kineo, Middle: (CN23) Kineo, (TM2) Chert, (JC9) Kineo, Bottom: (CN32) Kineo, (CN1) Chert, (TM5) Chert

922 potsherds, 192 stone tools and 1888 pieces of lithic debitage. Of the 192 identified stone tools, five pieces are ground stone. The Euro-American historic period sample includes three gunflints, three pipe bowl fragments, one pipe stem fragment, four ceramic marbles, and one large ceramic bead.

Aboriginal Ceramics

The Stevens Brook site yielded a total of 922 fragments of Native American pottery. Ceramics were collected from all three loci and represent 28 vessel lots (Table 1). Native Americans adopted ceramic technology in Maine approximately 3000 years ago. The vessel lot approach (following Hamilton and Yesner 1985) to attribute analysis of the Stevens Brook pottery (i.e. pottery sherds which were considered to belong to an individual vessel based on common characteristics were assigned to vessel lots) was utilized.

In Maine, the most finely resolved temporal sequences of any artifacts are to be found in ceramics (Petersen and Sanger 1991). Pottery provides a great range of decorative and technological change. It is through this variability that Petersen and Sanger (1991) developed a chronology of seven ceramic periods (CP1 - CP7) spanning some 3000 years. Each period has its own set of predominate characteristics such as the decorations of a vessel's surface, the shape and thickness of the vessel, and the type and density of the temper material used. The classifications are culturally homogeneous and cannot be equated with phases as traditions in the broad sense (Petersen and Sanger 1991). Other professionals prefer the

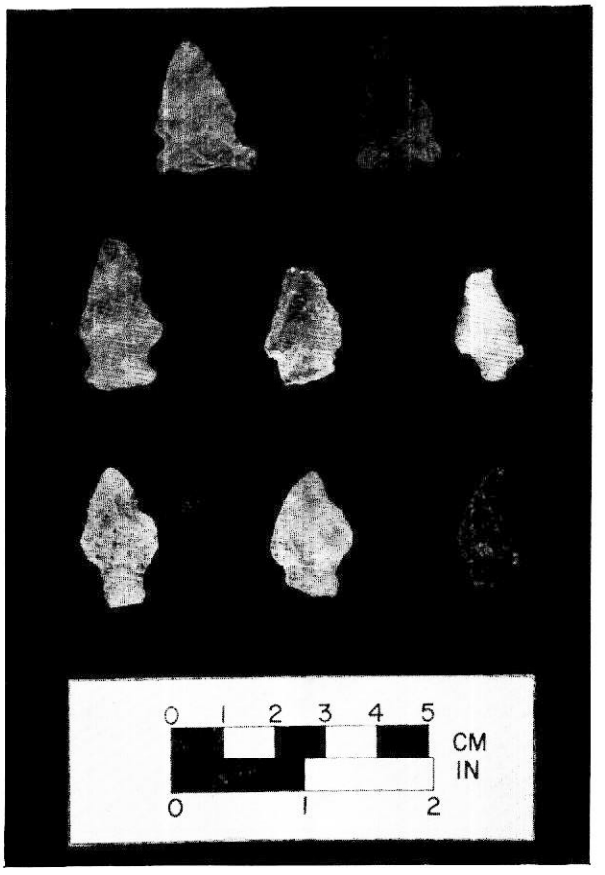

Figure 9. Various Untyped Woodland Projectile Points. Top: (CN16) Chert, (JC6) Chert Middle: (CN21) (CN25) (CN30) All Quartz, Bottom: (CN17) Felsite, (CN13) Quartz, (CN4) Quartz

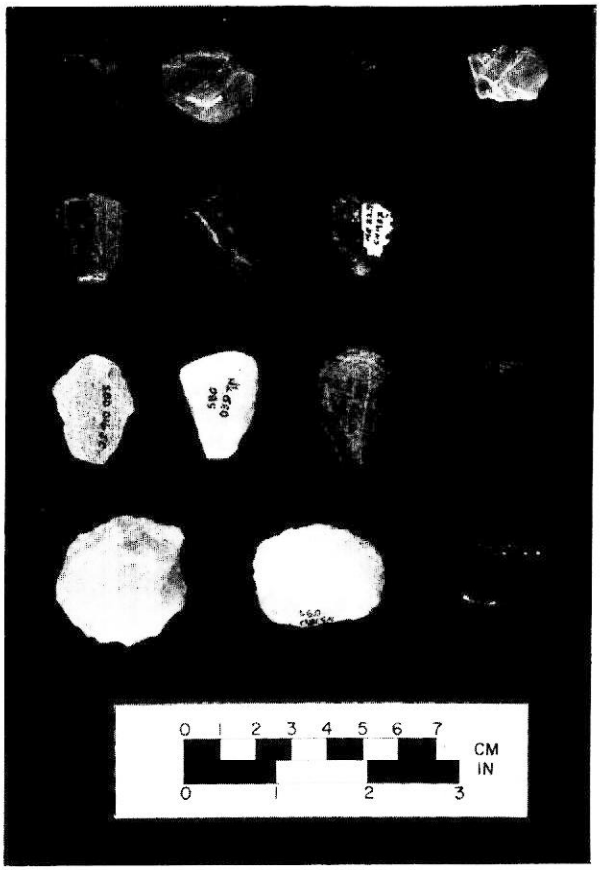

Figure 10. Assorted Scrapers. Top: Woodland (CN51) Chert, (CN1282) Chert, (CN48) Chert, (CN50) Quartz, 2nd: Woodland (JC17) Kineo, (CN47) Chert, (CN1437) Kineo, (JC19) Chert, 3rd: Woodland (JC16) Chert, (TM39) Quartz, (CN1436) Chert, (TM11) Chert, Bottom: Archaic (CN1403) Quartz, (CN81) Quartz, (CN1862) Quartz

traditional three period culture historic designations: Early Woodland (Ceramic) Period (*ca.* 2800 - 2100 B.P.), Middle Woodland (Ceramic) Period (*ca.* 2100 - 1000 B.P.), and Late Woodland (Ceramic) Period (*ca.* 1000 - 300 B.P.). The use of ceramics, in conjunction with good radiocarbon dates, allows for fine-tuning of the chronology and thus establishes a temporal sequence of stylistic change through time.

Out of the 922 potsherds collected, a sample of 115 pieces consisting of rims, necks and body portions was selected to conduct a vessel lot analysis. A final sample of 54 ceramic sherds was selected for this purpose. The result of this approach produced a total of 28 different vessel lots. To summarize Table 1, nine vessel lots represent the Middle Woodland (Ceramic) Period (CP2 - CP4), while 19 vessel lots represent the Late Woodland (Ceramic) Period (CP5 - CP7).

The next phase of the analysis focused on looking for stylistic variation in the exterior cordage impressions on the assorted vessel lots. Petersen and Hamilton (1984) and, more recently, Petersen (1996) feel that the direction of cordage twists indicates a cultural boundary between the coast and the interior of Maine of long duration. Generally speaking, coastal ceramics are represented by predominantly Z-twist cordage impressions while interior locations are dominated by S-twist. This dichotomy provides a sort of coding for social

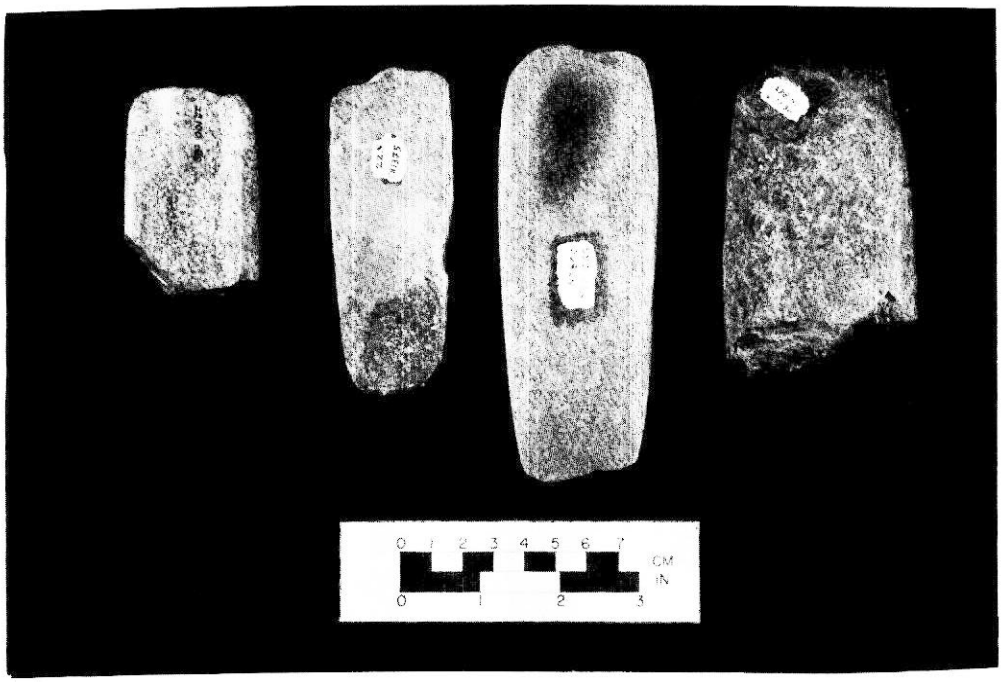

Figure 11. Ground Stone Specimens. Gouge Fragment (JC1), Celts (CN1375, CN68, CN1843)

SITE 22.9	J. Crowel		T. Moynihan		C. Norman		Total	Total Wt.	
	Qty.	Wt.(g)	Qty.	Wt(g)	Qty.	Wt(g)	Qty.	(g)	%
Clear Quartz	2	5	4	37	126	316	132	358	6.99
Smoky Quartz	--	--	1	8	59	230	60	238	3.18
Milky/Quartzite	6	19	14	130	546	1,629	566	1,778	29.98
Argillite	30	75	1	13	326	623	357	711	18.91
Chert	19	13	31	50	278	262	328	325	17.37
Kineo Rhyolite	18	23	12	37	222	337	252	397	13.35
Coarse Grained Rock	6	12	3	6	90	114	99	132	5.24
Assorted Felsites	5	30	4	36	63	81	72	147	3.81
Unknown	1	2	2	2	16	13	19	17	1.07
Basalt	--	--	2	3	--	--	2	3	.11
Slate	--	--	1	1	--	--	1	1	.05
Collection Totals	87		75		1,726		N=1,888	4,107	100

Table 3. Lithic Debitage from the Stevens Brook Site.

boundaries. However, Robinson (1996) points out that "this can only correlate usage either by coastal or interior groups in general...it cannot be effectively used to distinguish all social boundaries because one neighboring group might have a similar twist, while another group could have the complete opposite".

From the sample of 54 sherds used in the perishable analysis, 46 potsherds were impressed with plasticine to create positive casts in order to study cordage twist and spin for either "S" or "Z" orientation. 29 pieces were unclear which left 17 pieces that could be positively identified for twist and spin. The results of reading the positive casts are as follows: 18% (n=3) were "S" twist while 82% (n=14) were "Z" twist. These results tell us that there is a dominance of "Z" twist in the interior Long Lake region but does not elaborate on the specific ceramic periods of the respective samples. When the direction of twist is examined on the 28 vessel lots themselves (Table 1), the readable impressions are still overwhelmingly "Z" twist (n=8) even though "S" twist is present (n=2). The two "S" twist vessels are both CWS-decorated and

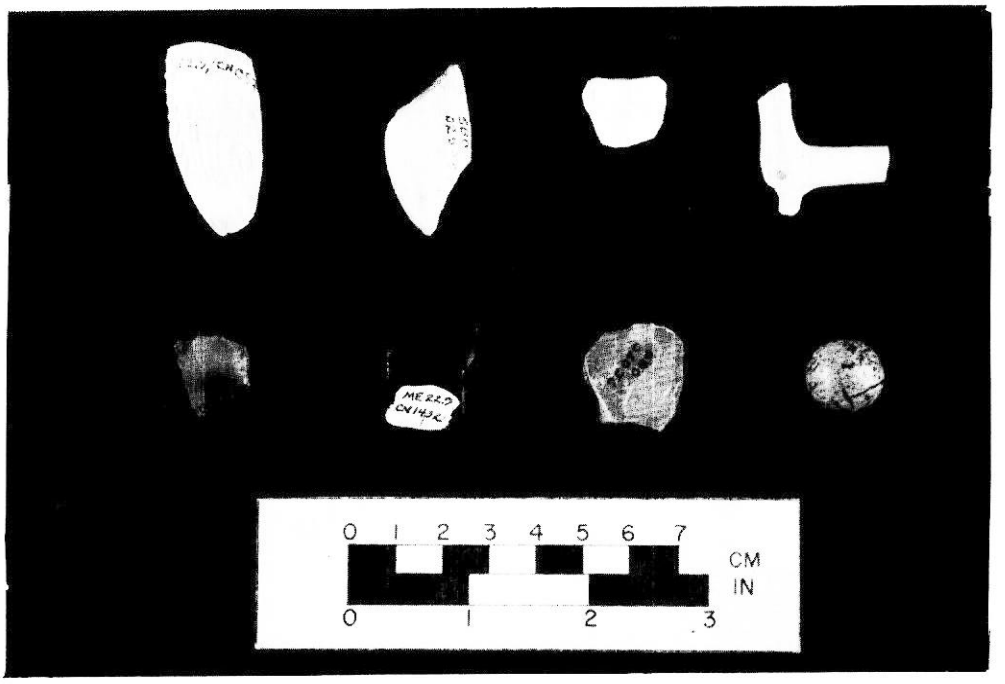

Figure 12. Historic Period Specimens. Top: Smoking Pipe Fragments (CN57, JC25, CN1860, CN1861), Bottom: Gun Flints, Clay Marble (CN49, CN1432, JC20)

the "Z" twist vessels are a combination of CWS and cordage and fabric- impressed vessels. Spiess (1990) reiterates that cordage differentiation occurs for approximately 2000 years from CP1 to CP4 (3000 - 950 B.P.). It is after 950 B.P. that shell-tempered ceramics show up in the interior as well as does the apparent homogenization of perishable fiber twists. When the sampled vessels with clear readable cordage twists are examined for ceramic period correlation all readable twists seem to occur from CP5 - CP7. At Stevens Brook, one factor stands out, of all 922 pot sherds examined there is a complete lack of shell-tempered sherds. It would seem that the outlet site will still leave the question of seasonal mobility (with coastal influence vs. decorative diffusion) unanswered. Only further regional studies may determine if Stevens Brook is an anomaly or simply a correlate of the broader region (Table 2, after Hamilton 1985).

ABORIGINAL LITHICS

Debitage:

Debitage represents the single largest sample of aboriginal cultural material collected (n=1888). A total weight of 4107 grams were recorded (Table 3). All debitage was analyzed for lithic raw materials, metric attributes, and weight and then grouped according to the presence or absence of cortex. Those with a cortex surface had a mean weight of 15 grams and, in a few instance (n=66), could be classified as core reduction fragments (Bradley 1975:7). The large majority has been classified, with few exceptions, as either secondary thinning flakes or bifacial thinning flakes (Crabtree 1972).

This information can be useful in establishing prehistoric patterns of raw material acquisition and trade. The most commonly used lithic material found throughout the site is quartz (40%). This category includes crystal quartz (7%), smoky quartz (3%), and milk quartz (30%). Although quartz predominates and is a very common lithic material found in sites throughout New England, Will (1989:6) points out that "its analysis has usually been avoided because of the inherent problem of natural shattering and the difficulty in identification of flakes from stone working". Reconstruction of technological details is problematic because of flake shatter on detachment. In addition, Will states that "flake scars are not always easily distinguishable on quartz artifacts as they often are on other kinds of stone". However, advances in the study of quartz technology in order to further analyze and rectify identification problems have been pursued by others

Lithic Artifacts	Clear Quartz	Smoky Quartz	Milky/Quartzite	Chert	Argillite	Kineo Rhyolite	Coarse Grained Rock	Assorted Felsites	Unknown	Basalt	Slate	Total
Projectile Points												
Stemmed:												
Stark	--	--	--	--	--	--	--	1	--	--	--	1
Neville	--	--	--	1	--	--	--	--	--	--	--	1
Merrimack	--	--	--	--	--	--	--	1	--	--	--	1
Squibnocket Small Pt.	--	--	4	--	--	--	--	--	--	--	--	4
Susquehanna	--	--	--	--	--	1	1	--	--	--	--	2
Meadowood	--	--	--	1	--	--	--	--	--	--	--	1
Jacks Reef	--	--	--	--	--	2	--	--	--	--	--	2
Side-Notched	--	--	4	5	--	2	--	--	--	--	--	11
Untyped	--	--	--	5	1	1	2	3	--	--	--	12
Non-Stemmed:												
Levanna and Variants	--	--	5	10	--	--	--	--	--	--	--	15
Biface Fragments-N.I.D.												
Stemmed Bases	1	--	2	--	1	--	--	3	--	--	--	7
Non-Stemmed Bases	--	1	--	4	--	1	1	1	--	1	--	9
Distal Tips	1	1	6	9	--	10	4	7	1	--	--	39
Unifaces												
Prismatic Blades	--	--	1	--	--	--	--	1	--	--	--	2
End Scrapers	9	--	16	14	2	5	3	5	2	--	--	56
Ridged Back End Scrapers	--	--	1	2	--	1	--	1	--	--	--	5
Side Scrapers	1	--	--	--	--	1	--	1	--	--	--	3
Assorted Tools												
Drill Tips	--	--	--	2	--	--	--	--	--	--	--	2
Drill Bases	--	--	--	--	--	1	--	--	--	--	--	1
Wedges or Turtle Backs	--	--	7	--	--	--	--	--	--	--	--	7
Perforators?	--	--	4	1	1	--	--	--	--	--	--	6
Ground Stone												
1/2 Channel Gouge	--	--	--	--	--	--	--	--	1	--	--	1
Celts	--	--	--	--	--	--	3	--	--	--	--	3
Problematic w/ Hole	--	--	--	--	--	--	1	--	--	--	--	1
Flakes	132	60	566	328	357	252	99	72	19	2	1	1,888
Total Materials	144	62	616	382	362	277	114	96	23	3	1	
Tool/ Flake Ratio	1:13	1:30	1:11	1:6	1:72	1:10	1:7	1:3	1:5	1:2	1:1	
											Tools	192
*Overall Tool/Flake Ratio=1:10											***Total Lithics***	2,080

Table 4. Lithic Artifacts from the Stevens Brook Site.

such as Barber (1981).

Quartz has been demonstrated to predominate in lithic usage throughout the Middle Archaic and Late Archaic periods, as well as the Woodland periods, in southwestern Maine (Cowie 1990:6). The geographic placement of Stevens Brook suggests that the heavy reliance on quartz usage is not uncommon because it lies between the Androscoggin and Saco Rivers' drainages where the same patterns have been observed (due to the local availability of the material). In addition, as Gramly (1979:40) surveyed lithic sources in this region of the state, he pointed out that, based on collections of artifacts at the R. S. Peabody Museum of Archaeology at Andover, Massachusetts, quartz crystal and quartzite are the predominant lithologies. In fact, this is the primary local material that will serve the needs of the stone-knapper in the

Lithic Tool Summary	Qty.	% of all	
		Tools	Lithics
Stemmed Projectile Points	34	17.71	1.64
Non-Stemmed Projectile Points	16	8.33	.77
Biface Fragments	55	28.65	2.64
Assorted Tools	16	8.33	.77
Ground Stone	5	2.60	.24
Unifaces	66	34.38	3.17
Totals	N=192		

Table 5. Lithic Tool Summary from the Stevens Brook Site.

manufacture of tools. Another locally available material utilized at the site and elsewhere in the Presumpcot Drainage during the Middle and Late Archaic periods, is a bluish-banded, tan, coarse-textured felsite (5%) that has correlates at numerous sites on Sebago Lake. This material may be difficult to work considering that it has a workability ranking of 5.0 on Callahan's (1979) scale.

Evidence of long distance trade is suggested by the presence of exotic raw material types, which are not available locally. Raw materials (Table 3) including Kineo rhyolite from the Moosehead Lake region (13%), small amounts of Mount Jasper rhyolite from near Berlin, NH, Pennsylvania jasper from eastern PA, Munsungun chert from northern Maine, Cheshire quartzite from Vermont, assorted fine-grained felsites (3%), unidentifiable exotic cherts (17%), and argillite or "hornfels" (18%) are all materials found at Stevens Brook. Calogero and Philpotts (1995:7) point to the ring dike area west of the White Mountains in New Hampshire as the primary acquisition source for lithics used in southwestern Maine archaeological sites. All of these materials are seen in artifact assemblages from the Woodland Period elsewhere in the Northeast (Cowie 1990:9). Cultural interconnections seem characteristic of the area over a long period of time.

It is interesting to note that even though quartz is common to this site, the highest concentrations of debitage occur at locus 3, along with argillite, in an area that has produced archaic materials. The bulk of all other lithic debitage is found in loci one and two.

Lithic Tools

To date, the site's lithic tool sample includes 192 items. Rather than rehash the breakdown of Table 4, a list of tool types collected by locus will follow instead.

Locus one has yielded projectile point forms typical of: probable Meadowood (Figure 6, far right), Levanna and Levanna variants (Figure 7, top 2 rows), untyped-stemmed (Figure 7, bottom), and side-notched (Figure 8; Figure 9, bottom row; Figure 6). Also collected are unidentified stemmed basal fragments and distal ends of bifacial points. In addition, unifacial tools consisting of end-scrapers (Figure 10, top 3 rows) on exotic materials along with side-scrapers, ridged-back end-scrapers plus unifacial blades were collected. Drill fragments consisting of tips and a base, turtleback wedges and assorted probable perforators round out the inventory of this portion of the site.

Locus two has produced projectile point forms of the following types: Jack's Reef Notched (Figure 7, left side, middle and bottom rows), side-notched (same as locus 1), and untyped-stemmed. Also present are non-stemmed primary bifacial base fragments, as well as tips of bifaces.

Locus three produced projectile point forms of the following types: Neville, Stark and Merrimack (Figure 2), Squibnocket Small-stemmed and Susquehanna. Large quartz end-scrapers (Figure 10, bottom row) are present as well as these groundstone forms: celts, a half-channeled gouge fragment (Figure 11) and a problematic form.

Historic Artifacts

A small sample of Euro-American (Fig. 12) remains was recovered near an historic pile of bricks used as a datum for recording site dimensions. All of the historic specimens have only general historical significance because they do not date prior to the early-to-mid nineteenth century and are not pertinent to this prehistoric study (with the exception of three gunflints, which point to the late 18th to early 19th centuries).

SUMMARY

The outlet site, as collected and studied, supplies data for research in a geographic local that has received very little archaeological attention and scrutiny. The information gleaned from Stevens Brook allows for a better regional understanding of land utilization in prehistory as well as the type of landform preferred for habitation and resource

exploitation.

The Stevens Brook site has demonstrated relatively good associations of artifacts that correlate into chronological markers of a sort. To review lets again look at the loci as markers of time and culture units.

Locus 3 has demonstrated usage of the site during the Archaic periods. Diagnostic bifaces were collected that clearly reflect temporal usage of the site during the Middle and Late Archaic periods. In addition to the bifaces presented earlier in the paper, large quartz unifacial scrapers along with pecked and groundstone tools are substantial evidence of early Native American use. The preference for quartz during these two cultural periods is reflected by the amount of debitage found in this one locus in contrast to the others.

The evidence of Woodland Period occupation covers a time span of approximately 2000 years. Locus 2 is indicative of the Middle Woodland Period based upon its diagnostic elements: exotic lithic debitage, Jack's Reef points, stemmed and side-notched points and pot sherds with decorative attributes such as rocker-dentate impression, cord-wrapped stick impression and punctates.

Locus 1 presents a strong correlation between classes of artifacts indicative of the Late Woodland Period such as pot sherds decorated with incision, cord-wrapped stick impression and cordage-impressed and fabric-impressed markings that were routinely found in association with side-notched and Levanna projectile points. At both loci one and two, many common end-scrapers made from non-local exotic materials (which are common for the Woodland Period in general) were found.

Prehistoric economies based on possible long distance trade are evidenced by the overall range of non-local materials (Table 5). Obviously, much of the lithic material found is indicative of having been moved some distances to be utilized at the site. Hopefully, the information as presented will aid in our collective understanding of quantitative/ geographic pattern analysis.

The monitoring of site dimensions and changes (as outlined earlier) due to the effects of erosion, will help in our understanding of factors in archaeological site preservation related to shore line erosion. The effects of human-made impoundments, which artificially raise water levels, have an adverse effect on the prehistoric record in the draw-down zone. I'm concerned that, in my lifetime, numerous prehistoric sites such as the Stevens Brook outlet site will disappear from the record, to be lost forever.

In the meantime, efforts should be made to glean as much information from sites like Stevens Brook, as possible. I would argue that eroded sites, much like artifact collections, can tell quite a story. Erosional shoreline sites should be reconsidered for study especially in light of today's site conservation efforts. A question that begs to be asked is: "Who were the people who possibly lived and died here?". Cultural associations are extremely hard to trace backwards into prehistory. Perhaps the study of cultural boundaries, indicated by the presence or absence of tool types or pottery decoration, can help in the future. Archaeologists have generally observed that Levanna projectile points are more common in southern and western Maine during the Late Woodland (Ceramic) Period than elsewhere in the state and that Ceramic Period side-notched points seem to be most common along the Maine coast from roughly Casco Bay to somewhere east of Mount Desert Island. Perhaps the usage of cordage twist analysis will, one day, be fine-tuned to the point of culture-group identification. In late prehistory through to the early colonial period in Maine, written sources tell us about local Indians known as the Presumpscots (Calloway 1991:94) at the Sebago Lake Basin area. Are the people who utilized Stevens Brook related? Snow (1978:37) tells us that the people of the Presumpscot River are actually Pequawkets or Pigwacket as they are more commonly known. This would include them in the larger cultural group collectively known as the Eastern Abenaki.

To be redundant, only further investigation of other regional sites could aide in the possible ethnic identification, through artifact analysis, of culture groups that might then be projected backwards into prehistory.

PLANS FOR FUTURE WORK

After long-term surface collecting at the Stevens Brook site the focus has shifted to a larger portion of the area. In the process, two new Middle Archaic sites and another Late Woodland site have been identified. Because of this, a regional map has been generated to conduct analysis of prehistoric inter-

site land (form) use patterns. A large tract of backshore land owned by the Town of Bridgton is currently the focus of investigation. In conjunction, the University of Southern Maine assisted with test pit excavation in the spring of 1997 and will continue into 1998. The results of the new site investigations will be unveiled in a future publication.

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